Lansink Appraisals and Consulting
Real Estate Appraisers and Consultants
A Division of Wellington Realty Group Inc.

CASE STUDIES

Diminution in Price

Melancthon and Clear Creek

Wind Turbine Analyses

Hwy 89, Melancthon Township, Ontario, Canada Photograph: Ben Lansink

Prepared by

Ben Lansink
AACI, P.App, MRICS

October 2012

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Diminution in Price, Melancthon & Clear Creek Conclusions

The two studies suggest price diminution as follows:

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%**

None of the above properties considered in this report had a wind turbine erected on it. Registry facts and MLS® listings (if available) for these properties were obtained and are on file.

The Melancthon properties and neighbourhood were inspected and photographed by Ben Lansink on September 20, 2012.

The Clear Creek properties and neighbourhood were inspected and photographed by Ben Lansink on October 9, 2012.

Case Study: Introduction

Opinions about wind turbines – and their effect on property prices – are a relatively new phenomenon in Ontario (since 2005). Most people have an opinion regarding wind turbines and their effect on themselves, their surroundings, and society. The main concerns are the safety and health impacts of wind turbines.

If a wind turbine were erected on a property, would the neighbouring properties have the same market value as without the wind turbine? Does a wind turbine cause an increase or decrease in property value? There may be endless questions from a potential buyer and/or seller when dealing with a property affected by a wind turbine. When considering property value, these questions are difficult to quantify; however, the overall impact of a wind turbine can be analyzed within the actions of an open real estate market.

This study endeavours to isolate any loss in property price caused by a wind turbine. The construction and use of a wind turbine is an event over which a neighbouring property owner has no control. Each example in this study illustrates some type of 'harm' or 'injurious affection' that can be caused to a real property as a result of a wind turbine. The harm may be real or perceived and it may be different for each property and to each property seller and buyer.

This study analyzes specific examples that occurred within the open real estate market in order to isolate the impact on property value caused by a wind turbine.

Diminution, Obsolescence, Effects

Diminution in Value

Diminution in Value is a *loss in value* to a property caused by *obsolescence.* While the obsolescence may be curable, it may not be curable by a land owner.

For example, a land owner cannot move a hydro power transmission corridor or relocate a landfill operation nor can he move a Wind Turbine situated on land next to his land.

Obsolescence, one cause of diminution

- an impairment of desirability and usefulness caused by new inventions, changes in design, improved processes for production, or
- external factors that make a property less desirable and valuable for continued use
- may be either functional or external.

Source: The Appraisal of Real Estate, Second Canadian Edition

Harm

Most people have an opinion regarding obsolescence and the effect on themselves, their surroundings, their property, and on society. The harm may be real or perceived and it may be different for each property and to each property seller and buyer.

This perception is indicative of *how much one is willing to pay for a property***.**

TransAlta Corporation owns and operates the Melancthon Wind Facility through its wholly-owned subsidiary Canadian Hydro Developers, Inc. Based in Calgary, TransAlta is a public company listed on the Toronto Stock Exchange.

Canadian Hydro Developers, Inc. constructed Ontario's first utility-scale wind facility consisting of 133 industrial wind turbines producing 200 megawatts of power. Located near Shelburne, Ontario, Canada, the project is known as the 'Melancthon Wind Facility'. This facility has the capacity to generate 545,000 megawatt hours each year and twenty-year Renewable Energy Supply contract is in place with the Ontario Government. The Melancthon Technology is GE 1.5 MW turbines on 80 meter towers. Phase I of the project began commercial operation in 2006, with Phase II beginning commercial operation in late 2008.

In Ontario land use is controlled by the province through the *Planning Act, R.S.O. 1990, CHAPTER P.13.* Municipalities control land use through their Official Plans and Zoning by-laws. However, the Government of Ontario passed the *Green Energy Act, 2009* with the result that land use control regarding wind turbines was taken away from municipalities on May 14, 2009. On October 1, 2009, set-back regulations for wind turbines were implemented by *Ontario Regulation 359/09.*

The Melancthon Wind Facility project began in 2005 and was not subject to the Green Energy Act, 2009 or the set-back regulations implemented by Ontario Regulation 359/09.

Set-back Regulations for Wind Turbines in Ontario 550 Meters = 1,804.4 Feet

Item	Column 1	Column 2	Column 3
	Number of wind turbines calculated in accordance with subsection (2)	Sound power level of wind turbine (expressed in dBA)	Total distance from wind turbine to nearest noise receptor of the wind turbine (expressed in metres)
1.	1-5	102	550
		103 – 104	600
		105	850
		106 – 107	950
2.	6-10	102	650
		103 – 104	700
		105	1000
		106 – 107	1200
3.	11-25	102	750
		103 – 104	850
		105	1250
		106 – 107	1500

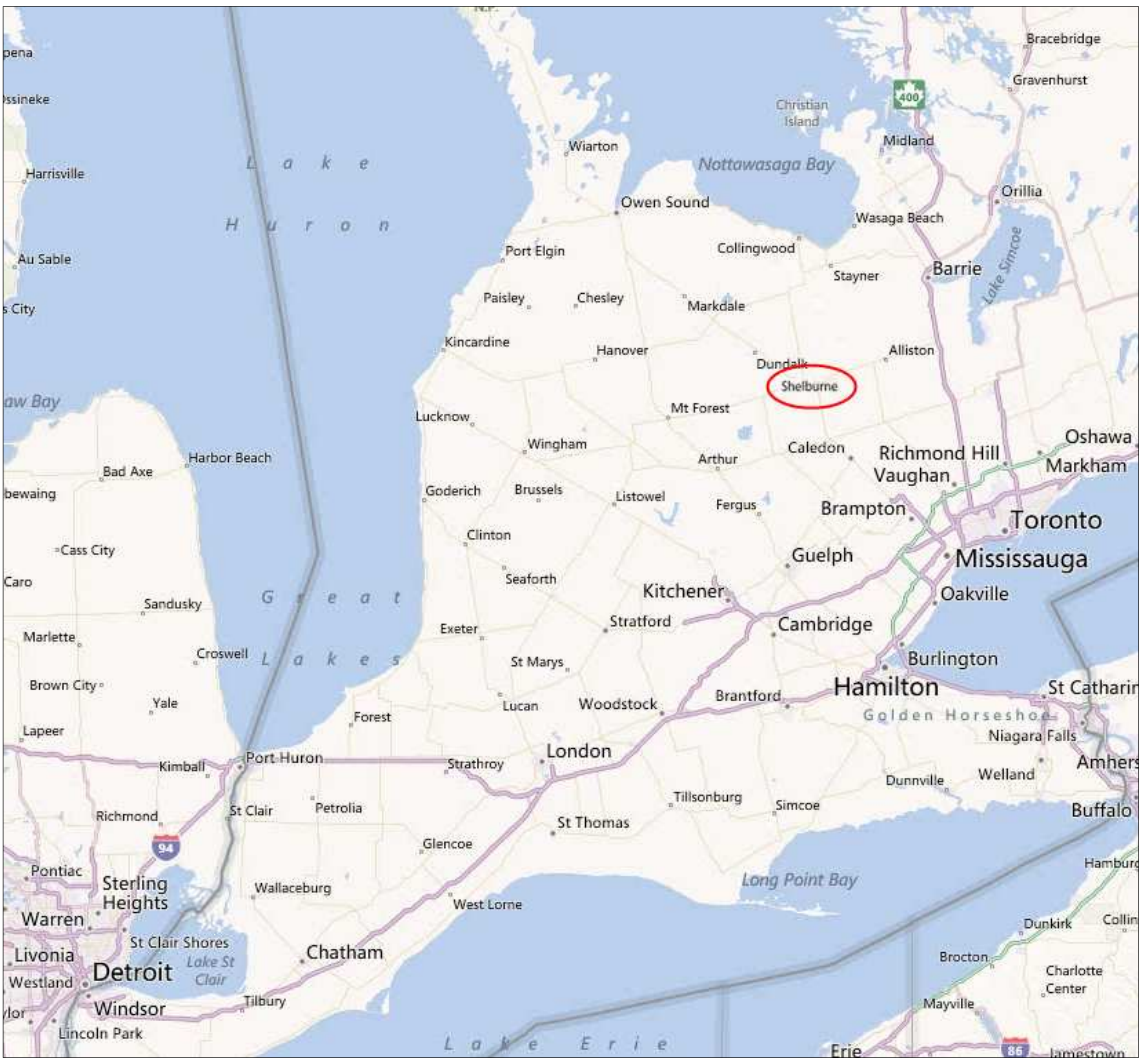
Source: http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09359_e.htm

It is noted that the "Noise Guidelines for Wind Farms", REQUIRES a proponent to submit a noise report:

> *Proponents of Wind Farms are to prepare and submit to the Ministry of the Environment (MOE) a Noise Assessment Report that includes details of the wind turbine design and operation, location of the wind turbine(s) within the specific site and surrounding area, as well as summary of compliance with the applicable sound level limits.*

The Set-Back table may not apply given a Noise Assessment report is required, why would a setback greater than 550m be used when the guideline requirement is to meet 40 dBA?

Location Map: Shelburne



CASE STUDY: Effects of a Wind Turbine Facility in Melancthon, Ontario

In this case study, an analysis of Melancthon Township properties that sold on the open market during the period 2005 to September 2012 was carried out. A registry search (Ontario's digital registry system) produced several properties that sold in the area, however, for the purpose of this study only 'dwelling properties' with a lot area of between ½ acre and 7½ acres were analyzed. Farm properties were not included.

Canadian Hydro Developers, Inc. purchased five properties, during the 2005 – 2007 time period, and re-sold these properties during the 2009 – 2012 time period. None of the properties detailed in this study had a wind turbine erected on it. Registry facts and MLS® listings for these properties were obtained and the Melancthon Wind Facility and the five properties were inspected in September, 2012.

