FILE

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Irwin, Steven

13-0990-EL-BGN

From: Valerie Malicki <valeriemalicki@gmail.com>
Sent: Monday, June 16, 2014 12:40 PM
To: PUCO ContactOPSB
Subject: Emailing McCann Mason County, Kentucky Value Impact UPDATED SUMMARY.pdf
Attachments: McCann Mason County, Kentucky Value Impact UPDATED SUMMARY.pdf

To all Voting and Non Voting members of the OPSB,

As you will see in this report property value is significantly decreased when wind turbines are in the area decreased by approximately 25% or more.

I also find it interesting that windlab has not addressed many specific questions/issues this community has with the wind turbines. our community has been taken advantage of ,because we are unfamiliar with turbines! they presented in black and white "worldwide evidence" showed that these structures are safe. however very simple research of other people's experiences , of the head of Harvard's vestibular department, of countless other medical professionals' experience with these wind turbines show that they are not safe. former senior member of Health Canada study Dr Robert McMurtry (former university dean also) reports 1 in 3 will have adverse health effects! He notes things like depression migraines feeling sick, dizziness. he reports that wind companies downplay these adverse health effects so that they can bring them into communities....hhmmmm, does that sound familiar?

They say that people are not a part of the project site , (yes I don't make the cut, being 717 feet away what a cruel joke). however these same people will be dramatically effected when they hear noise outside and cannot plan a simple party at their own home, experience infrasound that negatively affects every cell their body (simply Google infrasound destroys -it is used in the military as a weapon), maddening shadow flicker, or their children (although they live 12 miles away) , their children who love playing in the park can't anymore. Because it's too loud , because they have ringing in the ears and they get sick and nauseated, because there are seven 490 feet turbines planned within 2 miles of the local park , where their children play tee-ball. (is it even common sense that Industrial turbines , 20 stories higher than the Statue of Liberty, would make the sound of refrigerator what a joke).

so the evidence is mounting! in every area !, but this letter points to the fact that property values will be devalued and also local taxes due to our local county will be lowered. not to mention the fact that we are trying to improve greenwich but no one will want to move here with turbines everywhere. it's obvious.

the last map that I looked at showed that approximately two-thirds of greenwich will be within a mile and a half of turbines. again 550 homes within a mile and a half from turbine 14.

if windlab takes no responsibility for their actions in the pre-planning stage what will the impact be after these monstrous 20 stories higher than the Statue of Liberty beasts are erected?

Save our beautiful, peaceful, healthy, PRIVATE , and valuable (our life's largest investment!) PROPERTY,

Mrs. Valerie C. Malicki, MA, LPCC

Ps. it appears that most IWT residents have complaints starting at about 35 DBA, yet ours is rated for 51 DBA. why is this? is it because the very loud train engine blares have offset our average ? we are quiet rural neighborhood with an average of probably about 30 DBA normally.

Pss. Responsibility Matters! Ask the residents of (maybe the Hartke family who has been driven to a mobile home 8 miles away) in Boone co. Illinois. Lastly you may want to talk to the residents of Clinton County, MI. This is a project that Monica Jensen herself told me she worked on. Ask them how happy they are with the project, or simply visit their website at Clinton County Wind Watch.

Psss. if this wind company is so wonderful and honest and great for the community let's bring ALL of the information out into the open!

