

**PROPERTY VALUE IMPACT &
ZONING COMPLIANCE EVALUATION**

*Livingston County ZBA Special Use Application
Invenergy Pleasant Ridge Wind Project
Livingston County, Illinois*

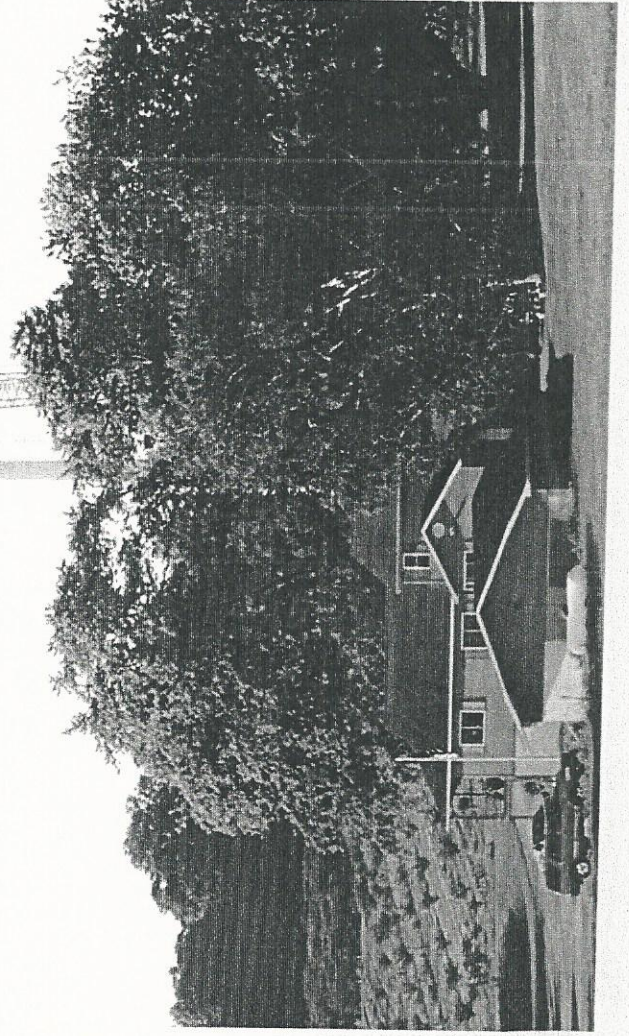
McCann Appraisal & Consulting, LLC
February 10, 2015

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476 ft.. height

1,139 ft.. setback

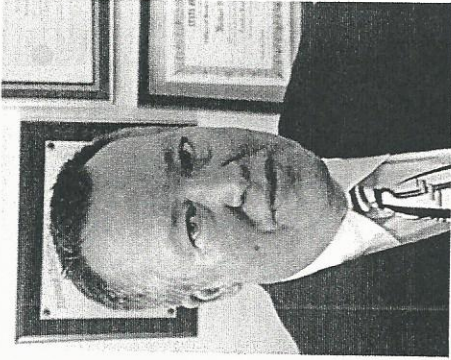


Qualifications

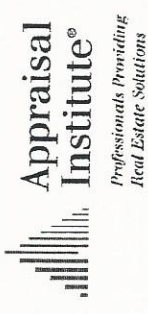
Michael S. McCann, CRA

- 34 years experience appraisal & consulting
- State Certified General Appraiser, licensed multiple states
- Certified Review Appraiser (CRA)
- Member – Lambda Alpha International - Inducted on basis of expertise with Property Value Impact Studies
- Qualified & testified as expert witness in 21+ state & federal courts
- Appraised variety of property value damage situations
- Consultant to governmental bodies, developers, corporations, attorneys, investors and private owners
- Appointed by Federal Court as a Condemnation Commissioner
- Evaluated & consulted 20+ utility scale wind projects in over a dozen states
- Prepared and presented a webinar regarding wind turbine impacts on property values for the **Appraisal Institute** – peer reviewed & approved for continuing education of Members

Mike McCann



Mike McCann, CRA
McCann Appraisal, LLC

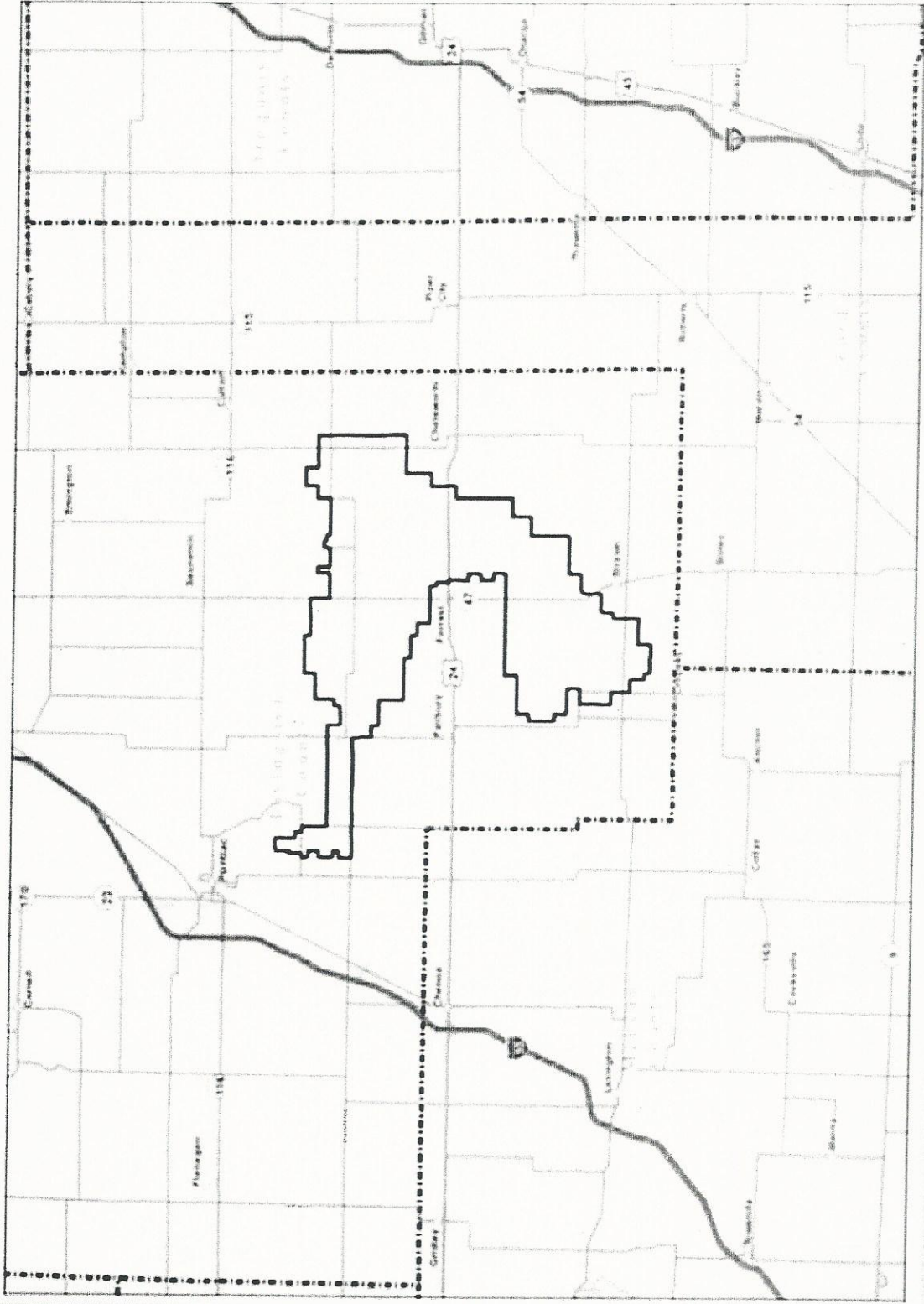


- Michael S. McCann has been exclusively engaged in the real estate appraisal profession since 1980, and is the owner of Chicago based McCann Appraisal, LLC.
- His appraisal experience has included market value appraisals in 20+ states of virtually all types of commercial, office, residential, retail, industrial and vacant property, along with a wide variety of unique or special purpose real estate, such as limestone quarries, hotels, contaminated properties, etc..
- Mr. McCann has been a speaker at seminars for the Appraisal Institute, the Illinois State Bar Association and Lorman Education Services on topics including the vacation of public right of ways (1986), Property Taxation in the New Millennium (2000), Zoning and Land Use in Illinois (2005,2006), and for community based organizations regarding Industrial Wind energy Project impacts in Illinois, Michigan, California, Massachusetts, etc. (2009 -2012).