Did Canadian Hydro Developers, Inc. pay the fair market price?

The sellers may have filed complaints and/or claims that the noises from the turbines were a nuisance and Canadian Hydro Developers, Inc. may have either tried to do the right thing or did not want bad publicity, or both, and purchased the five properties at prices that were in line with market prices for non-turbine homes in the proximity. Other than possible losses and costs resulting from possible litigation, there appears to be no incentive for Canadian Hydro Developers, Inc. to purchase the properties as they were not required for the wind facility.

It is very unlikely that the purchaser, Canadian Hydro Developers, Inc, would give an "equity gift" to a seller which is what Canadian Hydro Developers, Inc. would be doing if it paid above the fair market price.

It is also reasonable to conclude that Canadian Hydro Developers, Inc., a wholly-owned subsidiary of the public company, TransAlta, would not want to be seen as "taking advantage" and would therefore pay the fair market price.

On the following pages, the sale price of twenty dwelling properties in the vicinity of the Melancthon Wind Facility were compared to the sale price of the four dwelling properties purchased by Canadian Hydro Developers, Inc. The fifth property purchased by Canadian Hydro Developers, Inc. was a farm and is not included in this Case Study.

The properties studied were grouped into the following example groups:

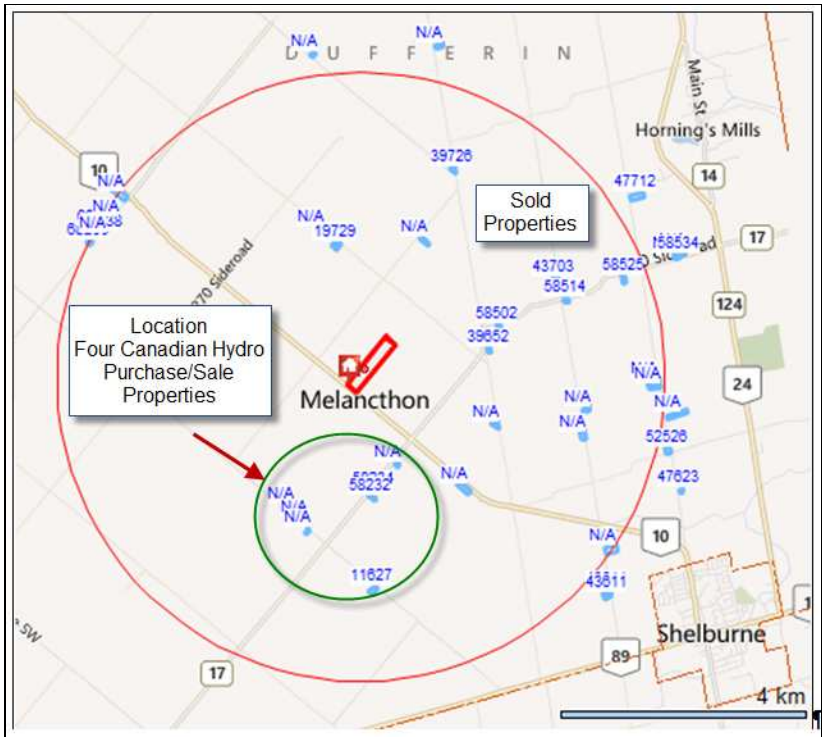
- Example Group A
  Dwelling properties offered and / or listed on MLS® and sold in the open market between January 1, 2005 and December 31, 2007.

- Example Group B
  Dwelling Properties offered and / or listed on MLS® and purchased by Canadian Hydro Developers, Inc. between January 1, 2005 and December 31, 2007 and subsequently re-sold.

The Open Market Sold Price is divided by the above-grade dwelling's square footage, as provided by Municipal Property Assessment Corporation (MPAC), to obtain the dollar price per square foot. The prices are then compared to the dollar value per square foot paid by Canadian Hydro Developers, Inc.

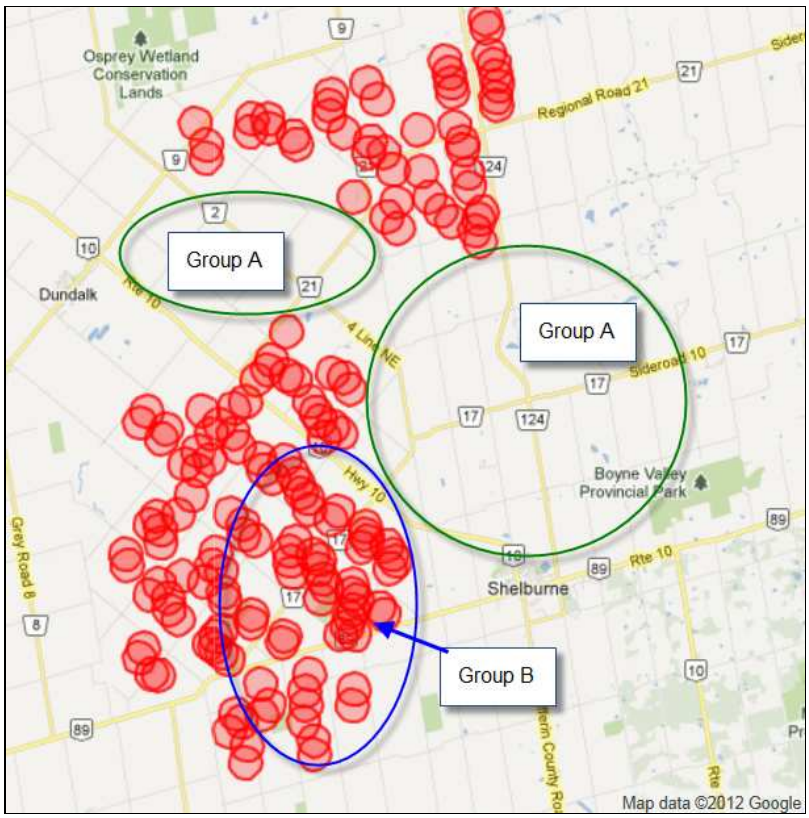
Because the difference between the dollar price per square foot for all the properties is negligible, it is therefore concluded that each of the four properties purchased by Canadian Hydro Developers, Inc. was acquired at a fair open market price.

The following map indicates the approximate location of the properties analyzed.



Source: Ontario's Digital Registry System

The following Map indicates approximate Wind Turbine Locations



Source: http://ontario-wind-turbines.org/owt-maps.html

GROUP A: Open Market Median and Average Sold Prices 2005-2007						
#	Roll Number	Melancthon Address	Date Sold	Sale Price	Dwelling Sq. Ft.	$/Sq. Ft.
1	2219000001253900000	ES Sideroad 280	Aug-05	$295,000	1608	$183.46
2	2219000004010500000	116278 2nd Line	Mar-06	$400,000	2174	$183.99
3	2219000006103250000	43611 4th Line	Apr-06	$326,500	1710	$190.94
4	2219000001192500000	585349 County Rd 17	Oct-06	$270,000	1398	$193.13
5	2219000005165400000	117093 2nd Line	Nov-06	$335,000	1719	$194.88
6	2219000006087200000	ES 4th Line	Apr-06	$333,000	1694	$196.58
7	2219000006076000000	525267 5th Sideroad	May-05	$320,000	1592	$201.01
8	2219000001278200000	397266 5th Line	Feb-06	$315,000	1564	$201.41
9	2219000005006050000	197300 2nd Line	Aug-06	$306,604	1504	$203.86
10	2219000005170030000	SS 2nd Line	Dec-07	$285,500	1392	$205.10
11	2219000006139000000	582400 County Rd 17	Sep-05	$312,500	1508	$207.23
12	2219000006077100000	WS 3rd Line	May-05	$314,019	1500	$209.35
13	2219000006158100000	396428 5th Line	Jul-07	$399,900	1875	$213.28
14	2219000006108500000	43636 4th Line	Feb-06	$309,000	1424	$216.99
15	2219000006061500000	47623 3rd Line	Nov-07	$345,000	1545	$223.30
16	2219000006113500000	39652 5th Line	Jul-07	$409,000	1829	$223.62
17	2219000001189200000	477125 3rd Line	Feb-07	$315,000	1310	$240.46
18	2219000006090100000	43617 4th Line	Feb-06	$384,000	1567	$245.05
19	2219000001217100000	437032 4th Line	Jun-06	$348,000	1400	$248.57
20	2219000006059200000	476353 3rd Line	May-06	$334,900	1320	$253.71
The twenty properties are located in Melancthon just northwest of Shelburne, mostly to the northeast and southeast of the wind turbines facility.				**MEDIAN**		**$206.16**
				AVERAGE		**$211.80**

GROUP B: Purchaser is Canadian Hydro Developers, Inc. Median and Average Sold Prices 2005-2007						
#	**Roll Number**	**Melancthon Address**	**Date Sold**	**Sale Price**	**Dwelling Sq. Ft.**	**$/Sq. Ft.**
a	2219000006138500000	582340 County Rd 17	Aug-07	$302,670	1539	$196.67
b	2219000006138000000	582328 County Rd 17	Jun-05	$299,000	1293	$231.25
c	2208000003215800000	375557 6th Line	Nov-07	$500,000	1887	$264.97
d	2219000004018000000	504059 Highway 89	Jan-07	$305,000	1800	$169.44
These four properties are located south and southwest of the properties in Group A.				**MEDIAN**		**$213.96**
				AVERAGE		**$215.58**

Note: Market value is an estimate, price is an historical fact.

The Median and Average difference between the open market sold price and the Canadian Hydro Developers, Inc. sold price is minimal; therefore, it is reasonable to conclude each purchase by Canadian Hydro Developers, Inc. was at a fair open market price.