PROPERTY VALUE IMPACT & ZONING EVALUATION

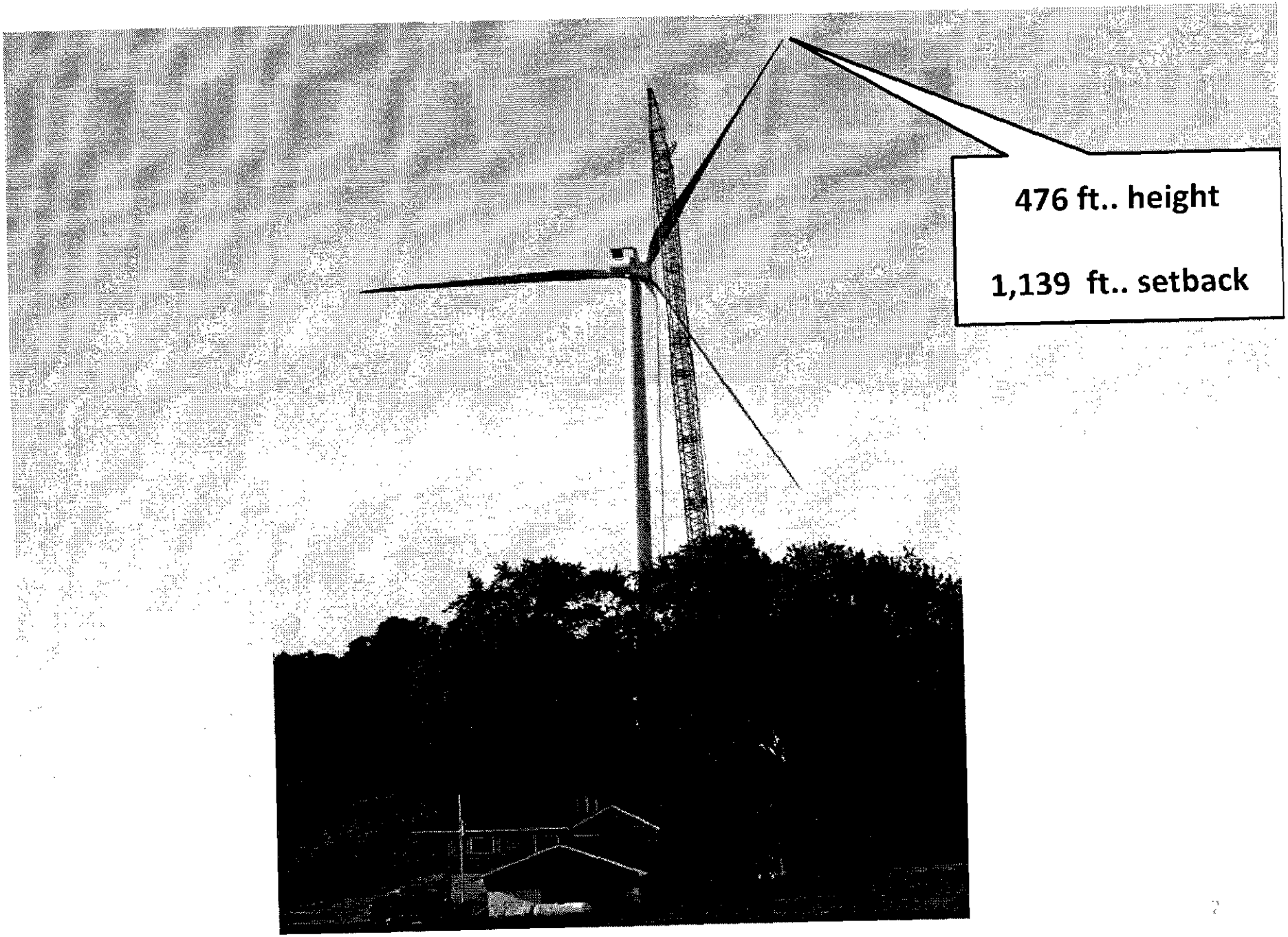
Industrial Scale Wind Energy
Mason County, Kentucky

- Requested by -

Citizens Voice of Mason County

McCann Appraisal & Consulting, LLC

May 12, 2014


476 ft.. height
1,139 ft.. setback

Mason County, Kentucky

Qualifications
Michael S. McCann, CRA

- Over 30 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

McCann Study

- ✓Review of Mason County Ordinance, Purpose, Conditional Use approval criteria
- ✓Review of existing character of Project area
- ✓Review of nuisance factors and stigma typically associated with nearby wind projects, established by existing residential uses
- ✓Review of prior McCann empirical value studies
- ✓Literature review - wind projects impact on property values

MASON COUNTY LAND USE MANAGEMENT ORDINANCE

202 PURPOSE

- to promote public health, safety, morals, and the general welfare of Maysville and Mason County, Kentucky;
- to facilitate orderly and harmonious development and preserve the visual or historical character of the area; and
- to regulate the density of population and the intensity of land use in order to provide for adequate light and air.

