

Wind Power GeoPlanner™

Off-Air TV Analysis

Arkwright Summit Wind Farm LLC



Prepared on Behalf of
EDP Renewables

January 29, 2015



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 Arkwright Summit Wind Farm project in Chautauqua 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 proposed wind turbines.

2. Summary of Results

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

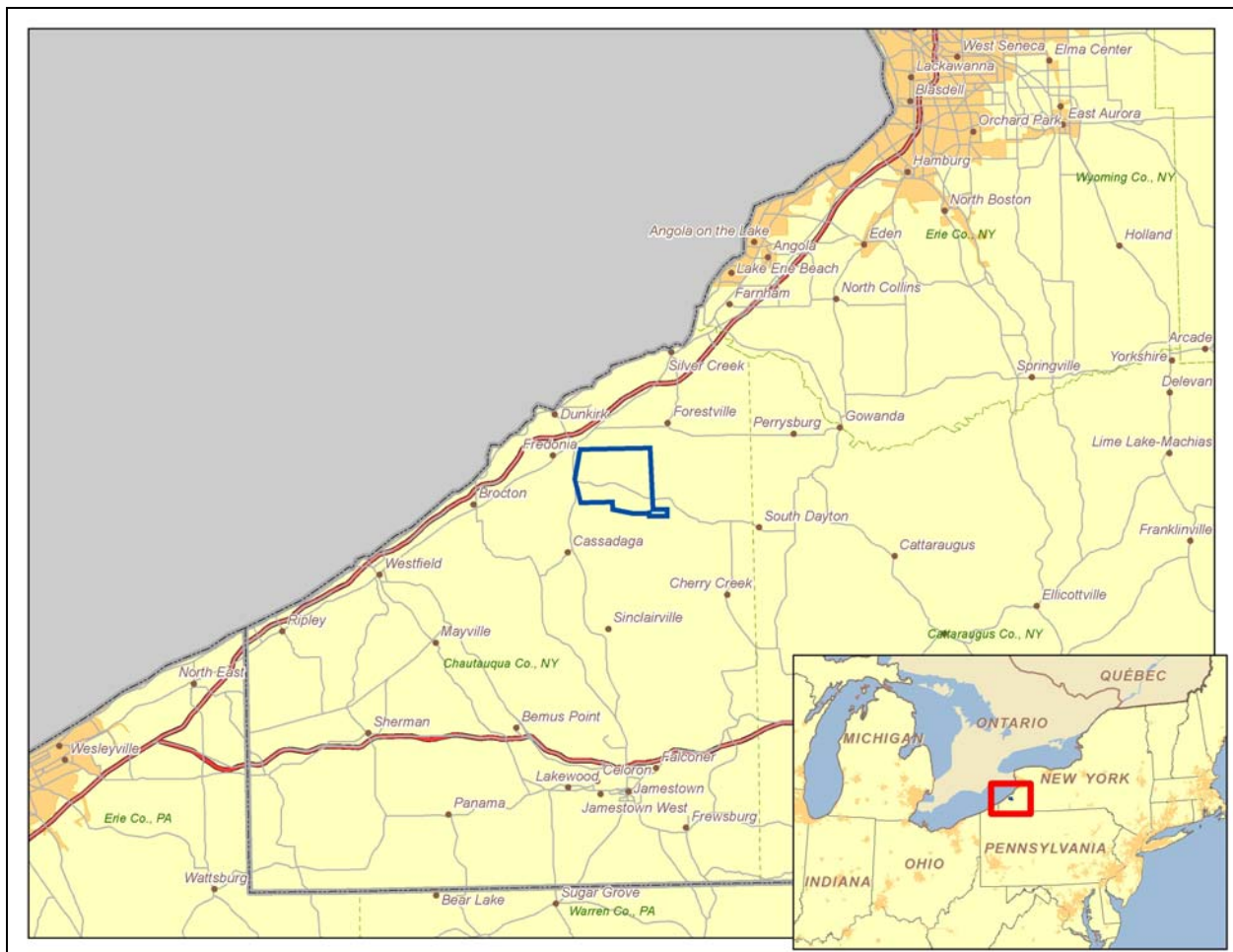


Figure 1: Wind Farm Project Area and Local Communities

To begin the analysis, Comsearch compiled all off-air television stations¹ within 150 kilometers of the center of the project area of interest (AOI). Appendix A contains a tabular summary of these stations. A plot depicting their locations appears in Figure 2, below.