When Canadian Hydro Developers, Inc. resold each of the five properties covenants were included in the deed/transfer wherein the buyer waived rights to complain due to noise or other nuisance or living environment issues resulting from wind turbines situated on neighbouring lands.

Each transfer/deed included the following “Transfer of Easement in Gross” covenant:

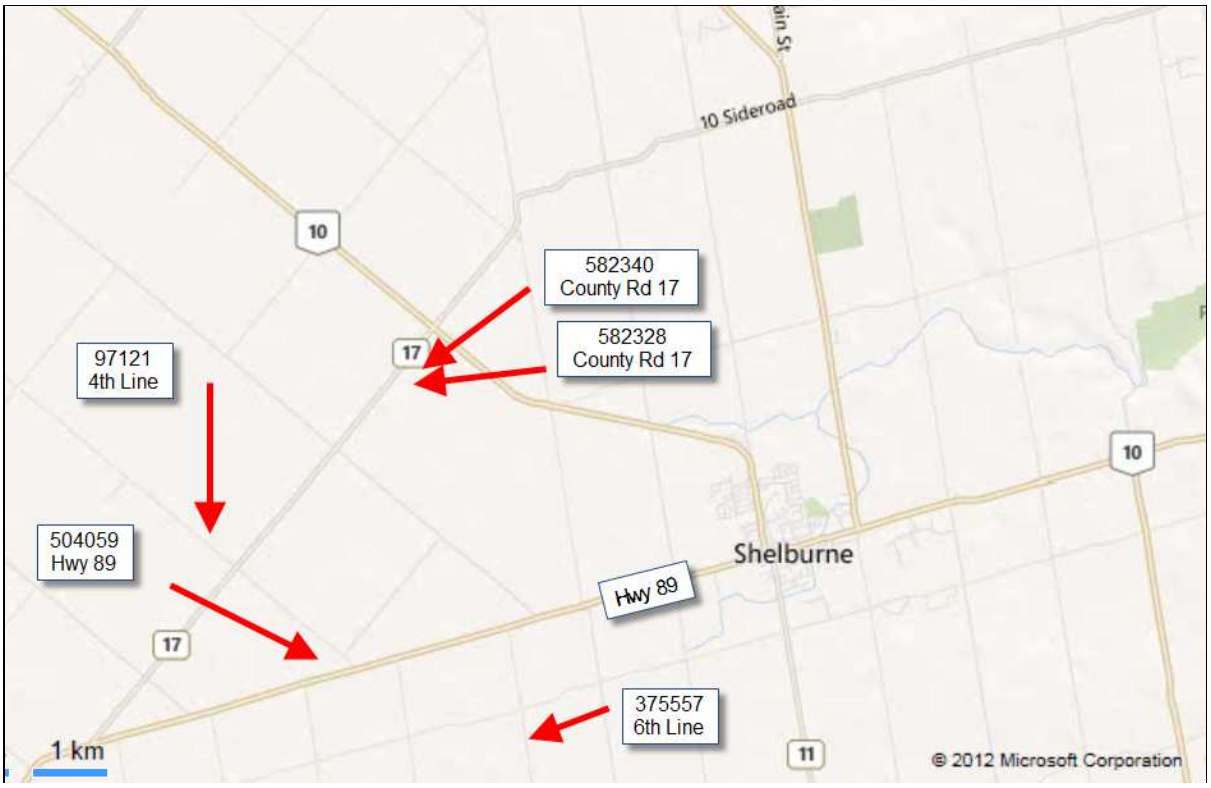
> *“free and unencumbered easement…over, along, and upon the Transferor's Lands for the right and privilege to permit heat, sound, vibration, shadow, flickering of light, noise (including grey noise) or any other adverse effect or combination thereof resulting directly or indirectly from the operation of the Transferee's wind turbine facilities situated…within the Townships of Melancthon and Amaranth, in the County of Dufferin…”.*
>
> *“…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”.*

Given that the buyers willingly signed the Transfer of Easement in Gross, the price reflects the fair market resale price.

MELANCTHON PROPERTIES ANALYZED

Having determined that the four properties in Group B were purchased and sold by Canadian Hydro Developers, Inc. at the fair market price, a further analysis was performed to determine whether or not these properties suffered a loss in value.

Each price was adjusted to reflect the passage of time as provided by the Canadian Real Estate Association based on the local real estate MLS® board.



Location of properties purchased and sold by Canadian Hydro Developers, Inc.
Source: Microsoft, altered by Ben Lansink

None of the properties detailed in this study had a wind turbine erected on it.

Sale and Re-Sale: TransAlta Melancthon 133 Wind Turbine Facility			**1**
Property:	375557 6th Line, Amaranth		
	The 1.88 acre site is improved with a single detached dwelling consisting of 1,887 sq. ft.		
Turbine Distance to Dwelling (estimated by aerial map scaling)		Metres	Feet
		771.45	2530.97
Date turbine became operational		Phase I 2006, Phase II 2008	
When sold in November 2007, the average MLS® residential price was $276,285. When the property resold in December 2009 the average MLS® price was $308,063 resulting in a change of 11.5%.	Average MLS® Price November 2007		$276,285
	Average MLS® Price December 2009		$308,063
	$Change		$31,778
	%Change		11.50%
The first buyer, Canadian Hydro Developers, Inc., purchased in November 2007 for $500,000 and would have resold December 2009 for $557,509 when adjusted for the MLS® passage of time.	Actual Sold Price November 2007		$500,000
	% and $ Change	11.50%	$57,509
	Adjusted Price to December 2009		$557,509
The Actual Price when Re-Sold to McDonald in December 2009 was $288,400, a difference of -$269,109.	Actual Re-Sale Price December 2009		$288,400
	$Difference		-$269,109
Diminution in Price: -48.27%.	%Difference		**-48.27%**
Passage of time source:	The average residential price source is the Canadian Real Estate Association as provided by the Orangeville & District MLS® board.		

This property did NOT have a wind turbine situated on its land. The closest wind turbine was on land situated across the road on land owned by a neighbour. Canadian Hydro Developers, Inc. listed the property on the MLS® system with Royal LePage RCR Realty. It was sold by Re-Max. The selling Realtor® Jerry Snel, was interviewed on January 18, 2012 at 11:30am by Ben Lansink. Mr. Snel estimated the turbine was about 1,000 feet from the dwelling located at 375557 6th Line and he stated:

> *'…when standing next to the house the noise from the turbine was very loud, like the sound of a aircraft…'*.

Property 1 - 375557 6th Line, Amaranth

Source: Ben Lansink

Sale and Re-Sale: TransAlta Melancthon 133 Wind Turbine Facility			**2**
Property:	97121 4th Line, Melancthon		
	The 100.49 acre site is improved with a dwelling and Quonset building.		
Turbine Distance to Dwelling (estimated by aerial map scaling)		Metres	Feet
		579.73	1901.98
Date turbine became operational		Phase I 2006, Phase II 2008	
When sold in October 2007, the average MLS® residential price was $291,323. When the property resold in November 2010 the average MLS® price was $351,479 resulting in a change of 20.65%.	Average MLS® Price October 2007		$291,323
	Average MLS® Price November 2010		$351,479
	$Change		$60,156
	%Change		20.65%
The first buyer, Canadian Hydro Developers, Inc., purchased in October 2007 for $350,000 and would have resold November 2010 for $422,272 when adjusted for the MLS® passage of time.	Actual Sold Price October 2007		$350,000
	% and $ Change	20.65%	$72,272
	Adjusted Price to November 2010		$422,272
The Actual Price when Re-Sold to Bal Farms Ltd in November 2010 was $175,000, a difference of -$247,272.	Actual Re-Sale Price November 2010		$175,000
	$Difference		-$247,272
Diminution in Price: -58.56%.	%Difference		**-58.56%**
Passage of time source:	The average residential price source is the Canadian Real Estate Association as provided by the Orangeville & District MLS® board.		

Property 2 - 97121 4th Line, Melancthon

Source: Ben Lansink

<table>
<tr><td colspan="4">Sale and Re-Sale: TransAlta Melancthon 133 Wind Turbine Facility</td><td>3</td></tr>
<tr><td rowspan="2">Property:</td><td colspan="4">504059 Highway 89, Melancthon</td></tr>
<tr><td colspan="4">The 10.01 acre site is improved with a single detached dwelling consisting of 1,800 sq. ft.</td></tr>
<tr><td rowspan="2" colspan="2">Turbine Distance to Dwelling (estimated by aerial map scaling)</td><td colspan="2">Metres</td><td>Feet</td></tr>
<tr><td colspan="2">202.39</td><td>663.99</td></tr>
<tr><td colspan="2">Date turbine became operational</td><td colspan="3">Phase I 2006, Phase II 2008</td></tr>
<tr><td rowspan="4" colspan="2">When sold in January 2007, the average MLS® residential price was $254,803. When the property resold in August 2009 the average MLS® price was $302,550 resulting in a change of 18.74%.</td><td colspan="2">Average MLS® Price January 2007</td><td>$254,803</td></tr>
<tr><td colspan="2">Average MLS® Price August 2009</td><td>$302,550</td></tr>
<tr><td colspan="2">$Change</td><td>$47,747</td></tr>
<tr><td colspan="2">%Change</td><td>18.74%</td></tr>
<tr><td rowspan="3" colspan="2">The first buyer, Canadian Hydro Developers, Inc., purchased in January 2007 for $305,000 and would have resold August 2009 for $362,153 when adjusted for the MLS® passage of time.</td><td colspan="2">Actual Sold Price January 2007</td><td>$305,000</td></tr>
<tr><td>% and $ Change</td><td>18.74%</td><td>$57,153</td></tr>
<tr><td colspan="2">Adjusted Price to August 2009</td><td>$362,153</td></tr>
<tr><td rowspan="2" colspan="2">The Actual Price when Re-Sold to Egresits / Gooder in August 2009 was $278,000, a difference of -$84,153.</td><td colspan="2">Actual Re-Sale Price August 2009</td><td>$278,000</td></tr>
<tr><td colspan="2">$Difference</td><td>-$84,153</td></tr>
<tr><td colspan="2">Diminution in Price: -23.24%.</td><td colspan="2">%Difference</td><td>-23.24%</td></tr>
<tr><td colspan="2">Passage of time source:</td><td colspan="3">The average residential price source is the Canadian Real Estate Association as provided by the Orangeville & District MLS® board.</td></tr>
</table>