ARTICLE IV
THE USE OF LAND AND STRUCTURES

- Preserve and protect the aesthetic quality, natural beauty, and character of the land and the natural resources.
- Preserve, enhance, and protect the character and quality of life of the community.
- Promote and protect the safety of the public against fire, flood, or other hazards.
- Encourage the best possible use of the land while avoiding the undesirable effects of overcrowding, congestion, and mixture of incompatible uses.

CONDITIONAL USE PERMITS

- **403.2** The board may approve, modify, or deny any application for a conditional use permit. If it approves such permit, it may attach necessary conditions .....
- The board shall have the power to revoke conditional use permits, or variances for non-compliance with the condition thereof.

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 ¼ mile or less; *experience proves these are too close, via property value diminution, noise, flicker, aesthetics, health complaints, blade/ice "throw", etc.*

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 other physical impacts into, through or over neighboring property

Property Value Studies

Independent
McCann & other independent professional appraisers

Industry
Academic Institutions funded by USDOE and wind energy developers

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.

2009 McCann Lee County Study

Sales > 2 miles

16	1310 Melugins Grove	Apr 2004	$179,000	Lyons	Overton	2	1,952	$91.70
17	2612 Shady Oaks Rd	Apr 2003	$131,000	Smith	Paplach	1.5	1,208	$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	$50.82
26	761 4th St.	Mar 2003	$68,000	Stewart	Elsinger	1	724	$93.92
27	2774 Welland Rd.	Apr 2003	$93,000	Batha	Crumpton	1.5	1,104	$84.24
28	558 Earlville 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 Earlville 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	Delhotal	Stewart	2	1,876	$54.90
33	306 Angling Rd.	Mar 2005	$110,000	BMV Prop.	Herendeen	1	680	$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	Gembeck	1	1,040	$162.50
36	901 Melugens Grove	Aug 2003	$228,000	Kidd	Rajan	1	2,000	$114.00
37	1490 German Rd.	Aug 2004	$85,000	Firth	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	2612 Johnson St.	Feb 2005	$123,000	Montavon	Sutton	2	2,232	$55.11
42	2509 Herman Rd.	Apr 2004	$142,900	Bresson	Arjes	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	Barnhill	1	1,701	$135.21
47	1349 Woodlawn Rd.	May 2003	$207,500	Howell	Wiskart	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	$112.28
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 Earlville Rd.	Nov 2004	$165,000	Schlafke	Fromhertz	2	1,400	$127.86
53	2512 Shaw Rd.	Jun 2004	$153,500	Hilavin	Kapinski	2	1,636	$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	DeKalb Sale 1-T	DeKalb Sale 3-C	Adjustments + (-)	
Address	13801 Tower Rd., Lee, IL	27779 Five Points Rd., Sycamore, IL		
Turbine Distance	1,000 ft. approx. from NWC property line	11.7 miles SW of property		
CDOM	712 days; 3 listings	409 days		
OLP	$275,000	$239,900		
SP/OLP %	51%	90%		
Sale Date	Nov. 2012	Feb. 2012	DeKalb (7%) X 9 months = (5.25%)	($11,300)
Sale Price	$140,000	$215,000		
GBA/SF	1,439	1,507	(Difference not relevant)	0
$/SF	$ 97.29	$ 142.67		
Built	1979	1966	(13 yrs older X 1/2% per yr deprec) = 6.50%	$ 13,975
Tot/BR/B	5 rm/3 br/1 bth	6 rm/3 br/ 1 bth	(Dining Room)	$ (2,000)
Basement	2 br's, fam rm, bath	full, unfinished	(+ $10/sf for subj. finish bsmt)	$ 15,070
Garage	2 car attached	2 car attached		0
Acres	5	4.18	at $10k/acre	$ 8,200
Out Bldgs	4	1	(Est. contribution of 3 bldgs)	$ 10,000
Quality	Avg.	Avg.		0
Condition	Avg.	Avg.		0
		Net Adjustments		$ 33,945