McCann Study

- ✓ Review of Livingston County Ordinance, Chapter 56, Special Use approval criteria
- ✓ Review of existing character of Project area
- ✓ Review of nuisance factors and stigma from nearby wind projects
- ✓ Development of empirical value impact study
- ✓ Literature review - wind projects impact on property values

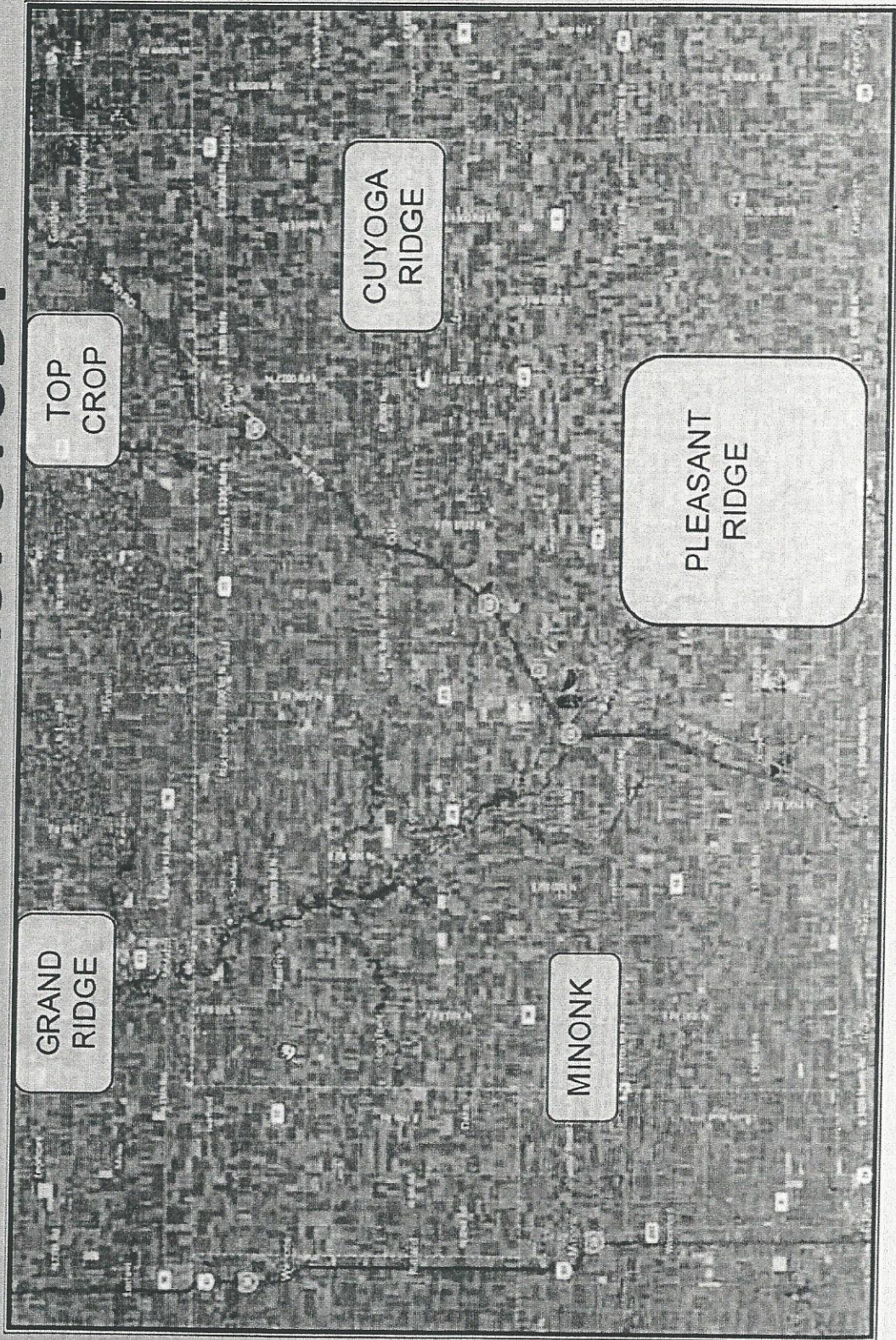
Figure 1-1 Pleasant Ridge Wind Farm Project Area Location



STANDARDS FOR SPECIAL USE

5. Will not be injurious to the use and enjoyment of other property in the immediate vicinity for the uses already permitted, or substantially reduce the value of neighboring property;

LIVINGSTON COUNTY RESIDENTIAL VALUE IMPACT STUDY



USGS map

VALUE LOSS - CAUSE?

- Detrimental Condition
- Impairment of quiet use and enjoyment
- Bona fide nuisances & health impacts
- Aesthetics
- Stigma – “Market Resistance”
- Any trespass or intrusion of excessive noise, contaminants, odor, vibration, glare, flicker or physical impacts into, through or over neighboring property

STIGMA

“Stigma damages” essentially constitute
“damage to the reputation of the realty.”

Smith v. Carbide & Chems. Corp., 226 S.W.3d 52, 55
(Ky.2007) —

See more at:

<http://caselaw.findlaw.com/tx-supreme-court/1676262.html#sthash.8FyxdAyF.dpuf>

Carbide Court Case

Property Value Studies

Independent

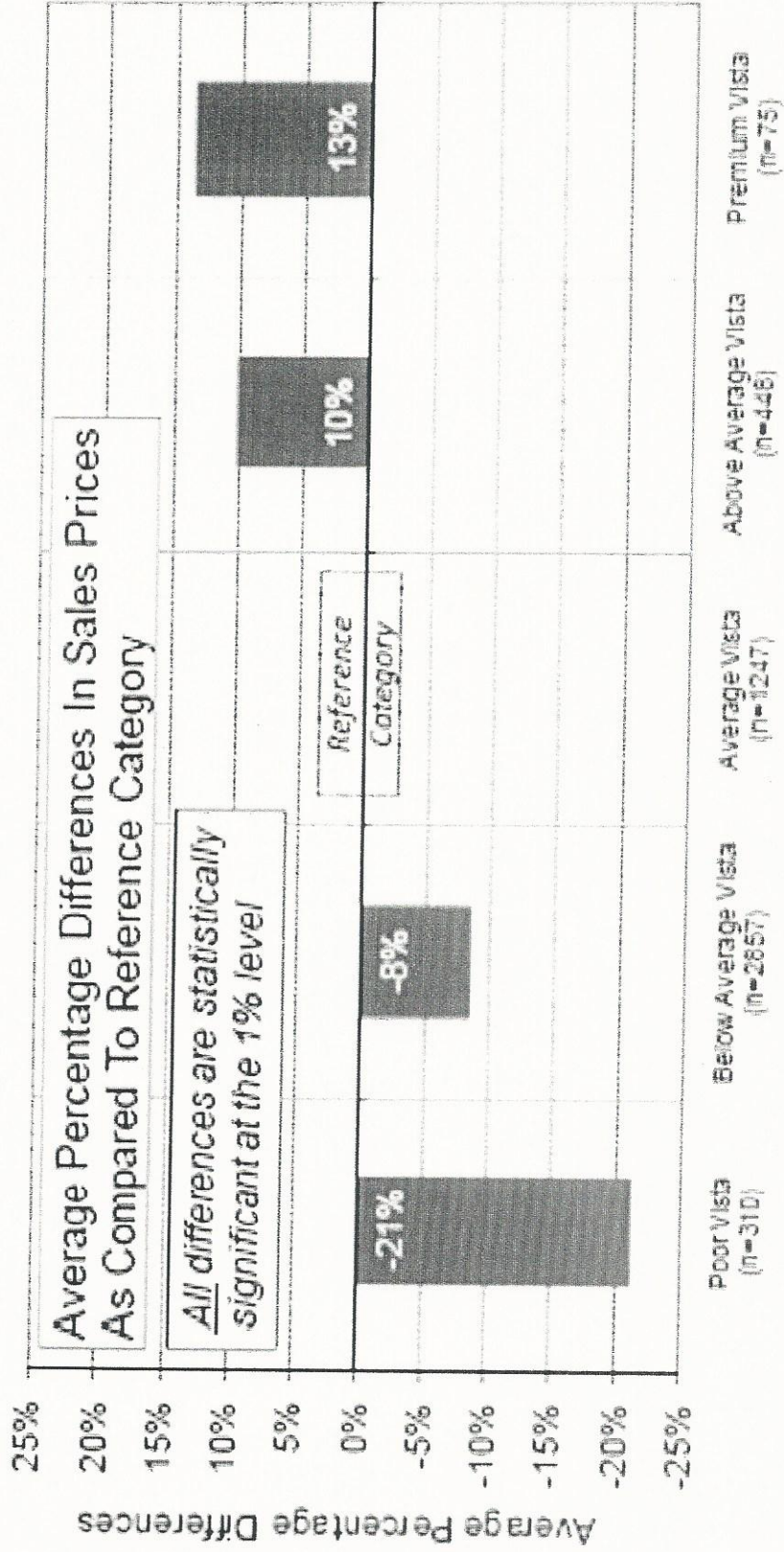
**McCann & other independent
professional appraisers**