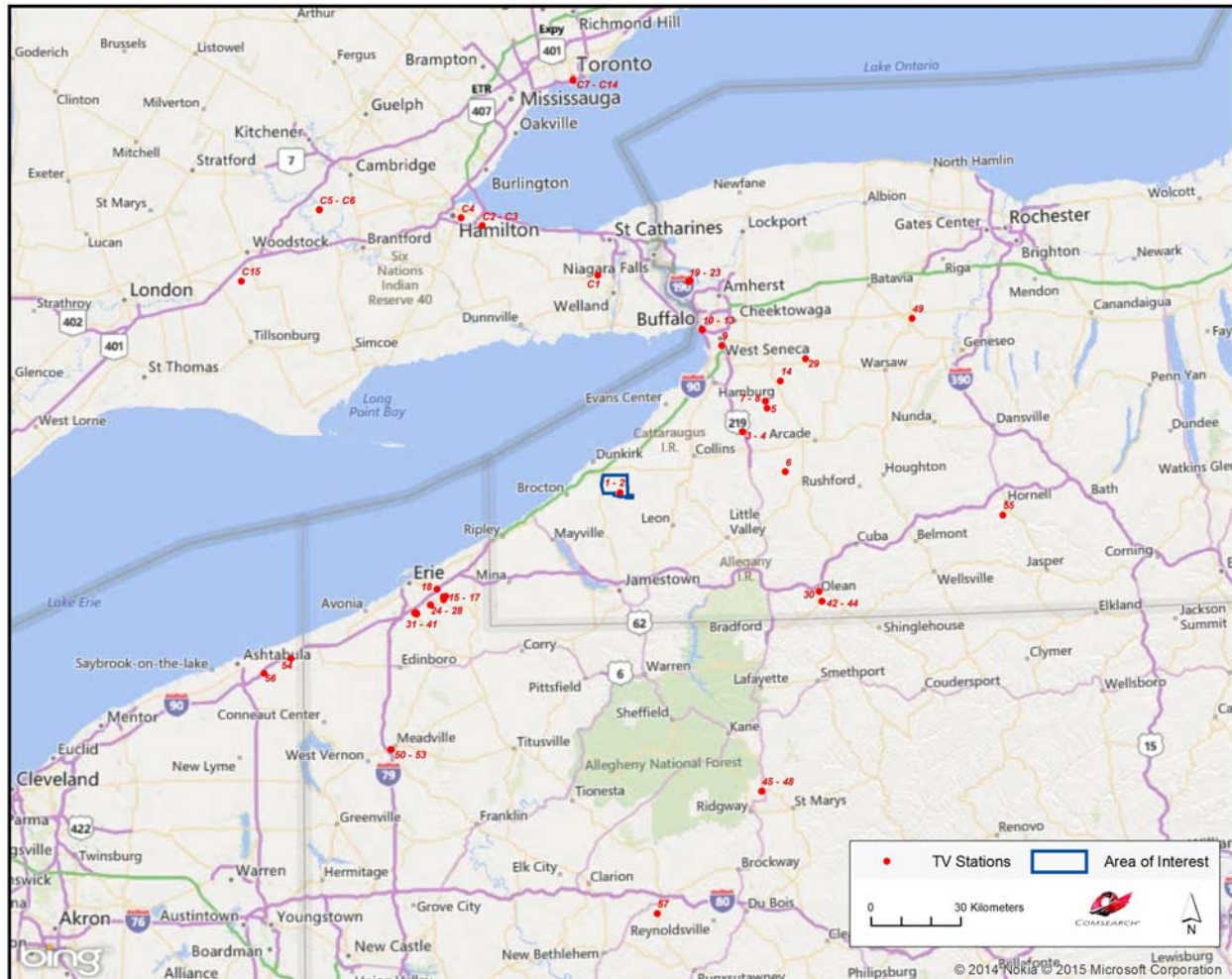


Figure 2: Plot of Off-Air TV Stations within 150 Kilometers of Project Area

TV stations at a distance of 75 kilometers or less are the most likely to provide off-air coverage to the project area and neighboring communities. These stations are listed in Tables 1 and 2, below, and a plot depicting their locations is provided in Figure 3. There are a total of forty-five database records for stations within approximately 75 kilometers of the limits of the project AOI,

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.

forty-four in the United States and one in Canada. Only twenty-three of these stations are currently licensed and operational, seven of which are low-power stations or translators. Translator stations are low-power stations that receive signals 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.