Unadjusted Sale Price Analysis

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

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 #	Target Area T#	Distance Feet	CDOM	SP/LP %	Control Area C#	Distance Miles	CDOM	SP/LP %	Impact %
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** 1.74 yrs	**73.6**		**10.5**	**297**	**92.4**	**(22.5)**

DeKalb County Study Area

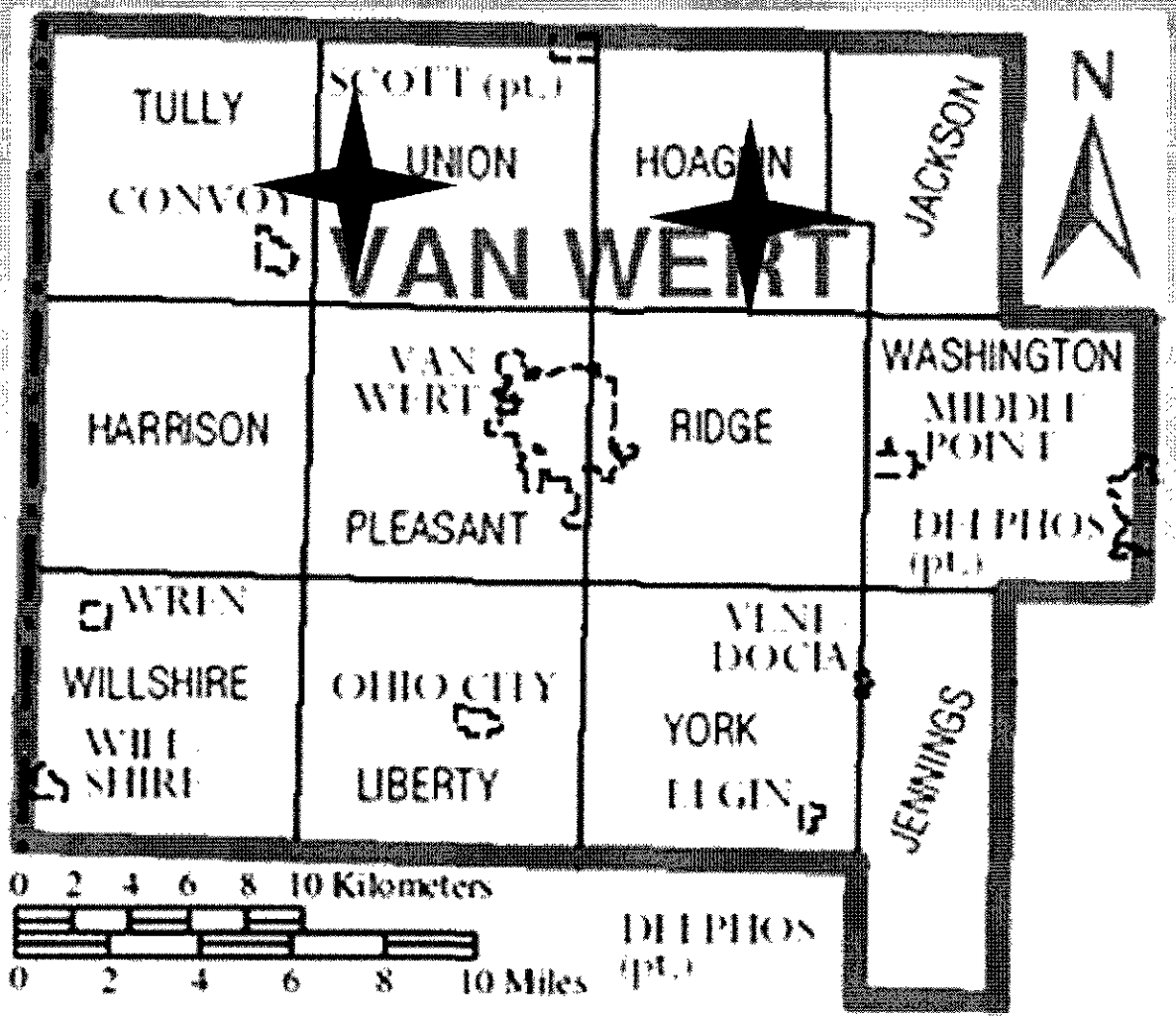
1	1-T	1,000	712	51.0	1-C	10.3	138	90.0	(46.9)
2	1-T	1,000	712	51.0	2-C	5.0	1	95.0	(41.6)
3	1-T	1,000	712	51.0	3-C	11.7	409	90.0	(43.8)
4	2-T	2,139	815	75.0	4-C	11.4	379	81.0	(15.9)
5	3-T	1,880	386	74.0	4-C	11.4	379	81.0	(15.6)
DeKalb Averages		**1,637**	**638** 1.75 yrs	**66.7**		**9.6**	**232**	**89.0**	**(32.8)**
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 & Jennings	11	1	9%	$78,980	$41.08	>6 miles away
Tully & Union	15	7	47%	$58,417	$31.97	Turbine Footprint
Differences	+ 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	582340 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%**