Industry

**Academic Institutions, some funded by
USDOE and wind energy developers**

LBNL 2009 STUDY

Figure ES-2: Base Model Results: Scenic Vista



The reference category consists of transactions for homes with an Average Vista, and that occurred after construction began on the wind facility

Oregan Berkeley

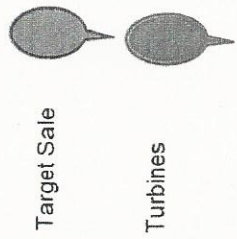
Recognized Methodology

- **Real Estate Damages – An Analysis of Detrimental Conditions** (pg. 19 -22), recognized methods of applying a Detrimental Condition Sales Comparison Approach includes the use of a Sale/Resale analysis or a Paired Sale Analysis.
- **Regression studies not reliable** for damage estimates, per IAAO Standards for use of Regression analysis.

John
Baker
G. Baker

Questio
How low
are clean

TARGET SALES LOCATION MAP



LIVINGSTON COUNTY STUDY RESULTS

PAIRED SALES ANALYSIS SUMMARY

Sale No.	Control # Pairs	T-Sale \$/SF	C-Sales Avg \$/SF	Difference \$ Amt	Difference % (%)	T-Sale MT	Avg. MT	Difference MT #	Difference MT %	Valuation Indications			
										Adj. FMV T-Sale	T-Sale Price \$	Impact \$ Amt	Impact FMV %
T-1	3	\$71.79	\$88.48	\$16.69	-19%	437	233	204	87%	\$153,086	\$143,000	\$10,086	-6.59%
T-2	6	\$60.19	\$81.42	\$21.23	-26%	46	172	126	-73%	\$168,043	\$119,900	\$48,143	-28.65%
T-3	5	\$55.22	\$87.43	\$32.21	-37%	44	207	163	-79%	\$164,697	\$110,000	\$54,697	-33.21%
T-4	3	\$146.50	\$131.95	-\$14.55	11%	534	240	294	122%	\$319,435	\$310,000	\$9,435	-2.95%
T-5	2	\$81.22	\$101.07	\$19.85	-20%	155	165	10	-6%	\$207,844	\$160,000	\$47,844	-23.02%
T-6	4	\$53.70	\$107.98	\$54.28	-50%	49	116	67	-58%	\$173,443	\$87,000	\$86,443	-49.84%
T-7	4	\$99.24	\$124.79	\$25.55	-20%	17	100	83	-83%	\$205,440	\$144,500	\$60,940	-29.66%
T-8	3	\$81.71	\$92.23	\$10.52	-11%	188	178	10	6%	\$165,101	\$159,000	\$6,101	-3.70%
T-9	1	\$125.74	\$142.73	\$16.99	-12%	215	138	77	56%	\$211,242	\$170,000	\$41,242	-19.52%
T-10	2	\$80.65	\$93.31	\$12.66	-14%	207	169	39	23%	\$273,013	\$220,000	\$53,013	-19.42%
T-11	1	\$102.07	\$109.28	\$7.21	-7%	225	98	127	130%	\$276,392	\$207,000	\$69,392	-25.11%
T-12	2	\$52.08	\$98.20	\$46.12	-47%	66	65	1	2%	\$264,911	\$165,000	\$99,911	-37.71%
T-13	3	\$74.04	\$72.52	-\$1.52	2%	153	183	30	-16%	\$209,518	\$170,000	\$39,518	-18.86%
T-14	5	\$50.21	\$72.16	\$21.95	-30%	161	240	79	-33%	\$162,014	\$117,500	\$44,514	-27.48%
T-15	2	\$105.94	\$110.67	\$4.73	-4%	139	53	86	162%	\$143,910	\$116,000	\$27,910	-19.39%
T-16	3	\$35.71	\$120.67	\$84.96	-70%	295	243	52	21%	\$113,082	\$48,000	\$65,082	-57.55%
T-17	1	\$105.55	\$157.09	\$51.54	-33%	285	55	230	418%	\$207,437	\$172,250	\$35,187	-16.96%
Total	50												
Mean		\$81.27	\$105.41	\$24.14	-23%	189	156	33	21%				-24.68%

Takes all control not except by studies

PRECONSTRUCTION STIGMA IMPACT

WINDFARM ANTICIPATION STIGMA														
Market Study Statistics										Valuation Indications				
Sale No.	Control # Pairs	T-Sale \$/SF	C-Sales Avg \$/SF	Difference \$ Amt	Difference % (%)	T-Sale MT	C-Sale		Difference MT#	Difference MT %	Adj. FMV T-Sale	T-Sale Price \$	Impact \$ Amt	Impact FMV %
							Avg.	MT						
T-1	3	\$71.79	\$88.48	\$16.69	-19%	437	233	204	87%	\$153,086	\$143,000	\$10,086	-6.59%	
T-2	6	\$60.19	\$81.42	\$21.23	-26%	46	172	-126	-73%	\$168,043	\$119,900	\$48,143	-28.65%	
T-4	3	\$146.50	\$131.95	-\$14.55	11%	534	240	294	122%	\$319,435	\$310,000	\$9,435	-2.95%	
Total	12													
Mean		\$92.83	\$100.62	\$7.79	-11%	339	215	124	57%				-12.73%	

POST CONSTRUCTION IMPACT

POST CONSTRUCTION IMPACT														
Market Study Statistics										Valuation Indications				
Sale No.	Control # Pairs	T-Sale \$/SF	C-Sales Avg \$/SF	Difference \$ Amt	Difference % (%)	T-Sale MT	C-Sale		Difference MT #	Difference MT %	Adj. FMV T-Sale	T-Sale Price \$	Impact \$ Amt	Impact FMV %
							Avg. MT	Difference MT #						
T-3	5	\$55.22	\$87.43	\$32.21	-37%	44	207	-163	-79%	\$164,697	\$110,000	\$54,697	-33.21%	
T-5	2	\$81.22	\$101.07	\$19.85	-20%	155	165	-10	-6%	\$207,844	\$160,000	\$47,844	-23.02%	
T-6	4	\$53.70	\$107.98	\$54.28	-50%	49	116	-67	-58%	\$173,443	\$87,000	\$86,443	-49.84%	
T-7	4	\$99.24	\$124.79	\$25.55	-20%	17	100	-83	-83%	\$205,440	\$144,500	\$60,940	-29.66%	
T-8	3	\$81.71	\$92.23	\$10.52	-11%	188	178	10	6%	\$165,101	\$159,000	\$6,101	-3.70%	
T-9	1	\$125.74	\$142.73	\$16.99	-12%	215	138	77	56%	\$211,242	\$170,000	\$41,242	-19.52%	
T-10	2	\$80.65	\$93.31	\$12.66	-14%	207	169	39	23%	\$273,013	\$220,000	\$53,013	-19.42%	
T-11	1	\$102.07	\$109.28	\$7.21	-7%	225	98	127	130%	\$276,392	\$207,000	\$69,392	-25.11%	
T-12	2	\$52.08	\$98.20	\$46.12	-47%	66	65	1	2%	\$264,911	\$165,000	\$99,911	-37.71%	
T-13	3	\$74.04	\$72.52	-\$1.52	2%	153	183	-30	-16%	\$209,518	\$170,000	\$39,518	-18.86%	
T-14	5	\$50.21	\$72.16	\$21.95	-30%	161	240	-79	-33%	\$162,014	\$117,500	\$44,514	-27.48%	
T-15	2	\$105.94	\$110.67	\$4.73	-4%	139	53	86	162%	\$143,910	\$116,000	\$27,910	-19.39%	
T-16	3	\$35.71	\$120.67	\$84.96	-70%	295	243	52	21%	\$113,082	\$48,000	\$65,082	-57.55%	
T-17	1	\$105.55	\$157.09	\$51.54	-33%	285	55	230	418%	\$207,437	\$172,250	\$35,187	-16.96%	
Total	38													
Mean		\$78.79	\$106.44	\$27.65	-25%	157	143	14	10%				-27.25%	