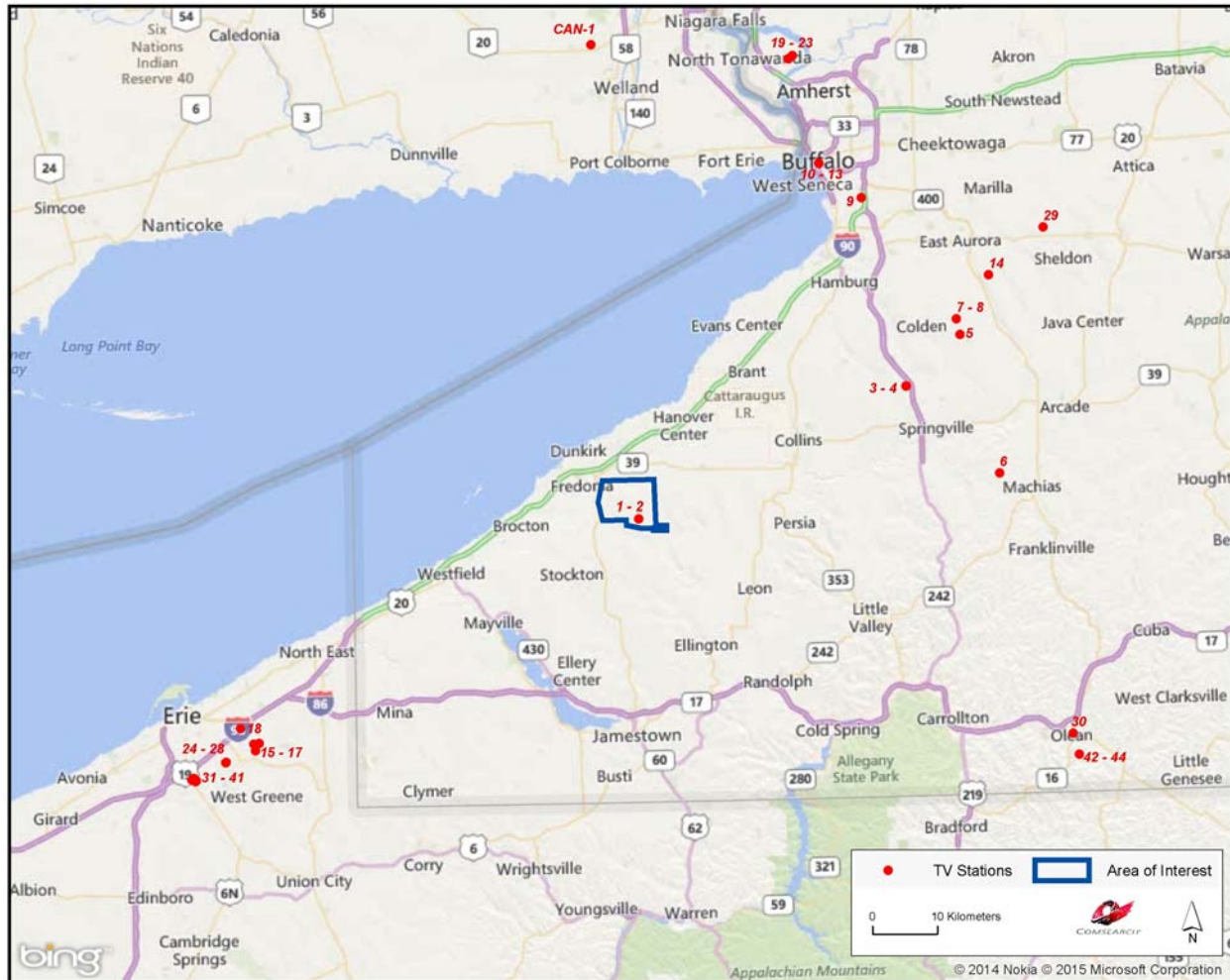


Figure 3: Plot of Off-Air TV Stations within 75 Kilometers of Project Area

ID	Call Sign	Status	Service ²	Channel	Transmit ERP ³ (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Center of AOI (km)
1	WNYB	LIC	DT	26	243.0	42.393333	-79.228889	2.80
2	WNYB	APP	DT	26	450.0	42.393333	-79.228889	2.80
3	WBBZ-TV	LIC	DT	7	26.9	42.567778	-78.723333	46.21
4	WBBZ-TV	APP	DS	7	26.9	42.567861	-78.722972	46.24
5	WKBW-TV	LIC	DT	38	358.0	42.637444	-78.619972	57.07
6	WVTT-CD	LIC	DC	34	15.0	42.443611	-78.553056	57.12
7	WIVB-TV	LIC	DT	39	790.0	42.659167	-78.625833	57.72
8	WIVB-TV	CP	DX	39	112.0	42.659167	-78.625833	57.72
9	WDTB-LP	LIC	TX	39	16.9	42.830556	-78.798333	58.99
10	WDTB-LP	STA	TX	40	0.004	42.879722	-78.876389	59.86
11	NEW	APP	LD	48	15.0	42.879722	-78.876389	59.86
12	WBXZ-LP	LIC	LD	17	15.0	42.880000	-78.876667	59.88
13	WDTB-LP	CP	LD	29	15.0	42.880000	-78.876667	59.88