Property 3 - 504059 Highway 89, Melancthon

Source: Ben Lansink

Property 4 - 582340 County Road 17, Melancthon

Sale and Re-Sale: TransAlta Melancthon 133 Wind Turbine Facility			**4**
Property:	582340 County Road 17, Melancthon		
	The 1.00 acre site is improved with a single detached dwelling consisting of 1,539 sq. ft.		
Turbine Distance to Dwelling (estimated by aerial map scaling)		Metres	Feet
		346.25	1135.99
Date turbine became operational		Phase I 2006, Phase II 2008	
When sold in August 2007, the average MLS® residential price was $317,478. When the property resold in April 2010 the average MLS® price was $307,515 resulting in a change of -3.14%.	Average MLS® Price August 2007		$317,478
	Average MLS® Price April 2010		$307,515
	$Change		-$9,963
	%Change		-3.14%
The first buyer, Canadian Hydro Developers, Inc., purchased in August 2007 for $302,670 and would have resold April 2010 for $293,172 when adjusted for the MLS® passage of time.	Actual Sold Price August 2007		$302,670
	% and $ Change	-3.14%	-$9,498
	Adjusted Price to April 2010		$293,172
The Actual Price when Re-Sold to Armstrong in April 2010 was $215,000, a difference of -$78,172.	Actual Re-Sale Price April 2010		$215,000
	$Difference		-$78,172
Diminution in Price: -26.66%.	%Difference		**-26.66%**
Passage of time source:	The average residential price source is the Canadian Real Estate Association as provided by the Orangeville & District MLS® board.		

Property 4 - 582340 County Road 17, Melancthon

Source: Ben Lansink

Caution to the Wind
Updated Sat. Dec. 27 2008 6:55 PM ET

W-FIVE Staff

Portions of the News Report Follow:

Helen Fraser wasn't at the opening of the Melancthon EcoPower Centre. But she's all-too familiar with the turbines. According to Fraser, she and her husband lived just over 400 meters from one of the turbines erected in phase one of the project. At first she had no problem with the fact that a wind farm was coming to her rural area.
"I thought this was absolutely amazing. [I was] all for green" said Fraser. But soon after the 45 meter blades -- longer than the wingspan of a Boeing 737 -- started spinning, she said she knew something was wrong.

"It was like a whoosh sound. It would just go whoosh-whoosh, like a steady beat with it. And there would be times my heart would actually beat to the pulse of the turbine," she recalled.

Even though the turbines' distance from the Fraser's home satisfied the Ontario government's noise guidelines, the sound and strobing effect when the sun was shining through the spinning blades made them too close for comfort - at least for the Frasers.

"I had terrible headaches, body aches. I couldn't sleep at night," said Fraser. "My husband's blood sugar, because he has diabetes, was all over the map." When the couple went away on vacation, they say the problems stopped.

Fraser and her family eventually sold their property to Canadian Hydro Developers, the company behind the wind farm, and their former home sits in the shadow of a giant, spinning wind turbine.

Source: W-FIVE Staff

<table>
<tr><td colspan="4">Sale and Re-Sale: TransAlta Melancthon 133 Wind Turbine Facility</td><td>5</td></tr>
<tr><td rowspan="2">Property:</td><td colspan="4">582328 County Road 17, Melancthon</td></tr>
<tr><td colspan="4">The 2.08 acre site is improved with a single detached dwelling consisting of 1,293 sq. ft.</td></tr>
<tr><td rowspan="2" colspan="2">Turbine Distance to Dwelling (estimated by aerial map scaling)</td><td colspan="2">Metres</td><td>Feet</td></tr>
<tr><td colspan="2">369.72</td><td>1212.99</td></tr>
<tr><td colspan="2">Date turbine became operational</td><td colspan="3">Phase I 2006, Phase II 2008</td></tr>
<tr><td rowspan="4" colspan="2">When sold in June 2005, the average MLS® residential price was $279,707. When the property resold in June 2012 the average MLS® price was $372,995 resulting in a change of 33.35%.</td><td colspan="2">Average MLS® Price June 2005</td><td>$279,707</td></tr>
<tr><td colspan="2">Average MLS® Price June 2012</td><td>$372,995</td></tr>
<tr><td colspan="2">$Change</td><td>$93,288</td></tr>
<tr><td colspan="2">%Change</td><td>33.35%</td></tr>
<tr><td rowspan="3" colspan="2">The first buyer, Canadian Hydro Developers, Inc., purchased in June 2005 for $299,000 and would have resold June 2012 for $398,723 when adjusted for the MLS® passage of time.</td><td colspan="2">Actual Sold Price June 2005</td><td>$299,000</td></tr>
<tr><td>% and $ Change</td><td>33.35%</td><td>$99,723</td></tr>
<tr><td colspan="2">Adjusted Price to June 2012</td><td>$398,723</td></tr>
<tr><td rowspan="2" colspan="2">The Actual Price when Re-Sold to Steffan in June 2012 was $250,000, a difference of -$148,723.</td><td colspan="2">Actual Re-Sale Price June 2012</td><td>$250,000</td></tr>
<tr><td colspan="2">$Difference</td><td>-$148,723</td></tr>
<tr><td colspan="2">Diminution in Price: -37.30%.</td><td colspan="2">%Difference</td><td>-37.30%</td></tr>
<tr><td colspan="2">Passage of time source:</td><td colspan="3">The average residential price source is the Canadian Real Estate Association as provided by the Orangeville & District MLS® board.</td></tr>
</table>

Property 5 - 582328 County Road 17, Melancthon

Source: Ben Lansink

In each of the five sales, Canadian Hydro Developers, Inc. registered a “Transfer of Easement in Gross”.

Following is an example of a typical easement.

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.

Source: Attachment to Deed DC105449

CONCLUSIONS – Melancthon Property Purchases and Re-Sales

Market evidence suggests that 'dwelling properties' will be harmed or injured by the construction, use, and maintenance of wind turbines situated on properties located in the vicinity. Real or perceived nuisances resulting from wind turbines produces buyer resistance that results in price diminution.

TransAlta Melancthon 133 Wind Turbine Facility		
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 Price Diminution		**-37.30%**
Average Price Diminution		**-38.81%**
Low		**-23.24%**
High		**-58.56%**

The erection of a wind turbine creates apprehension in the general public, which makes the property less desirable and thus diminishes the prices of neighbouring property. Continuing scientific uncertainty over the adverse health consequences of wind turbines only serves to perpetuate the debilitating effect of wind turbines on property prices.

By including the Transfer of Easement in Gross in the deed/transfer of the properties sold by Canadian Hydro Developers, Inc., it is reasonable to conclude that Canadian Hydro Developers, Inc. was fully aware of problems associated with…h*eat, 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…within the Townships of Melancthon and Amaranth, in the County of Dufferin…'* and that the turbines *…'**may affect the living environment'**…".*

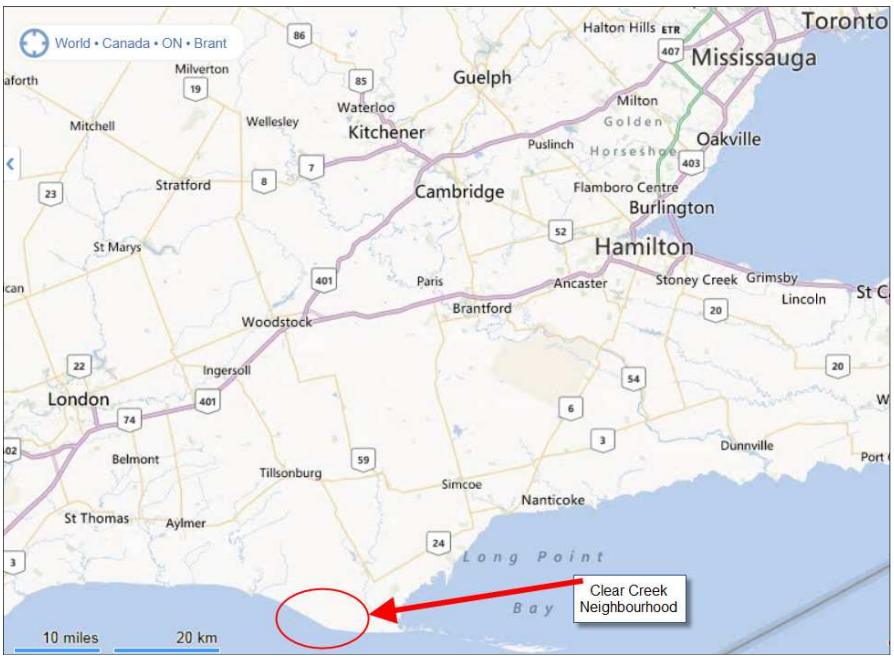
The covenants imposed by Canadian Hydro Developers, Inc. and accepted by the five buyers suggest an official admission by Canadian Hydro Developers, Inc. that there are living environment issues with the result that there is a diminution in price as a result of wind turbines.