FORECLOSURE & SHORT SALE TRENDS

Control		Target					
Year	# Sales	# Fcl/SS	% F/S	Year	# Sales	# Fcl/SS	% F/S
2009	32	2	6.25%	2009	3	1	33.33%
2010	32	4	12.50%	2010	4	1	25.00%
2011	20	1	5.00%	2011	4	1	25.00%
2012	24	2	8.33%	2012	8	4	50.00%
2013	27	5	18.52%	2013	8	1	12.50%
2014	16	2	12.50%	2014	3	1	33.33%
Totals	151	16	10.60%	Totals	30	9	30.00%

Target - Residential sales within 3 miles of any turbine(s), > 1 acre

Control - Rural residential, > 3 miles from turbines or landfill, > 1 acre,

*Where - Max of 1 acre
Add 2*

Where

LIVINGSTON STUDY PAIRED SALE SAMPLE

(50 EXAMPLES IN MCCANN REPORT)

T-2 Milnook 0.58 MI. TO TOWER

Address	City	Closed Date	Sold Pr	\$/SF	Acres	MT	F-Baths	J Bath	# Stv	ASF	Bsmt	Yr Bld	Out Bldgs	Cond.	Net \$ Adj.	Adj. Value	Impact %
18687 N 100 E	Flanagan	6/20/2011	\$119,900	\$60.19	3.68	46	1	1	2	1992	F	1917	45x80 Metal	2009 remodel, Avg-Gd	\$188,983	\$188,983	-36.56%
20558 E 100 N	Fairbury	1/13/2011	\$165,000	\$ 79.29	1.80	220	1	1	2	2081	F-PF	1916	1 bldg	Avg	\$23,983	\$188,983	-36.56%
					\$14,100					(\$2,117)	(\$5,000)			\$15,000			
4667 E 1600 N	Flanagan	1/31/2011	\$164,500	\$ 91.90	1.74	213	1	1	2	1790	F-F	1925	3 outbdgs	Avg	\$20,119	\$184,619	-35.06%
					\$14,550					\$5,569	(\$10,000)			\$15,000			
11003 N 2300 E	Fairbury	4/29/2011	\$120,000	\$ 68.97	3.50	264	1	0	1.5	1740	F-PF	1922	1 outbdg	Avg	\$18,064	\$138,064	-13.16%
					\$1,350					\$5,214	(\$5,000)		\$0	\$15,000			
27184 N 2400 E	Odell	7/27/2011	\$173,000	\$105.49	2.14	100	2	0	2	1640	F-PF	1912	1 outbdg	Remod. Gd	\$3,190	\$176,190	-31.95%
					\$11,550					\$11,140	(\$5,000)			(\$15,000)			
12610 N 1900 E	Fairbury	7/27/2011	\$143,000	\$ 62.97	5.01	104	1	0	2	2271	F	1890	1 outbdg	Avg	\$3,255	\$146,255	-18.02%
					(\$9,975)					(\$5,270)	\$0			\$15,000			
19578 E 260 N	Fairbury	10/31/2011	\$155,000	\$ 79.90	1.56	132	1	1	1.5	1940	P	1908	1 outbdg	Remodel, Avg-Gd	\$19,146	\$174,146	-31.15%
					\$15,900					\$1,246	\$0			\$0			

Control Mean	\$ 81.42	172.2
T Sale	\$60.19	46
Difference	-26%	\$ 21.23
		-73%
		-126

FMV TI without turbines	\$ 168,048
Actual Sale Price	\$119,900
Value Impact \$ Amt	\$ 48,143
Value Impact %	-28.65%

W. McCann

Copy from W. McCann

2009 McCann Lee County Study

Sales > 2 miles

16	1310 Melugins Grove	Apr 2004	\$179,000	Lyons	Overton	2	1,952	\$91.70
17	2617 Shady Oaks Rd	Apr 2003	\$131,000	Smith	Paplach	1.5	1,708	\$108.44
18	3448 Cyclone Rd.	Mar 2003	\$105,900	Munyon	Pippenger	2	1,456	\$72.73
19	2524 Johnson St.	Aug 2004	\$61,800	Copeland	Lampson	1.5	948	\$65.19
20	741 Third St.	Feb 2004	\$63,500	Eckhardt	Rosales	1.5	868	\$73.16
21	613 Church Rd	May 2003	\$115,000	Merkel	Parpart	1.5	1,458	\$78.88
22	3435 Willow Creek	Jun 2003	\$118,000	Swiatek	Brydun	2	884	\$133.48
23	3021 Cottage Hill	Mar 2005	\$182,000	Russ	Curtis	1.5	1,239	\$146.89
24	3385 Willow Creek	Mar 2003	\$180,000	McCoy	Carver	2	2,840	\$63.38
25	745 Second St.	Dec 2004	\$59,000	Wilson	Calderon	1.5	1,161	\$50.92
26	761 4th St.	Mar 2003	\$66,000	Stewart	Eisinger	1	724	\$93.92
27	2774 Welland Rd.	Apr 2003	\$93,000	Batha	Crumpton	1.5	1,104	\$84.24
28	558 Earville Rd.	Jan 2003	\$145,000	Hodge	Ikeler	2	1,280	\$113.28
29	2505 Wood St.	Aug 2004	\$105,000	Janiak	Bullock	2	1,812	\$57.95
30	385 Earville Rd.	Aug 2004	\$280,000	Rago	Diehl	2	2,142	\$130.72
31	3095 Cyclone Rd.	Dec 2004	\$169,900	Summerhill	Rainbolt	2	2,048	\$82.96
32	742 Second St.	Jan 2003	\$103,000	Deinotal	Stewart	2	1,876	\$54.90
33	305 Angling Rd.	Mar 2005	\$110,000	DMV Prop.	Herendeen	1	690	\$176.00
34	2515 Wood St.	Apr 2004	\$80,000	Jones	Sarver	1	912	\$87.72
35	1218 Locust Rd.	Jan 2005	\$169,000	Wachowski	Gernbeck	1	1,040	\$162.50
36	901 Melugins Grove	Aug 2003	\$228,000	Kidd	Rajan	1	2,000	\$114.00
37	1490 German Rd.	Aug 2004	\$85,000	Firrit	Challand	2	2,144	\$39.65
38	603 Ogee Rd.	Apr 2004	\$285,000	Anderson	Miller	1	1,920	\$148.44
39	546 Carnahan Rd.	Jan 2005	\$110,000	Coley	Sarabia	1	1,296	\$84.88
40	1353 County Line	Nov 2003	\$185,000	Vallejo	Bozaeth	1.5	1,338	\$138.27
41	2512 Johnson St.	Feb 2005	\$123,000	Montavon	Sutton	2	2,232	\$55.11
42	2509 Herman Rd.	Apr 2004	\$142,900	Bresson	Aries	1	1,404	\$101.78
43	955 Woodlawn	Jul 2003	\$265,000	Swan	LaRosa	1.5	1,918	\$138.16
44	1279 Locust Rd.	Mar 2003	\$270,000	Witte	olin	1	2,156	\$125.23
45	648 Ogee	Nov 2003	\$225,000	Fickenscher	Rojas	1	1,768	\$127.26
46	1339 Woodlawn Rd.	Sep 2003	\$230,000	Howell	Bamhill	1	1,701	\$135.21
47	1349 Woodlawn Rd.	May 2003	\$207,500	Howell	Wiskan	1	1,809	\$114.70
48	711 O'Gee Rd.	Aug 2004	\$185,000	Groevengoed	Carabal	1	1,352	\$136.83
49	1295 Locust Rd.	May 2004	\$300,000	Hagan	Lowe	1	2,672	\$112.20
50	860 Paw Paw Rd.	May 2004	\$185,000	Wiskur	Pogreba	1	1,148	\$161.15
51	3011 Honeysuckle	Mar 2005	\$355,000	Abbott	Brandt	2	3,655	\$97.13
52	489 Earville Rd.	Nov 2004	\$165,000	Schlafke	Fromhertz	2	1,400	\$127.86
53	2512 Shaw Rd.	Jun 2004	\$153,500	Hilavin	Kapinski	2	1,038	\$93.71
								Average sale price
								\$104.72