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%.

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.

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%.

Average Price January 2007	$254,803
Average Price August 2009	$302,550
$Change	$47,747
%Change	18.74%
Actual Price January 2007	$305,000
%Change	18.74%
$Change	$57,153
Adjusted Price August 2009	$362,153
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.	Committee (5)	2000-2002	Wisconsin	AV ratio 104% v. 76%	1 mile	(28%)

Wind Industry Funded Studies						
Canning & Simmons	**Appraisers (CANWEA)**	**2010**	**Ontario**	**Regression Paired Sales**	**Viewshed (6)**	**(7%-13%) (9%) No SS**
Hinman	**Academic ISU - REP Student thesis**	**2010**	**Illinois**	**Pooled Regression Realtor survey**	**3 miles ½ mile**	**No SS (11.8%) (7)**
Hoen	**USDOE funded LBNL**	**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.

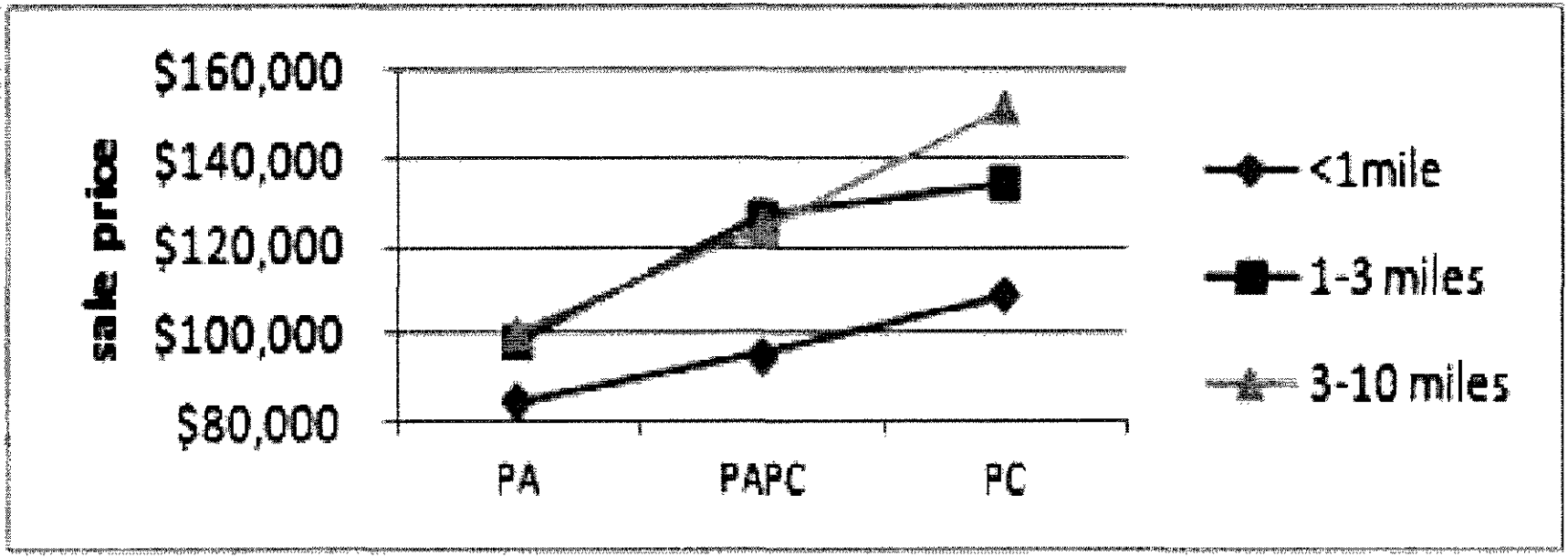
(8) Study excludes developer resales with 36% & 80% discounts from buyout price. Pooled data from 9 states 24 projects insures lack of statistical significance for value loss examples near turbines. Other sales nearby excluded due to deviation *too far from mean and resale.*