It is also reasonable to assume that a property that has a wind turbine erected on it will suffer a similar price diminution and will be injuriously affected.

The Clear Creek Wind turbine facility, also known as “Frogmore-Cultus-Clear Creek”, consists of about 18 Wind Turbines. The Clear Creek Wind Facility project became operational on November 22, 2008.

Lakeshore Road, Clear Creek, Ontario, Canada. Photograph: Ben Lansink

Location Map: Clear Creek, Ontario



CASE STUDY: Effects of a Wind Turbine Facility in Clear Creek, Ontario

In this case study, an analysis of the Clear Creek neighbourhood properties that sold on the open market was carried out. A registry search (Ontario's digital registry system) produced several properties that sold in the area, however, for the purpose of this study only 'dwelling properties' and a vacant bush site were analyzed. Farm properties were not included.

Two properties sold and re-sold. Property 1 sold March 2004 and re-sold May 2012. Property 2 sold September 1995 and re-sold March 2012.

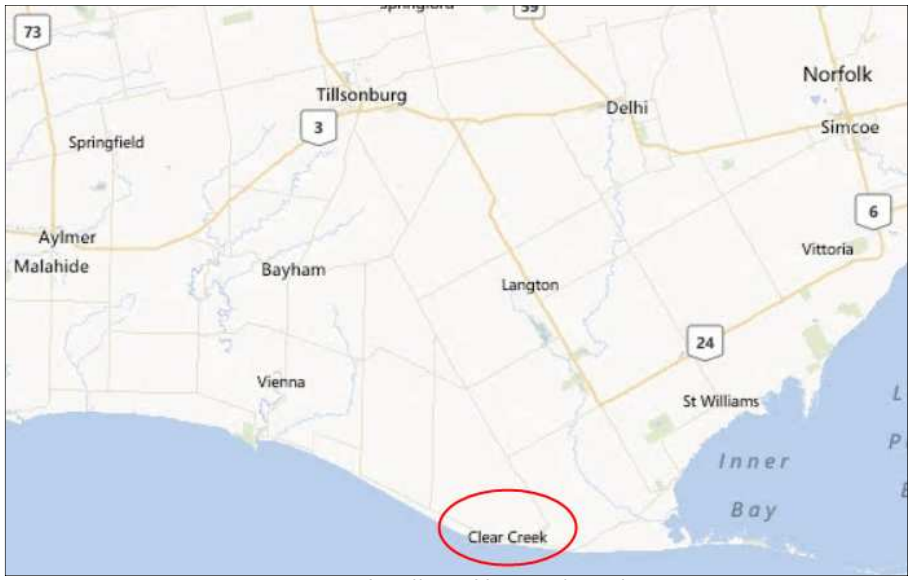
Properties 3-7 had "Current Value" assessments as of January 1, 2008 in place as estimated by the Municipal Property Assessment Corporation (MPAC). The sold dates for these properties are from October 2010 to September 2012.

None of the properties considered in this report had a wind turbine erected on it.

Registry facts and MLS® listings (if available) for these properties were obtained and are on file.

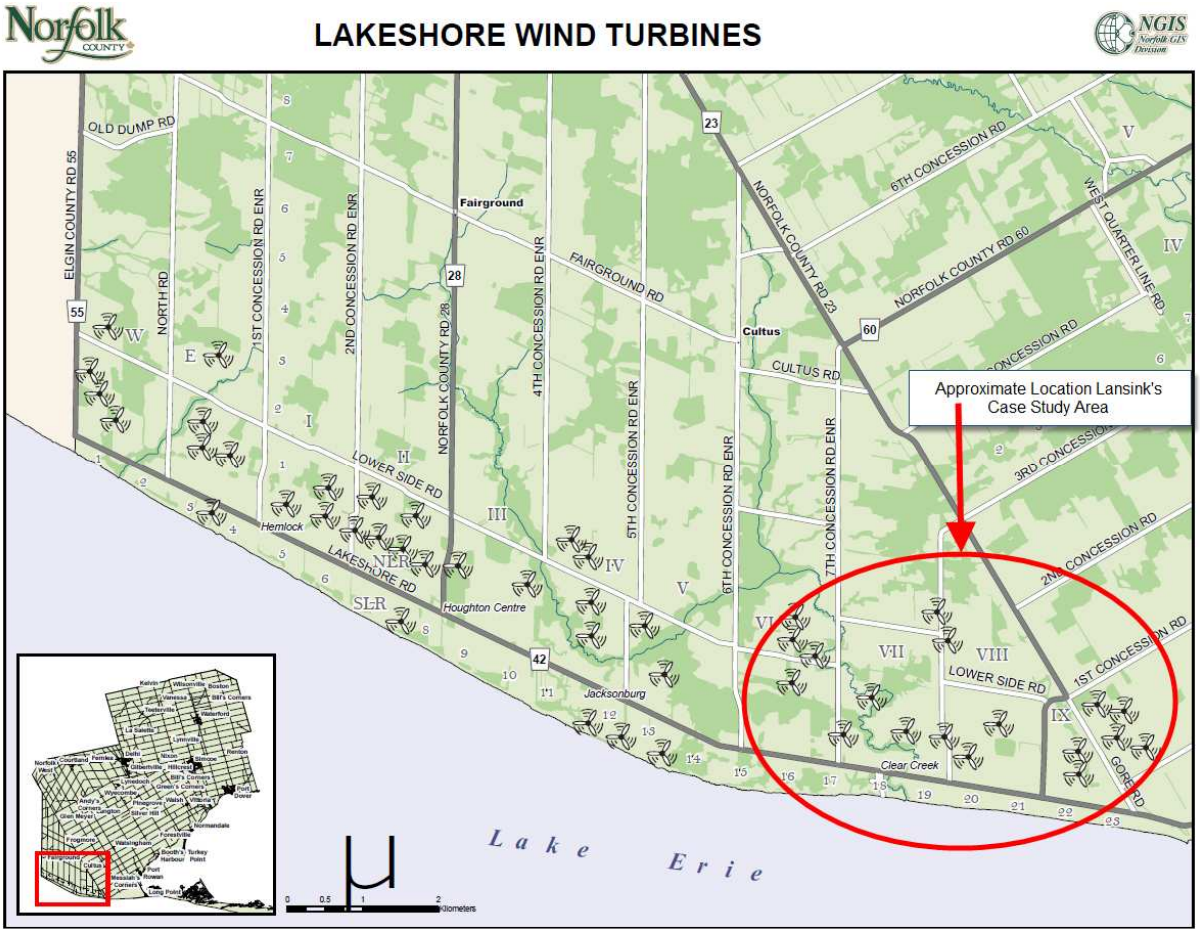
The Clear Creek properties and neighbourhood were inspected and photographed by Ben Lansink on October 9, 2012.

The following map indicates the location of Clear Creek



Source: http://www.bing.com/maps/

The following Map indicates approximate Clear Creek Wind Turbine Locations



Source: Norfolk County

Property 1 - 1480 Lakeshore Road, Norfolk

<table>
<tr><td colspan="4">Sale and Re-Sale: Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines</td><td>1</td></tr>
<tr><td rowspan="2">Property:</td><td colspan="4">1480 Lakeshore Road, Norfolk</td></tr>
<tr><td colspan="4">The 1.02 acre site is improved with a single detached dwelling consisting of 1,017 sq. ft.</td></tr>
<tr><td colspan="3" rowspan="2">Turbine Distance to Dwelling (estimated by aerial map scaling)</td><td>Metres</td><td>Feet</td></tr>
<tr><td>464.00</td><td>1522.29</td></tr>
<tr><td colspan="3">Date turbine became operational</td><td colspan="2">Nov 22, 2008</td></tr>
<tr><td rowspan="4">When sold in March 2004, the average MLS® residential price was $138,668. When the property resold in May 2012 the average MLS® price was $237,895 resulting in a change of 71.56%.</td><td colspan="3">Average MLS® Price March 2004</td><td>$138,668</td></tr>
<tr><td colspan="3">Average MLS® Price May 2012</td><td>$237,895</td></tr>
<tr><td colspan="3">$Change</td><td>$99,227</td></tr>
<tr><td colspan="3">%Change</td><td>71.56%</td></tr>
<tr><td rowspan="3">The first buyer, Kaiss / Steverson, purchased in March 2004 for $71,000 and would have resold May 2012 for $121,806 when adjusted for the MLS® passage of time.</td><td colspan="3">Actual Sold Price March 2004</td><td>$71,000</td></tr>
<tr><td>% and $ Change</td><td>71.56%</td><td>$50,806</td></tr>
<tr><td colspan="3">Adjusted Price to May 2012</td><td>$121,806</td></tr>
<tr><td rowspan="2">The Actual Price when Re-Sold to Weber in May 2012 was $68,000, a difference of -$53,806.</td><td colspan="3">Actual Re-Sale Price May 2012</td><td>$68,000</td></tr>
<tr><td colspan="3">$Difference</td><td>-$53,806</td></tr>
<tr><td>Diminution in Price: -44.17%.</td><td colspan="3">%Difference</td><td>-44.17%</td></tr>
<tr><td>Passage of time source:</td><td colspan="4">The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.</td></tr>
</table>