Sales located within 2 miles

Sale #	Address	Sale Date	Price	Grantor	Grantee	Style	Size SF	\$/SF
1	629 W. Chestnut	Oct 2003	\$37,000	Estes	Lipe	1.5	1,161	\$31.87
2	323 W. Chestnut	Oct 2004	\$40,000	Reed	Hovious	1.5	1,425	\$28.07
3	1019 Steward Rd.	May 2003	\$40,000	Houle-Ward	Reyns	2	1,408	\$28.41
4	91143 Paw Paw	Mar 2005	\$187,000	Zaylik	Pachero	2	1,571	\$119.03
5	1224 IL Rte. 251	Jun 2003	\$138,000	Gittleson	Kowalski	2	1,272	\$108.49
6	339 Chestnut St.	Jan 2003	\$72,000	White	Flynn	2	1,684	\$42.76
7	630 W. Chestnut	Sep 2003	\$126,000	Eddy	Morath, Sr.	1.5	1,728	\$72.92
8	427 Chestnut St.	Oct 2003	\$87,000	Hesik	Rourke, Jr.	1.5	1,380	\$63.04
9	138 Cherry St.	Sep 2004	\$80,000	Hammond	Alexander	1.5	1,326	\$60.33
10	536 W. Cherry	Oct 2004	\$63,500	Johnson	Fitzpatrick	1.5	999	\$63.56
11	885 Compton Rd.	Oct 2004	\$68,900	Boysen	Gellings	1	480	\$143.54
12	518 W. Cherry St.	Apr 2003	\$87,500	Allen	Beckman	1	927	\$94.39
13	222 Maple St.	Dec 2004	\$150,000	Clark	Cummings	1	1,852	\$80.99
14	444 W. Main St	Mar 2005	\$109,900	Miller	Michaels	1	1,402	\$78.39
15	2874 Beemerville	Jul 2003	\$367,000	Finkboner	DGNB TRT	1	2,201	\$166.74
Average sale price								\$78.84

2009 Study Summary

Avg Sale Price > 2 miles = \$104.72 SF

Avg Sale Price < 2 miles = \$ 78.84 SF

Difference in Sale Price = \$ 25.89 SF

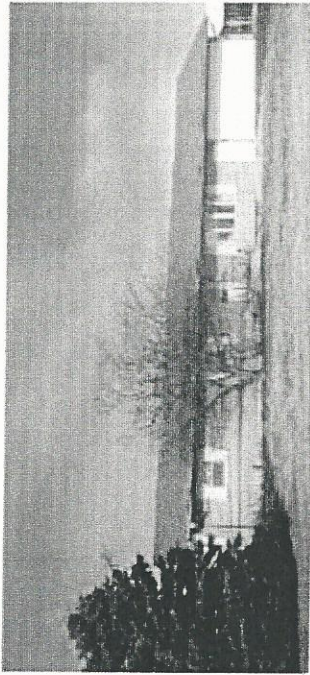
Average Value Diminution Within 2
miles of turbines **25%**

McCann 2012 Study

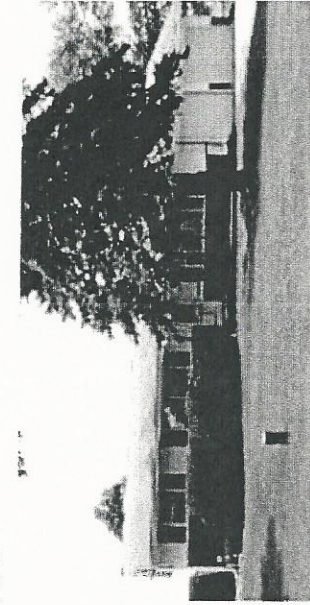
Lee & DeKalb Counties

- Detailed Paired Sales analysis
- Target & Control sale data selected on basis of sales near turbines (Target) being paired with comparable sales (Control) at much greater distances
- Target sales average distance = 2,618 feet
- Control sales average distance = 10.1 miles
- Current empirical data finds 23% to 33% (**avg. 26%**) impact from inadequate setbacks

**DeKalb County Paired Sale #3
1-T & 3-C**



Near Turbines = Target



Far from Turbines = Control

Category
Address
Turbine Distance
CDOM
OLP
SP/OLP %
Sale Date
Sale Price
GBA/SF
\$/SF
Built
Tot/BR/B
Basement
Garage
Acres
Out Bldgs
Quality
Condition

DeKalb Sale 1-T
 13801 Tower Rd., Lee, IL
 1,000 ft. approx. from NWC property line
 7-12 days; 3 listings
 \$275,000
 51%
 Nov. 2012
 \$140,000
 \$ 1,439
 \$ 97.29
 1979
 5 rm/3 br/1 bth
 2 br's, fam rm, bath
 2 car attached
 5
 4
 Avg.
 Avg.

DeKalb Sale 3-C
 27779 Five Points Rd., Sycamore, IL
 11.7 miles SW of property
 409 days
 \$239,900
 90%
 Feb. 2012 DeKalb (7%) X 9 months = (5.25%)
 \$215,000
 \$ 1,507
 \$ 142.67
 1966 (13 yrs older X 1/2% per yr deprec) = 6.50%
 6 rm/3 br/ 1 bth (Dining Room) \$ 13,975
 full, unfinished (+ \$10/sf for subj. finish bsmt) \$ (2,000)
 2 car attached \$ 15,070
 4.18
 1
 Avg.
 Avg.
 at \$10k/acre
 (Est. contribution of 3 bldgs)
 0
 0
 0
 0

Adjustments + (-)

Unadjusted Sale Price Analysis

Actual Sale Price Far Sale \$215,000
 Actual Sale Price Near Sale (\$140,000)
 Difference (\$75,000)
 % Difference **-34.9%**

Net Adjustments

Adjusted Sale Price Analysis

Adjusted Sale Price (MV of near sale) \$ 248,945
 Near Sale Price \$ (140,000)
 Indicated Turbine Value Impact to Near Sale \$ (108,945)
 Impact % **-43.8%**

Paired Sale Analysis Summary

Lee County Study Area

Pair #	T#	Target Area			Control Area			Impact %	
		Distance Feet	CDOM	SP/LP %	C#	Distance Miles	CDOM		SP/LP %
1	1-T	7,860	535	71.4	1-C	10.0	55	100.0	(27.0)
2	1-T	7,860	535	71.4	2-C	16.0	167	87.2	(30.3)
3	2-T	1,469	1,041	70.0	3-C	11.7	544	90.0	(11.9)
4	2-T	1,469	1,041	70.0	4-C	16.3	176	101.0	(24.0)
5	3-T	3,660	339	71.0	3-C	11.7	544	90.0	(15.5)
6	3-T	3,660	339	71.0	4-C	16.3	176	101.0	(25.6)
7	4-T	315	625	82.0	5-C	4.0	241	82.0	(22.5)
8	4-T	315	625	82.0	6-C	4.8	601	94.0	(23.1)
Lee Averages		3,326	635	73.6		10.5	297	92.4	(22.5)
			1.74 yrs						