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 R_2. 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.*" R_2 = .67

Sale Price

	<1mile	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

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

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

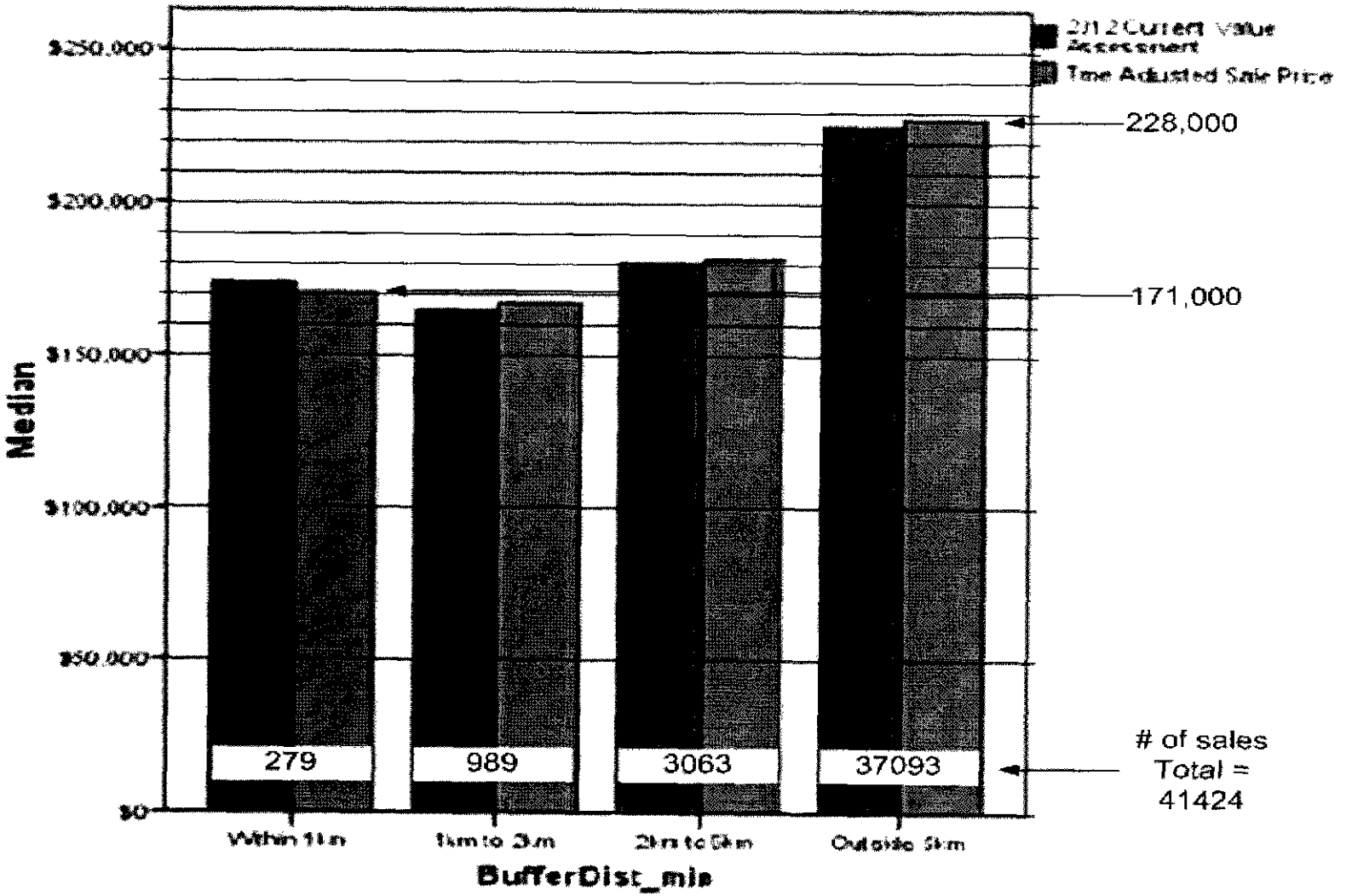
Impact of Industrial Wind Turbines on Residential Property Assessment In Ontario