14	WGRZ	LIC	DT	33	480.0	42.718611	-78.563056	65.44
15	W45EC-D	CP	LD	45	15.0	42.090278	-79.943611	67.93
16	NEW	APP	LD	30	2.5	42.089361	-79.953278	68.66
17	NEW	APP	TX	29	4.0	42.079722	-79.950556	69.05
18	W32DH-D	APP	LD	32	1.35	42.111333	-79.977722	69.16
19	WUTV	LIC	DT	14	1000.0	43.025556	-78.928611	72.63
20	WBNF-CD	APP	LD	15	4.6	43.025556	-78.928611	72.63
21	WBNF-CD	LIC	DC	15	15.0	43.025556	-78.928611	72.63
22	WNLO	LIC	DT	32	1000.0	43.030000	-78.920833	73.32
23	WNED-TV	LIC	DT	43	156.0	43.030000	-78.920833	73.32
24	WSEE-TV	LIC	DT	16	75.0	42.064444	-80.005278	73.78
25	WICU-TV	APP	DT	12	7.8	42.063833	-80.005778	73.85
26	WSEE-TV	APP	DT	16	363.0	42.063833	-80.005778	73.85
27	WICU-TV	LIC	DT	12	5.4	42.063889	-80.005833	73.85
28	NEW	APP	LD	30	1.0	42.063889	-80.005833	73.85
29	WNYO-TV	LIC	DT	49	198.0	42.782778	-78.457778	76.52
30	W20AB	LIC	TX	20	12.5	42.080556	-78.430556	76.88

² Definitions of US service and status codes:

DT – Digital television broadcast station

DS – Digital special temporary authority (STA)

DX – Digital auxiliary station

LD – Low-power digital television broadcast station

TX – Translator station

CA – Class A analog television broadcast station

DC – Class A digital television broadcast 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 temporary authority

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 Center of AOI (km)
31	DWLEP-LP	APP	TX	9	0.1	42.039167	-80.060833	79.17
32	WLEP-LD	LIC	LD	43	12.0	42.039167	-80.060833	79.17
33	WQLN	LIC	DT	50	300.0	42.042778	-80.065556	79.29
34	W48CH	LIC	TX	48	10.2	42.038889	-80.062500	79.30
35	W32DH-D	LIC	LD	32	2.07	42.037778	-80.062222	79.35
36	NEW	APP	LD	34	2.0	42.037778	-80.062222	79.35
37	W36EK-D	CP	LD	36	10.0	42.037778	-80.062222	79.35
38	WXTM-LD	CP MOD	LD	47	1.6	42.037778	-80.062222	79.35
39	WFXP	LIC	DT	22	850.0	42.040278	-80.069167	79.69
40	WJET-TV	LIC	DT	24	523.0	42.040278	-80.069167	79.69
41	NEW	APP	LD	35	15.0	42.040278	-80.069167	79.69
42	WVTT-CD	CP	DC	25	3.0	42.051111	-78.420278	79.26
43	W30BW	LIC	TX	30	5.9	42.051111	-78.419722	79.30
44	W30BW	CP	LD	30	1.0	42.051111	-78.419722	79.30

Table 1: Off-Air TV Stations within 75 Kilometers of Project Area (United States)

ID	Call Sign	Status	Class ⁴	Channel	Transmit ERP (kW)	Latitude (NAD 83)	Longitude (NAD 83)	Distance to Center of AOI (km)
C1	CKVP-DT	OP	R	42	5.0	43.051667	-79.300833	70.85

Table 2: Off-Air TV Stations within 75 Kilometers of Project Area (Canada)

3. Impact Assessment

One of the licensed full-power stations, WNYB, lies within the project area of interest. This station is licensed to Faith Broadcasting Network, Inc. of Marion, Illinois. Depending on the final determination of the turbine locations, reception of this station may be severely disrupted by the Arkwright Summit wind energy project.

In addition, thirteen of the other licensed full-power stations, WBBZ-TV, WKBW-TV, WIVB-TV, WGRZ, WUTV, WNLO, WNED-TV, WSEE-TV, WICU-TV, WNYO-TV, WQLN, WFXP, and WJET-TV, may have their reception disrupted in and around the project, primarily in locations on the opposite side of the project area, relative to the station antennas. Communities and homes to the south and west of the project may have degraded reception of stations WBBZ-TV,

⁴ Definitions of Canadian class and status codes:
R – Regular VHF Television Broadcast Station
OP – Licensed and operational station

WKBW-TV, WIVB-TV, WGRZ, WUTV, WNLO, WNED-TV, and WNYO-TV, which are located northeast of the project area, after the wind turbines are installed. Similarly, stations WSEE-TV, WICU-TV, WQLN, WFXP, and WJET-TV, which broadcast from southwest of the project area, may have diminished reception in communities directly to the north and the east.

4. Recommendations

Both cable service and direct broadcast satellite service will be unaffected by the presence of the wind turbine facility and may be offered to those residents who can show that their off-air TV reception has been disrupted by the presence of the wind turbines after they are 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 ⁵	Channel	Transmit ERP ⁶ (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Center of AOI (km)
1	WNYB	LIC	DT	26	243.0	42.393333	-79.228889	2.80
2	WNYB	APP	DT	26	450.0	42.393333	-79.228889	2.80
3	WBBZ-TV	LIC	DT	7	26.9	42.567778	-78.723333	46.21
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10	WDTB-LP	STA	TX	40	0.004	42.879722	-78.876389	59.86
11	NEW	APP	LD	48	15.0	42.879722	-78.876389	59.86
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16	NEW	APP	LD	30	2.5	42.089361	-79.953278	68.66
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28	NEW	APP	LD	30	1.0	42.063889	-80.005833	73.85