DeKalb County Study Area

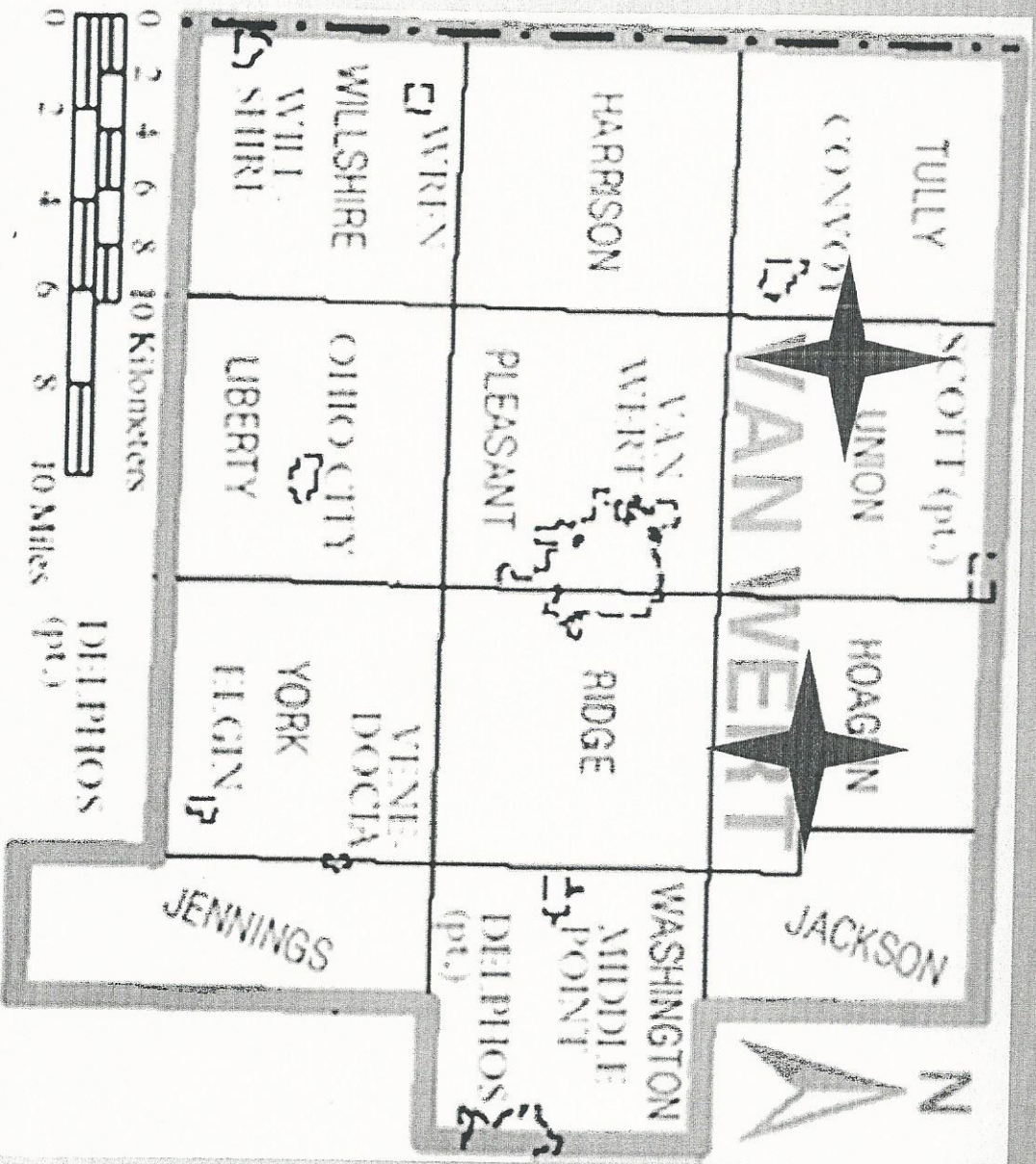
1	1-T	1,000	712	51.0	1-C	10.3	138	90.0	(46.9)
2	1-T	1,000	712	51.0	2-C	5.0	1	95.0	(41.6)
3	1-T	1,000	712	51.0	3-C	11.7	409	90.0	(43.8)
4	2-T	2,139	815	75.0	4-C	11.4	379	81.0	(15.9)
5	3-T	1,880	386	74.0	4-C	11.4	379	81.0	(15.6)
DeKalb Averages		1,637	638	66.7		9.6	232	89.0	(32.8)
			1.75 yrs						
Lee & DeKalb combined		2,618	636	70.6		10.1	271	91.0	(26.4)

Note: Averages reflect each Target & Control Sale 1 time each, except for Impact %.

Related Study Results

- CDOM is 1 year longer near turbines
- Sale Price as a % of list price is 70.6% near vs. 91% far from turbines
- DeKalb FPL turbines are larger and nearer Target residential sales, on average, and empirical appraisal results find greater impact with shorter Setbacks
- LBNL & Hinman claim that values “rebound” is false. McCann 2003-2005 & 2012 study periods in Lee County find consistent long term value impairment

McCann 2012 Study Van Wert County, Ohio



Van Wert County, Ohio 2012 Residential Sale Summary

Township	# Sales	# Sales via Foreclosure	% via Foreclosure	Avg. Price*	Avg. \$/Sq Ft*	Setting
York & Liberty	11	1	9%	\$78,980	\$41.08	>6 miles away
Union & Hoaglin	15	7	47%	\$58,417	\$31.97	Turbine Footprint
Difference	+ 4	+ 6	+38%	(\$20,563)	(\$9.11)	
% Difference				(26%)	(22%)	

Falmouth, MA Value Diminution

	Sale Price \$/Sq. Ft.	Indicated Discount % VS. Comp Data	Indicated Discount \$/Sq. Ft.
833 W. Falmouth Hwy, Falmouth, MA	\$199.77		
62 Nye Rd. Falmouth, MA	\$294.12	32%	\$94.35
Falmouth Average	\$272.29	27%	\$75.52
Barnstable Average	\$261.69	24%	\$61.92
	Avg. Discount	27%	\$77.26

Analysis

833 W. Falmouth Hwy has a clear view of the turbines, and is a sale that is contemporary with the paired sale at 62 Nye Rd. It is also compared to Falmouth & Barnstable County average sale prices per square foot.

Comparison reveals that the 833 Falmouth Hwy property, located in close proximity to the Wind 1, 2 and Webb turbines has sold for a discounted or below market price, despite its superior historic appeal, a 1.1 acre lot size (larger than typical) and a 199 day marketing time. It is also noted that 833 Falmouth Hwy home had been previously marketed and withdrawn, for a total time from beginning to end of marketing efforts of about 37 months.

All indicators reflect a market derived discount from 24% to 32%, and average 27%. However, if the 833 Falmouth sale is adjusted down by \$50,000 for the additional value of the larger lot, the indicated discount increases to 37% compared to Falmouth market average.

LANSINK RESALE STUDY SUMMARY

Conclusion: Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines	
1	1480 Lakeshore Road, Norfolk -44.17%
2	71 Norfolk County Road 23, Norfolk -55.18%
3	47 Concession Road A, Norfolk -22.47%
4	43 Old Mill Road, Norfolk -32.96%
5	1575 Lakeshore Road, Norfolk -27.67%
6	1527 Lakeshore Road, Norfolk -28.88%
7	1921 Lakeshore Road, Norfolk -38.48%
	Median -32.96%
	Average -35.69%
	Low -22.47%
	High -55.18%

Conclusion: Melancthon, 133 Wind Turbines	
1	375557 6th Line, Amaranth -48.27%
2	97121 4th Line, Melancthon -58.56%
3	504059 Highway 89, Melancthon -23.24%
4	562340 County Road 17, Melancthon -26.66%
5	582328 County Road 17, Melancthon -37.30%
	Median -37.30%
	Average -38.81%
	Low -23.24%
	High -58.56%

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Opinion from Antares:

Lansink Resale Study - 2012

Sale and Resale, Property: 504059 Highway 89, Melancthon

The average Orangeville & District Real Estate Board Residential MLS® price January 2007 was \$254,803 and August 2009 when 504059 Highway 89, Melancthon resold the average price was \$302,550 resulting in a Change of 18.74%.

Average Price January 2007	\$254,803
Average Price August 2009	\$302,550
\$Change	\$47,747
%Change	18.74%

The property, 504059 Highway 89, Melancthon, was purchased by Canadian Hydro Developers, Inc. in January 2007 for \$305,000 but would have resold August 2009 for \$362,153 as a result of the passage of time.

Actual Price January 2007	\$305,000
%Change	18.74%
\$Change	\$57,153
Adjusted Price August 2009	\$362,153

However the Actual Price when the property resold to Egresits / Gooder in August 2009 was \$278,000, a loss of -\$84,153.