Source: Ben Lansink

<table>
<tr><td colspan="3">Sale and Re-Sale: Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines</td><td>2</td></tr>
<tr><td rowspan="2">Property:</td><td colspan="3">71 Norfolk County Road 23, Norfolk</td></tr>
<tr><td colspan="3">The 1.13 acre site is improved with a single detached dwelling consisting of 1,659 sq. ft.</td></tr>
<tr><td rowspan="2">Turbine Distance to Dwelling (estimated by aerial map scaling)</td><td colspan="2">Metres</td><td>Feet</td></tr>
<tr><td colspan="2">464.00</td><td>1522.29</td></tr>
<tr><td>Date turbine became operational</td><td colspan="3">Nov 22, 2008</td></tr>
<tr><td rowspan="4">When sold in September 1995, the average MLS® residential price was $106,911. When the property resold in March 2012 the average MLS® price was $214,070 resulting in a change of 100.23%.</td><td colspan="2">Average MLS® Price 1995</td><td>$106,911</td></tr>
<tr><td colspan="2">Average MLS® Price March 2012</td><td>$214,070</td></tr>
<tr><td colspan="2">$Change</td><td>$107,159</td></tr>
<tr><td colspan="2">%Change</td><td>100.23%</td></tr>
<tr><td rowspan="3">The first buyer, Braun, purchased in September 1995 for $78,000 and would have resold March 2012 for $156,181 when adjusted for the MLS® passage of time.</td><td colspan="2">Actual Sold Price September 1995</td><td>$78,000</td></tr>
<tr><td>% and $ Change</td><td>100.23%</td><td>$78,181</td></tr>
<tr><td colspan="2">Adjusted Price to March 2012</td><td>$156,181</td></tr>
<tr><td rowspan="2">The Actual Price when Re-Sold to Powell / Wedekind in March 2012 was $70,000, a difference of -$86,181.</td><td colspan="2">Actual Re-Sale Price March 2012</td><td>$70,000</td></tr>
<tr><td colspan="2">$Difference</td><td>-$86,181</td></tr>
<tr><td>Diminution in Price: -55.18%.</td><td colspan="2">%Difference</td><td>-55.18%</td></tr>
<tr><td>Passage of time source:</td><td colspan="3">The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.</td></tr>
</table>

Source: Ben Lansink

Municipal Property Assessment Corporation Current Value* vs. Actual Sold Price			3
Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines			
Property	47 Concession Road A, Norfolk		
	The 1.01 acre site is improved with a single detached dwelling consisting of 1,934 sq. ft.		
Turbine distance to dwelling (estimated by aerial map scaling)		Metres	Feet
		391.00	1282.79
Date turbine became operational		Nov 22, 2008	
When valued by MPAC on January 2008, the average residential price was $199,418. When the property sold in July 2012 the average MLS® price was $225,259 resulting in a change of 12.96%.	Average MLS® Price January, 2008		$199,418
	Average MLS® Price July 2012		$225,259
	$Change		$25,841
	%Change		12.96%
The MPAC January 2008 Current Market Value was $153,000 but the Current Market Value as of July 2012 would be $172,826.06 when adjusted for the MLS® passage of time.	Actual Sold Price January 2008		$153,000
	% and $ Change	12.96%	$19,826
	Adjusted Price to July 2012		$172,826
The Actual Price when Sold to Hunt in July 2012 was $134,000, a difference of -$38,826.	Actual Re-Sale Price July 2012		$134,000
	$Difference		-$38,826
Diminution in Price: -22.47%.	%Difference		**-22.47%**
Passage of Time Source:	The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.		
**Assessment Act*, R.S.O. 1990, CHAPTER A.31, 1. Definitions: "current value" means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm's length by a willing seller to a willing buyer; ("valeur actuelle")			

Source: Ben Lansink

<table>
<tr><td colspan="3">Municipal Property Assessment Corporation Current Value* vs. Actual Sold Price</td><td>4</td></tr>
<tr><td colspan="4">Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines</td></tr>
<tr><td rowspan="2">Property</td><td colspan="3">43 Old Mill Road, Norfolk</td></tr>
<tr><td colspan="3">The .55 acre site is improved with a single detached dwelling consisting of 1,158 sq. ft.</td></tr>
<tr><td rowspan="2">Turbine distance to dwelling (estimated by aerial map scaling)</td><td colspan="2">Metres</td><td>Feet</td></tr>
<tr><td colspan="2">647.00</td><td>2122.68</td></tr>
<tr><td>Date turbine became operational</td><td colspan="3">Nov 22, 2008</td></tr>
<tr><td rowspan="4">When valued by MPAC on January 2008, the average residential price was $199,418. When the property sold in June 2012 the average MLS® price was $213,873 resulting in a change of 7.25%.</td><td colspan="2">Average MLS® Price January, 2008</td><td>$199,418</td></tr>
<tr><td colspan="2">Average MLS® Price June 2012</td><td>$213,873</td></tr>
<tr><td colspan="2">$Change</td><td>$14,455</td></tr>
<tr><td colspan="2">%Change</td><td>7.25%</td></tr>
<tr><td rowspan="3">The MPAC January 2008 Current Market Value was $153,000 but the Current Market Value as of June 2012 would be $164,090.35 when adjusted for the MLS® passage of time.</td><td colspan="2">Actual Sold Price January 2008</td><td>$153,000</td></tr>
<tr><td>% and $ Change</td><td>7.25%</td><td>$11,090</td></tr>
<tr><td colspan="2">Adjusted Price to June 2012</td><td>$164,090</td></tr>
<tr><td rowspan="2">The Actual Price when Sold to Fidanza in June 2012 was $110,000, a difference of -$54,090.</td><td colspan="2">Actual Re-Sale Price June 2012</td><td>$110,000</td></tr>
<tr><td colspan="2">$Difference</td><td>-$54,090</td></tr>
<tr><td>Diminution in Price: -32.96%.</td><td colspan="2">%Difference</td><td>-32.96%</td></tr>
<tr><td>Passage of Time Source:</td><td colspan="3">The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.</td></tr>
<tr><td colspan="4">*Assessment Act, R.S.O. 1990, CHAPTER A.31, 1. Definitions:
“current value” means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm’s length by a willing seller to a willing buyer; (“valeur actuelle”)</td></tr>
</table>

Source: Ben Lansink

<table>
<tr><td colspan="4">Municipal Property Assessment Corporation Current Value* vs. Actual Sold Price</td><td>5</td></tr>
<tr><td colspan="5">Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines</td></tr>
<tr><td rowspan="2">Property</td><td colspan="4">1575 Lakeshore Road, Norfolk</td></tr>
<tr><td colspan="4">The 2.62 acre site is improved with a single detached dwelling consisting of 1,245 sq. ft.</td></tr>
<tr><td colspan="3" rowspan="2">Turbine distance to dwelling (estimated by aerial map scaling)</td><td>Metres</td><td>Feet</td></tr>
<tr><td>606.00</td><td>1988.16</td></tr>
<tr><td colspan="3">Date turbine became operational</td><td colspan="2">Nov 22, 2008</td></tr>
<tr><td rowspan="4">When valued by MPAC on January 2008, the average residential price was $199,418. When the property sold in November 2010 the average MLS® price was $214,434 resulting in a change of 7.53%.</td><td colspan="2">Average MLS® Price January, 2008</td><td colspan="2">$199,418</td></tr>
<tr><td colspan="2">Average MLS® Price November 2010</td><td colspan="2">$214,434</td></tr>
<tr><td colspan="2">$Change</td><td colspan="2">$15,016</td></tr>
<tr><td colspan="2">%Change</td><td colspan="2">7.53%</td></tr>
<tr><td rowspan="3">The MPAC January 2008 Current Market Value was $225,000 but the Current Market Value as of November 2010 would be $241,942.30 when adjusted for the MLS® passage of time.</td><td colspan="2">Actual Sold Price January 2008</td><td colspan="2">$225,000</td></tr>
<tr><td>% and $ Change</td><td>7.53%</td><td colspan="2">$16,942</td></tr>
<tr><td colspan="2">Adjusted Price to November 2010</td><td colspan="2">$241,942</td></tr>
<tr><td rowspan="2">The Actual Price when Sold to Flower / Willbanks in November 2010 was $175,000, a difference of -$66,942.</td><td colspan="2">Actual Re-Sale Price November 2010</td><td colspan="2">$175,000</td></tr>
<tr><td colspan="2">$Difference</td><td colspan="2">-$66,942</td></tr>
<tr><td>Diminution in Price: -27.67%.</td><td colspan="2">%Difference</td><td colspan="2">-27.67%</td></tr>
<tr><td>Passage of Time Source:</td><td colspan="4">The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.</td></tr>
<tr><td colspan="5">*Assessment Act, R.S.O. 1990, CHAPTER A.31, 1. Definitions:
“current value” means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm’s length by a willing seller to a willing buyer; (“valeur actuelle”)</td></tr>
</table>

Property 5 - 1575 Lakeshore Road, Norfolk

Source: Ben Lansink

Property 6 - 1527 Lakeshore Road, Norfolk

<table>
<tr><td colspan="4">Municipal Property Assessment Corporation Current Value* vs. Actual Sold Price</td><td>6</td></tr>
<tr><td colspan="5">Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines</td></tr>
<tr><td rowspan="2">Property</td><td colspan="4">1527 Lakeshore Road, Norfolk</td></tr>
<tr><td colspan="4">The 6.13 acre site is improved with a single detached dwelling consisting of 1,154 sq. ft.</td></tr>
<tr><td colspan="2" rowspan="2">Turbine distance to dwelling (estimated by aerial map scaling)</td><td colspan="2">Metres</td><td>Feet</td></tr>
<tr><td colspan="2">606.00</td><td>1988.16</td></tr>
<tr><td colspan="2">Date turbine became operational</td><td colspan="3">Nov 22, 2008</td></tr>
<tr><td rowspan="4">When valued by MPAC on January 2008, the average residential price was $199,418. When the property sold in October 2010 the average MLS® price was $218,496 resulting in a change of 9.57%.</td><td colspan="3">Average MLS® Price January, 2008</td><td>$199,418</td></tr>
<tr><td colspan="3">Average MLS® Price October 2010</td><td>$218,496</td></tr>
<tr><td colspan="3">$Change</td><td>$19,078</td></tr>
<tr><td colspan="3">%Change</td><td>9.57%</td></tr>
<tr><td rowspan="3">The MPAC January 2008 Current Market Value was $231,000 but the Current Market Value as of October 2010 would be $253,099.40 when adjusted for the MLS® passage of time.</td><td colspan="3">Actual Sold Price January 2008</td><td>$231,000</td></tr>
<tr><td colspan="2">% and $ Change</td><td>9.57%</td><td>$22,099</td></tr>
<tr><td colspan="3">Adjusted Price to October 2010</td><td>$253,099</td></tr>
<tr><td rowspan="2">The Actual Price when Sold to Flower / Pearlman in October 2010 was $180,000, a difference of -$73,099.</td><td colspan="3">Actual Re-Sale Price October 2010</td><td>$180,000</td></tr>
<tr><td colspan="3">$Difference</td><td>-$73,099</td></tr>
<tr><td>Diminution in Price: -28.88%.</td><td colspan="3">%Difference</td><td>-28.88%</td></tr>
<tr><td>Passage of Time Source:</td><td colspan="4">The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.</td></tr>
<tr><td colspan="5">*Assessment Act, R.S.O. 1990, CHAPTER A.31, 1. Definitions:
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</table>