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DT – Digital television broadcast station
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36	NEW	APP	LD	34	2.0	42.037778	-80.062222	79.35
37	W36EK-D	CP	LD	36	10.0	42.037778	-80.062222	79.35
38	WXTM-LD	CP MOD	LD	47	1.6	42.037778	-80.062222	79.35
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41	NEW	APP	LD	35	15.0	42.040278	-80.069167	79.69
42	WVTT-CD	CP	DC	25	3.0	42.051111	-78.420278	79.26
43	W30BW	LIC	TX	30	5.9	42.051111	-78.419722	79.30
44	W30BW	CP	LD	30	1.0	42.051111	-78.419722	79.30
45	W17DU-D	CP	LD	17	1.0	41.482222	-78.683889	113.62
46	W19EI-D	CP	LD	19	1.0	41.482222	-78.683889	113.62
47	W21DO-D	CP	LD	21	1.0	41.482222	-78.683889	113.62
48	W28EO-D	CP	LD	28	1.0	41.482222	-78.683889	113.62
49	WPXJ-TV	LIC	DT	23	455.0	42.895000	-78.015556	114.12
50	W52BO	CP	LD	28	15.0	41.627778	-80.170833	116.25
51	W52BO	LIC	TX	52	5.7	41.627778	-80.170833	116.25
52	W52BO	APP	TX	46	0.057	41.627500	-80.170556	116.25
53	W52BO	APP	TX	44	21.6	41.627500	-80.170833	116.27
54	W48CH	CP	LD	48	4.0	41.905556	-80.571111	123.27
55	W16BE-D	LIC	LD	16	0.277	42.292222	-77.674167	130.24
56	DW64AK	CP	LD	39	12.0	41.860833	-80.679722	133.56
57	W45BT-D	LIC	LD	45	6.32	41.119722	-79.114444	144.28

Table A: Off-Air TV Stations within 150 Kilometers of Project Area

ID	Call Sign	Status	Class ⁷	Channel	Transmit ERP (kW)	Latitude (NAD 83)	Longitude (NAD 83)	Distance to Center of AOI (km)
C1	CKVP-DT	OP	R	42	5.0	43.051667	-79.300833	70.85
C2	CHCH-DT	OP	R	15	132.0	43.207500	-79.774167	98.06
C3	CITS-DT	OP	R	36	473.0	43.207500	-79.774167	98.06
C4	CHCJ-DT	OP	R	35	390.0	43.231667	-79.859167	103.65
C5	CIII-DT(1)	AU	R	17	165.0	43.260833	-80.443889	135.72
C6	CICO-DT-28	OP	R	28	20.2	43.261389	-80.444722	135.81
C7	CFTO-DT	OP	R	9	10.8	43.642500	-79.387222	136.84
C8	CJMT-DT	OP	R	40	19.5	43.642500	-79.387222	136.84
C9	CITY-DT	OP	R	44	21.0	43.642500	-79.387222	136.84
C10	CBLT-DT(1)	AU	R	20	106.9	43.642500	-79.387222	136.84
C11	CFMT-DT	OP	R	47	22.2	43.642500	-79.387222	136.84
C12	CBLFT-DT(1)	AU	R	25	106.2	43.642500	-79.387222	136.84
C13	CICA-DT	OP	R	19	106.5	43.642500	-79.387222	136.84
C14	CIII-DT-41	OP	R	41	100.0	43.642500	-79.387222	136.84
C15	CITY-DT-2	OP	R	31	20.0	43.046111	-80.767778	143.00

Table A-2: Off-Air TV Stations within 150 Kilometers of Project Area (Canada)

⁷ Definitions of class and status codes:
R – Regular VHF Television Broadcast Station
OP – Licensed and operational station
AU – Authorized, not yet fully operational