Diminution in Value: -23.24%

Actual Price August 2009	\$278,000
\$Difference	-\$84,153
%Difference	-23.24%

LITERATURE REVIEW

Summary Wind Turbine - Property Value Impact Studies

Independent Studies

Author	Type	Year	Location	Method	Distance	Impact %
Lansink	Appraiser	2012	Ontario	Resale (1)	< 2 miles	(39%) Avg. 23%-59%
Sunak	Academic RWTH Aachen University	2012	Rheine & Neuenkirchen	OLS Geographic Weighted Regression (2)	2 Km	(25%)
Heintzelman Tuttle	Academic Clarkson University	2011	Upstate NY	Regression Resale & Census Block	1/10 to 3 miles	Varies to > (45%)
McCann	Appraiser	2009 -2013	Illinois, (3) MI, MA, WI, OH	Paired Sales & resale	< 2 miles	(25%) 20% - 40%
Gardner	Appraiser	2009	Texas	Paired Sales	1.8 miles	(25%)
Kielisch	Appraiser	2009	Wisconsin (4)	Regression & Survey	Visible vs. not visible	(30-40%) (24-39%)
Luxemburger	Broker	2007	Ontario	Paired Sales	3 NM	(15%) \$48,000
Lincoln Twp. (5)	Committee	2000-2002	Wisconsin	AV ratio 104% v. 76%	1 mile	(28%)

D. J. ...

Wind Industry Funded Studies

Author	Year	Location	Methodology	Viewshed	Statistical Significance
Canning & Simmons	2010	Ontario	Regression Paired Sales	(6)	(7% - 13%) (9%)
Hinman	2010	Illinois	Pooled Regression Realtor survey	3 miles ½ mile	No SS (11.8%) (7)
Hoehn	2009	9 states	Pooled regression	5 miles 3k ft - 1 mile	No SS (5.6%) (8)

Footnotes:

- (1) Lansink Resale study uses resales from developer to private buyers, with Easement in Gross condition of sale. Buyer accepts noise impacts, etc., waives liability
- (2) Lots only. No pooling of data
- (3) McCann Illinois study & research updated, multiple states
- (4) Kielisch regression lot sales; Realtor survey residential
- (5) Committee compared actual sale prices vs. AV and found homes up to 1 mile sold @ 76% of AV, and > 1 mile @ 104% of AV
- (6) Usually cited as being a study that found no impact. However, all methods used yielded negative numeric indication. Author concludes no statistical significance.
- (7) Cites Realtor who believes no impact on value > 3 miles. Concludes some results indicate "wind farm anticipation stigma" (11.8%)/Pg.55. Author states "the results neither support nor reject the existence of a wind farm nuisance stigma after the wind farm achieved commercial operation....likely due to only 11 properties selling during operations within 1 mile of wind farm." Good neighbor payments to some nearby neighbors. Values near wind farm appreciated \$13,524 after operation, following \$21,916 decline measured under anticipation stigma theory. (Net loss of \$8,392 pre- vs. post operation./Pg. 120.
- (8) Study excludes developer resales with 36% & 80% discounts from buyout price. Pooled data from 9 states 24 projects insures lack of statistical significance for value loss examples near turbines. Other sales nearby excluded due to deviation too far from mean and resale.

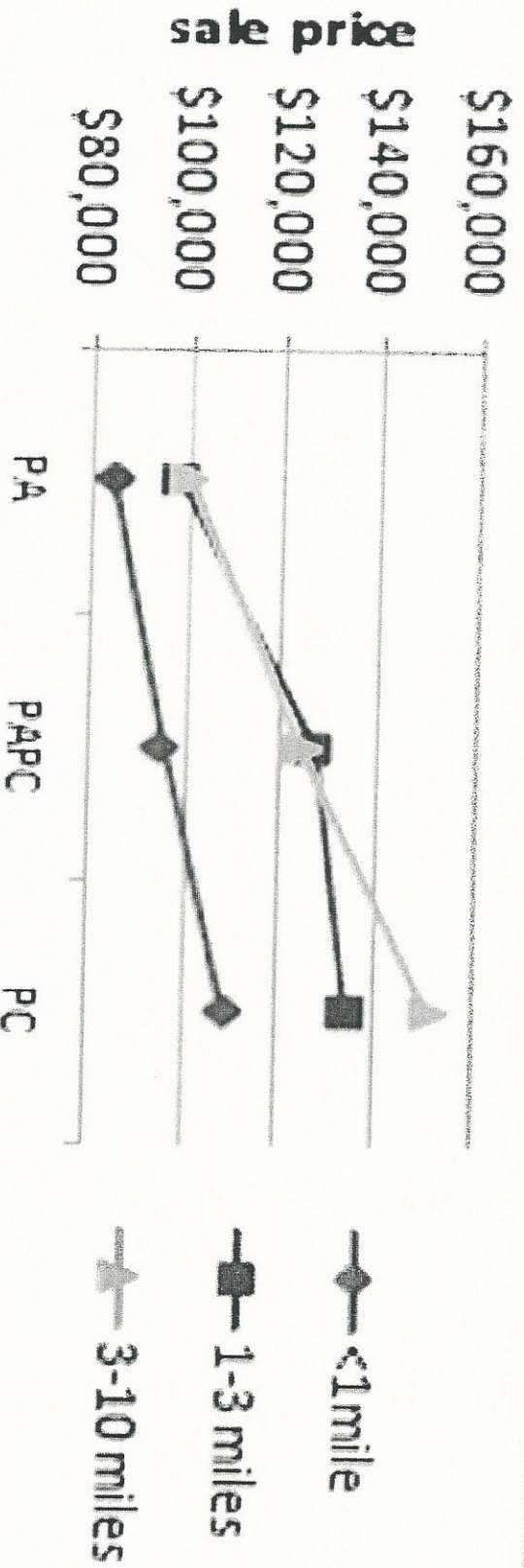
Recent Studies

- LSE -11% impact. Academic regression study
- UCON/LBNL/- (Massachusetts Clean Energy Center)
(Does not mention scores of lawsuits and thousands of neighbor complaints) **No Statistical significance** found. .80 R2. IAAO standard for reliability is .90 or >
- LBNL, 8/2013: *“Therefore for the purposes of this research we will assume 3-4% is a maximum possible effect.”* R2 = .67

McLennan Risk Management
35

Sale Price

	<1mle	1-3 miles	3-10 miles
PA	\$ 84,830	\$ 98,676	\$ 100,485
PAPC	\$ 95,223	\$ 127,054	\$ 124,532
PC	\$ 109,133	\$ 134,647	\$ 151,559



LBNL 8/2013

<u>Value Change - PA</u>	<u>PC</u>	<u>Difference</u>
3-10 miles \$100,485	\$151,559	\$51,074 50.8%
< 1 mi. \$ 84,830	\$100,485	\$15,655 <u>18.5%</u>

Value change is lower by margin of **32.3%**

- Original LBNL 2009 report excluded resales that showed 36% & 80% value loss. 2013 conclusions similarly not supported by empirical data analysis