Property 6 - 1527 Lakeshore Road, Norfolk

Source: Ben Lansink

Property 7 - 1921 Lakeshore Road, Norfolk

<table>
<tr><td colspan="4">Municipal Property Assessment Corporation Current Value* vs. Actual Sold Price</td><td>7</td></tr>
<tr><td colspan="5">Clear Creek, known as Frogmore-Cultus-Clear Creek, about 18 Wind Turbines</td></tr>
<tr><td rowspan="2">Property</td><td colspan="4">1921 Lakeshore Road, Norfolk</td></tr>
<tr><td colspan="4">The 24.72 acre site is vacant rural bush land.</td></tr>
<tr><td rowspan="2" colspan="2">Turbine distance to Lot (estimated by aerial map scaling)</td><td colspan="2">Metres</td><td>Feet</td></tr>
<tr><td colspan="2">51.82</td><td>170.01</td></tr>
<tr><td colspan="2">Date turbine became operational</td><td colspan="3">Nov 22, 2008</td></tr>
<tr><td rowspan="4" colspan="2">When valued by MPAC on January 2008, the average residential price was $199,418. When the property sold in September 2012 the average MLS® price was $208,155 resulting in a change of 4.38%.</td><td colspan="3">Average MLS® Price January, 2008</td><td>$199,418</td></tr>
<tr><td colspan="3">Average MLS® Price September 2012</td><td>$208,155</td></tr>
<tr><td colspan="3">$Change</td><td>$8,737</td></tr>
<tr><td colspan="3">%Change</td><td>4.38%</td></tr>
<tr><td rowspan="3" colspan="2">The MPAC January 2008 Current Market Value was $109,000 but the Current Market Value as of September 2012 would be $113,775.56 when adjusted for the MLS® passage of time.</td><td colspan="2">Actual Sold Price January 2008</td><td>$109,000</td></tr>
<tr><td>% and $ Change</td><td>4.38%</td><td>$4,776</td></tr>
<tr><td colspan="2">Adjusted Price to September 2012</td><td>$113,776</td></tr>
<tr><td rowspan="2" colspan="2">The Actual Price when Sold to Serra in September 2012 was $70,000, a difference of -$43,776.</td><td colspan="2">Actual Re-Sale Price September 2012</td><td>$70,000</td></tr>
<tr><td colspan="2">$Difference</td><td>-$43,776</td></tr>
<tr><td colspan="2">Diminution in Price: -38.48%.</td><td colspan="2">%Difference</td><td>-38.48%</td></tr>
<tr><td colspan="2">Passage of Time Source:</td><td colspan="3">The average residential price source is the Canadian Real Estate Association as provided by the Simcoe & District MLS® board.</td></tr>
<tr><td colspan="5">*Assessment Act, R.S.O. 1990, CHAPTER A.31, 1. Definitions:
“current value” means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm’s length by a willing seller to a willing buyer; (“valeur actuelle”)</td></tr>
</table>

Source: Ben Lansink

CONCLUSIONS – Current Values, Property Purchases and Re-Sales

Market evidence suggests that 'dwelling properties' will be harmed or injured by the construction, use, and maintenance of wind turbines situated in the vicinity. Real or perceived nuisances resulting from wind turbines produces buyer resistance that results in price diminution.

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%**

None of the above properties had a Wind Turbine situated on its land.

The Wind Turbines were located in the neighbourhood.

However, it is reasonable to assume that a property that has a wind turbine erected on it will suffer a similar price diminution and will also be injuriously affected.

The Future: Given that wind turbines are a relatively new phenomenon in Ontario (since 2005), it may be that in the future a buyer will simply refuse to purchase a property within the vicinity of a wind turbine. If there is no buyer, there may be no value.

July 10, 2012, For immediate release

OTTAWA - Health Canada, in collaboration with Statistics Canada, will conduct a research study that will explore the relationship between wind turbine noise and health effects reported by, and objectively measured in, people living near wind power developments.

"This study is in response to questions from residents living near wind farms about possible health effects of low frequency noise generated by wind turbines," said the Honourable Leona Aglukkaq, Minister of Health. "As always, our Government is putting the health and safety of Canadians first and this study will do just that by painting a more complete picture of the potential health impacts of wind turbine noise."

Health Canada is aware of health-related complaints from individuals living in close proximity to wind turbine establishments. The study is being designed with support from external experts, specializing in areas including noise, health assessment, clinical medicine and epidemiology.

The proposed research design and methodology was posted on Health Canada's web site today for a 30-day public comment period. Feedback obtained will be reviewed by the design committee, compiled and published to the website, along with the design committee's responses.

The study will be focused on an initially targeted sample size of 2,000 dwellings selected from 8-12 wind turbine installation facilities in Canada. In addition to taking physical measurements from participants, such as blood pressure, investigators will conduct face-to-face interviews and take noise measurements inside and outside of some homes to validate sound modelling.

Health Canada has expertise in measuring noise and assessing the health impacts of noise because of its role in administering the Radiation Emitting Devices Act (REDA). As defined under REDA, noise is a form of radiation.

The study results are expected to be published in 2014.

Contact: David S. Michaud, PhD, Principal Investigator, Health Canada
Consumer and Clinical Radiation Protection Bureau
Healthy Environments and Consumer Safety Branch
Email: wind.turbine.health.study@hc-sc.gc.ca

Guelph, ON [January 20, 2012] – Escalating concerns about industrial wind turbines have prompted the Ontario Federation of Agriculture (OFA) to urge the province of Ontario to suspend further development until farm families and rural residents are assured that their interests are adequately protected. The OFA unveiled its strong stance in a new position statement on industrial wind turbines, released today, that will be presented to government later this month.

Since 2007, when the development of industrial wind turbines began in Ontario, the OFA has worked with government on regulations, cautioned farmer members on the pitfalls of wind leases and expressed concerns about pricing. Many of these issues have not been addressed, causing tremendous tension among rural residents and community neighbours.

"We are hearing very clearly from our members that the wind turbine situation is coming to a head – seriously dividing rural communities and even jeopardizing farm succession planning," says OFA President Mark Wales. "The onus is on our provincial government to ensure the interests of rural Ontarians are protected. OFA is speaking up to clearly outline the issues that must be addressed right now."

The OFA's new position statement on industrial wind turbine development addresses a number of concerns of rural Ontarians, including:

• Price paid for wind power
•Inefficiency of wind power – it can't be stored for use during peak demand periods
•Setback issues and induced currents
•Health and nuisance issues
•Removal of municipal input from industrial wind turbine projects

OFA has always supported Ontario's need for a reliable, affordable source of renewable energy for our future. "We must all work together to ensure green energy projects respect concerns for noise, community involvement and price, balanced with the effective provision of energy," says Wales.

Read the full OFA position statement on industrial wind turbines here.

The Ontario Federation of Agriculture (OFA) is the largest general farm organization in Ontario, representing 37,000 farm families across the province. As a dynamic farmer-led organization based in Guelph, the OFA works to represent and champion the interests of Ontario farmers through government relations, farm policy recommendations, lobby efforts, community representation, media relations and more. OFA is the leading advocate for Ontario's farmers and is Ontario's voice of the farmer.

Mark Wales, President, Ontario Federation of Agriculture

Jan 25, 2012

CanWEA disappointed with OFA statement on wind, will continue to work to ensure farmers enjoy productive relationship with wind energy

The Canadian Wind Energy Association (CanWEA) is extremely disappointed that the Ontario Federation of Agriculture (OFA) has called for a suspension of wind energy development at a time when farmers across the province are actively participating in, and seeking to participate in, wind energy developments throughout Ontario. In fact, many of the issues that the OFA has identified as areas of concern are already being reviewed and examined through processes like the Ontario Government's Feed-in-Tariff (FIT) Review process.

"We are surprised and disappointed the OFA is proposing to put thousands of jobs at risk in Ontario and limit the ability of farmers to participate in Ontario's clean energy economy," said Robert Hornung, CanWEA president. "We will be seeking a meeting with the OFA to better understand their point of view and discuss their concerns and will remain active participants in the processes that are already in place to discuss many of these issues."

The wind energy industry has a long history of working with the agricultural community and in fact sees farmers as a key partner in wind energy development as thousands of Ontario farmers are participating in Ontario's clean energy economy through FIT and microFIT programs. CanWEA has worked with leaders within the OFA and other agricultural associations to inform our best practices in stakeholder engagement and to ensure the industry continues to be a good partner.