2012 Assessment Base Year Study

MUNICIPAL PROPERTY ASSESSMENT CORPORATION

www.mpac.ca

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**	

Conclusions

- ✓ Setbacks of less than 2-3 miles are inadequate to avoid significant loss of value, or impaired use & enjoyment of neighboring property
- ✓ If Projects are approved as typically proposed, the most proximate residential properties will experience a range of value impact from (25%) at 2-3 miles, to (40%) typical setback ranges proposed by developers
- ✓ Wind Energy Projects do not meet the requirements of the Mason County Land Use Management Ordinance with respect to Conditional Use, real estate value and compatibility related issues

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 of undesirable or "problem" property.

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 2 to 3 mile range.
- ✓ 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.
- ✓ Language to prevent need for neighbors to file litigation. PVG panel should be final arbitration.

SCHEDULE

TRANSFER OF EASEMENT IN GROSS

Transferor: **Malcolm Keith McDonald**
Transferee: **Canadian Hydro Developers, Inc.**
Re: **Part Lot 29, Concession 5, Part 1 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.

CERTIFICATION

- The undersigned, representing McCANN APPRAISAL & CCONSULTING, LLC, do hereby certify to the best of our knowledge and belief that:

- FIRST: The statements of fact contained in this consulting report are true and correct.
- SECOND: The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions and represents the personal, impartial and unbiased professional analyses, opinions, and conclusions of the undersigned.
- THIRD: We have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to any of the parties involved.
- FOURTH: We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- FIFTH: Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
- SIXTH: Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- SEVENTH: Our analysis, opinions, and conclusions were developed, and this report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice.
- EIGHTH: Prior to testimony, a physical inspection was made by McCann Appraisal, LLC of the property that is the subject of this report. The undersigned also utilized photographs, maps and property record card data for characterizing and understanding the character of the subject property.
- NINTH: No one other than the undersigned provided significant real property appraisal assistance to the person signing this certification.
- TENTH: The undersigned, McCann Appraisal, LLC has not previously consulted and testified regarding the subject property.
- IN WITNESS WHEREOF, THE UNDERSIGNED has caused these statements to be signed and attested to.

Michael S. McCann, CRA
State Certified General Real Estate Appraiser
License No.553.001252 (Expires 9/30/2015)