Impact of Industrial Wind Turbines on Residential Property Assessment In Ontario

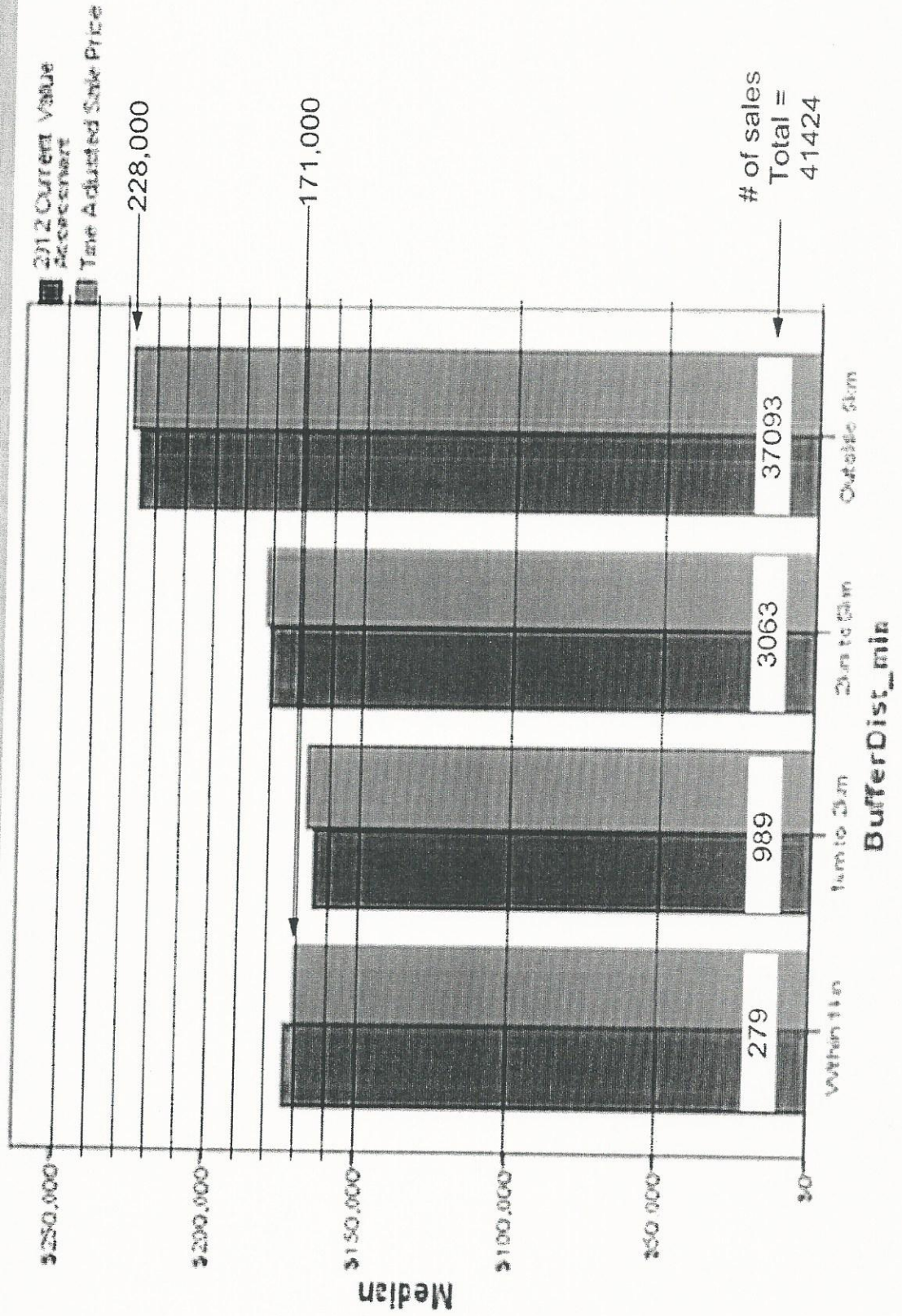
2012 Assessment Base Year Study



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PROPERTY
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CORPORATION

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MPAC STUDY DATA



VALUE IMPACT SUMMARY

MPAC STUDY DATA

(Time Adjusted Sales - Appendix D2)

Setback km	# Sales	Median Sale Price	\$ Impact	% Impact
1 or <	279	\$171,000	\$57,000	25.0%
1 to 3	989	\$168,000	\$60,000	26.3%
3 to 5	3,063	\$180,000	\$48,000	21.1%
> 5	37,093	\$228,000	Control Setback	

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 32
 Cathy...
 [Illegible signatures]

Conclusions

- ✓ Setbacks of less than 3 miles are inadequate to avoid significant loss of value, or impaired use & enjoyment of neighboring property
- ✓ If Project is approved as proposed the most proximate residential properties will experience a range of value impact from (25%) at 2-3 miles, to (40%) typical setback ranges.
- ✓ Project does not meet the requirements of the Livingston County Zoning Ordinance with respect to Special Use, real estate value and compatibility related issues.

What does WDO affect project value

Basis for Professional Opinions

- ✓ Independent studies consistently find significant value diminution
- ✓ Appraisal studies are superior
 - Focus on **paired sale** data, **resale** studies, “nearby” data
- ✓ Wind Industry commissioned studies use only regression analysis
- ✓ Data “pooling” assures no statistical significance of any value loss examples
- ✓ Non-appraisers do not comply with USPAP, on several levels
- ✓ Industry favored LBNL study found to not be reliable for any public policy purposes
- ✓ Court decision rejected regression by value witness
- ✓ Clarkson & Sunak studies use regression, but do not pool data
- ✓ Value loss conclusions are statistically significant
- ✓ Clarkson useful for distances as near as 1/10 mile
- ✓ McCann and other studies collectively find that proximity impacts values (25%) to (40%)

Common Sense

- Market resistance to buying a home in an overwhelming industrial setting
- Sellers often under duress, due to noise, health impacts, nuisance and “invasion” of turbine impacts
- Discounts derived from market are comparable to other duress conditions, i.e., foreclosure sale, liquidation, estate sale with short marketing, auction or undesirable or “problem” property.

Consideration of Appropriate Conditions

- **Height** – 400 -500 ft. typically proposed; *wind energy can be generated with much less height.*
- **Hours of Operation** – 24/7 typically proposed; *Most nuisance, noise and health complaints are during normal sleep hours.*
- **Setbacks** - Industry claims “standards” of 1/4 mile or less; *experience proves these are too close, via property value diminution, noise, flicker, aesthetics, health complaints, blade/ice “throw”, etc.*

Ben Hoen Interview

.... You might know about a Property Value Guarantee. It's a dicey situation and complicated, but I think homes that are very close, there is just too much unknown right now; that seems reasonable. I think one of the things that often happens is that (wind) developers put our report forward and say look property values aren't affected, and that's not what we would say specifically. On the other hand, they have little ground to stand on if they say we won't guarantee that.

Reported by:
Clif Schneider

April 12, 2010 – recorded interview available online

PVG - Key Elements

- ✓ Owners left "whole", regardless of whether they sell or stay.
- ✓ No hurdles to being included. Property rights for 2nd homes, AG land, etc. are not immune from devaluation.
- ✓ Buyout provision in the event that a property is unmarketable after "typical" marketing period for area with no turbines visible.
- ✓ Administration of PVG by unbiased 3rd party (*Panel appointed by PVA? Could include a retired judge, lawyer and professional appraiser.*)
- ✓ Automatic coverage of property within 3 mile range. *How far? (radius?)*
- ✓ Extend PVG range if/when ILFN or other noise nuisance is A) reported by owner/occupant & B) measured by independent acoustician retained by PVG panel.
- ✓ Bonding and/or insurance to cover 25% of value within 3 miles. *How far?*
- ✓ Language to prevent need for neighbors to file litigation. **PVG**

Does not include DeKalb - Ham.

guy [unclear]

AG

SCHEDULE

TRANSFER OF EASEMENT IN GROSS

Transferor: Malcolm Keith McDonald
Transferee: Canadian Hydro Developers, Inc.
Re: Part Lot 29, Concession 5, Part I on Plan 7R787, Amaranth (PIN: 34055-0033 (LT))

The Transferor hereby transfers, sells, grants, and conveys to the Transferee, to use and enjoy for the benefit of the Transferee, the right, liberty, privilege, and free and unencumbered easement (hereinafter "Easement") in perpetuity commencing on the date hereof, over, along, and upon the Transferor's Lands for the right and privilege to permit heat, sound, vibration, shadow, flickering of light, noise (including grey noise) or any other adverse effect or combination thereof resulting directly or indirectly from the operation of the Transferee's wind turbine facilities situated on the Transferee's leasehold interests located within the Townships of Melancthon and Amaranth, in the County of Dufferin, for the Transferee's Melancthon EcoPower Centre, which shall include but not be limited to any and all options to lease and lease agreements and any renewals, extensions, amendments or replacements thereof, in any abutting, adjoining, neighbouring or other lands (hereinafter, collectively, the 'Leasehold Lands'). The Transferor further acknowledges and agrees that the operation of the Transferee's wind turbine facilities located on the Leasehold Lands may affect the living environment of the Transferor and that the Transferee will not be responsible or liable for, of and from any of the Transferor's complaints, claims, demands, suits, actions, or causes of action of every kind known or unknown which may arise directly or indirectly from the Transferee's wind turbine facilities on the Leasehold Lands to the extent permitted by this Easement. In addition, the Transferor hereby covenants and agrees to indemnify, defend, and hold harmless the Transferee from any and all liabilities, claims, demands, costs and expenses arising from any direct, indirect or consequential damages arising out of a complaint, claim, action or cause of action initiated by the Transferor as against the Transferee for anything permitted by this Easement in relation to the Transferee's wind turbine facilities located on the Leasehold Lands.

This Easement and all acknowledgements contained herein shall enure to the benefit of and be binding upon the Transferor and Transferee and their respective heirs, executors, successors, servants, agents and assigns, as the case may be. This Easement will also be registered on title and shall remain with the Transferor's Lands.

This is an easement in gross.