"We will continue to provide fact-based answers to ensure Ontarians have the information they need to make informed choices as Ontario moves towards a cleaner, stronger and affordable energy system," added Robert Hornung.

For more information on wind energy visit: http://www.canwea.ca/wind-energy/talkingaboutwind_e.php

For information, please contact:
Ulrike Kucera, Media Relations, Canadian Wind Energy Association
613 234 8716 ext. 228
Mobile 613 867 4433

Ontario wind power bringing down property values — CBC News

OCT 3 Posted by ccsage

CBC News has published a major investigative report on losses in market values of Ontario residential properties located near wind turbines. It reports actual and anticipated losses of 10-50%, increased time to sell and potential difficulties in obtaining a mortgage. There is also a poll showing the percentage of people willing to live near wind turbines.

Some excerpts from the report:

... The CBC has documented scores of families who've discovered their property values are not only going downward, but also some who are unable to sell and have even abandoned their homes because of concerns nearby turbines are affecting their health."

... The president of the Brampton Real Estate Board [Chris Luxemburger] examined real estate listings and sales figures for the Melancthon-Amaranth area, home to 133 turbines in what is Ontario's first and largest industrial wind farm. "Homes inside the windmill zones were selling for less and taking longer to sell than the homes outside the windmill zones," said Luxemburger. On average, from 2007 to 2010, he says properties adjacent to turbines sold for between 20 and 40 per cent less than comparable properties that were out of sight from the windmills.

... Canadian Hydro Developers bought out four different owners [who threatened legal action] for $500,000, $350,000, $305,000 and $302,670. The company then resold each property, respectively, for $288,400, $175,000 (50% loss), $278,000 and $215,000. In total, Canadian Hydro absorbed just over half a million dollars in losses [34%] on those four properties.

... last February, before an environmental review tribunal in Chatham, Environment Ministry lawyer Frederika Rotter said: ..."That's what makes them sick is that, you know, they'll get less money for their properties, and that's what's causing all this annoyance and frustration and all of that."

... Getting a mortgage on her house might not be that easy. CBC News has learned that already one bank in the Melancthon area is not allowing lines of credit to be secured by houses situated near wind turbines. In a letter to one family situated close to the turbines, the bank wrote, "we find your property a high risk and its future marketability may be jeopardized."

Reinforcing the information contained in the above report, a CBC News poll indicates that only 23% of more than 1700 responders would be willing to live near wind turbines, thereby reducing the number of potential buyers by three-quarters.

Source: http://ccsage.wordpress.com/2011/10/03/ontario-wind-power-bringing-down-property-values-cbc-news/

TransAlta™

Melancthon

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The Melancthon wind facility is Ontario's first utility-scale wind facility. It is one of the largest wind projects in Canada, with 133 wind turbines producing 200 megawatts of power. The facility is located near Shelburne, Ontario.

Phase I of the project began commercial operation in 2006, with Phase II beginning commercial operation in late 2008.

The Melancthon facility has the capacity to generate 545,000 megawatt hours each year.

The 20-year Renewable Energy Supply contract with the Ontario government creates long-term pricing stability.

TransAlta owns and operates the Melancthon facility through its wholly owned subsidiary Canadian Hydro Developers.

Note: We gratefully acknowledge Natural Resources Canada (NRCan) for its support for phase II of this project through the eco Energy for Renewable Power (eERP) program. Phase I is supported by the Wind Power Production Incentive Plan.

At a Glance

- **Technology:** GE 1.5 MW turbines, 80 metre towers

Environmental Highlights

- The Melancthon facility is EcoLogo[M] certified by the Environmental Choice Program.
- **Transformer station accoustic audits** - Click here.

Facts & Figures

- Location: Shelburne, ON
- Fuel: Wind
- Capacity (MW): 200
- Ownership: 100%
- Operator: Yes
- First on-stream: 2006
- Revenue Source: LTC
- Builder: Yes
- Contract Expiry: 2026-28

Related Documents

NEW - Melancthon Newsletter, October 2010

Related Pages

- Ontario community page
- Transformer station acoustic audits

Source: http://www.transalta.com/

"At the end of 2010, TransAlta became the first company to own and operate more than 1,000MW of installed wind capacity in Canada – almost 30 per cent of the country's total."

August 11, 2008

AIM PowerGen commissions Frogmore and Cultus wind farms

TORONTO

AIM PowerGen Corp. has announced the commissioning of the Frogmore and Cultus wind farms.

The projects, developed under Ontario's Renewable Energy Standard Offer Program, each have a total installed capacity of 9.9 megawatts (MW) and will produce enough power to supply 3,000 average households for one year.

Mike Crawley, CEO of AIM PowerGen, says these projects are among the first to be built under Ontario's Standard Offer Program.

"We are pleased that Frogmore and Cultus wind farms are now on-line and providing clean, renewable energy to the province," says Crawley. "The Standard Offer program was a ground-breaking initiative for the province and has allowed smaller projects such as these to be competitive and developed to support Ontario's evolving energy system."

The wind farms, located in Norfolk County on the northern shore of Lake Erie, are each comprised of six Vestas V82 1.65 MW turbines. Six landowners are hosting the 12 turbines on their properties.

"Many of these turbines are hosted by landowners that we approached over six years ago. These people embraced Ontario's energy revolution very early on and acted as pioneers in making this a reality", says Jim Wilgar, project manager and site consultant on the projects.

These are the first of four projects that AIM expects to commission in Ontario this summer. The Clear Creek Wind Farm, also in Norfolk County and the Mohawk Point Wind Farm, in Haldimand County, are expected to come on-line later this year. Construction on these wind farms is complete and AIM is finalizing interconnection issues with the local distribution company prior to commercial operation.

http://dcnonl.com/article/id29812

Sound, Noise:

"Applicants and regulators should have foreseen the very negative noise response from neighbors living near wind turbine sites. By their not adequately understanding the sound character generated by wind turbines, appropriate corrections to prevent annoyance were not included in the noise predictions. Wind turbine noise has a unique and visceral sound character, which may be perceived as being twice as loud as measured."

Source: Stephen Ambrose and Robert Rand, Rand Acoustics

An uncompensated taking:

"A wind "farm" creates an easement in gross over neighboring, non-participating property that impairs value. Thus, it is tantamount to an "inverse condemnation", or regulatory taking of private property rights.....an uncompensated taking."

Source: Sept. 22, 2012 by Michael S. McCann, CRA, McCann Appraisal, LLC (Chicago, Illinois, USA).

Ben Lansink's Canadian interpretation of Mr. McCann's statement:

A wind "farm" creates an easement in gross over neighboring, non-participating property that impairs value. Thus, it is tantamount to an "inverse expropriation", or regulatory taking of private property rights, but is effectively an uncompensated taking.

Reliability, Hierarchy of Evidentiary Value:

1. **Case Study Data**: The most reliable method for determining property value

   The most reliable evidence is represented by Case Studies, or individual examples of value loss, directly linked to the cause of value loss.

2. **Paired Sales**: The second most reliable method for determining property value

   With that said, the second most reliable basis for demonstrating a "detrimental conditions" valuation opinion, when one does not have enough factual background on Case Studies, is the use of "paired sales." That is, one sale near turbines and one far away, in order to isolate the impact of the turbines on value.

3. **Regression Analysis**: The least reliable method for determining property value. (This method has been used by the wind industry.)

   Regression Analysis is the technique that was used by the now well-circulated Hoen/Lawrence Berkeley National Laboratory report. The Appraisal Institute (US) recognizes this technique as the third and least reliable method, which should only be used in the absence of data, such as the type of Case Study data that is most reliable and preferable, or absent the data to perform a Paired Sales analysis.

Source: Michael S. McCann, CRA, McCann Appraisal, LLC (Chicago, Illinois, USA).

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April 24, 2012

Dear

On speaking with the Western General Insurance Company in regard to your inquiry about the installation of wind turbines on your property at Sarnia, Ontario, the Company has advised that should a wind turbine be erected on the property, the Western General would not insure same and they would no longer remain on risk at that property, and your policy would therefore be cancelled.

The Company has also stated that once the units are erected, you, the owner of the property lose some control on people coming onto the property for repairs or maintenance, along with some injury risk the units could cause, leaving yourself and the Company open to potential liability losses.

Yours very truly

Laurie E. Maclean

LM

Laurie E. Maclean, A.I.I.C., C.I.P.
Principal/Partner
Gary K. STEWART INSURANCE BROKERS
Limited

Aaron: ARB ruling on wind power noise sets precedent

January 9, 2010 Bob Aaron, Toronto Star

In a precedent setting move, a recently discovered decision of the provincial Assessment Review Board (ARB) has cut a homeowner's assessment in half because the house is located near a noisy hydro substation. The hydro plant serves a nearby wind farm producing "clean" electricity.

The decision of ARB member Ana Cristina Marques was issued following an appeal by Paul Thompson of the assessment on his house.

Thompson's one-storey home is located on the 10th Line in Amaranth Township. It was built in 1989 and sits on a lot with a frontage of 183 feet (55.7 meters) and a depth of 240 feet (73.15 meters).

In 2008, the Municipal Property Assessment Corp. assessed the 1,320-square-foot house at $255,000. Thompson agreed with the assessment except for one thing: The house sits across the road from a Canadian Hydro Developers transformer station. The station converts the output of the nearby Melancthon I wind plant into electricity for the Ontario power grid.

Thompson told me last month that the station emits a "wicked buzz" all day, every day, and that's what prompted him to appeal his assessment.

Evidence presented to the board at Thompson's appeal revealed that in April 2005, the township of Amaranth rezoned a 6.07 hectare (15-acre) parcel across the road from Thompson's home for the purpose of construction of a transformer station.

The station was built 360 meters (1,181 feet) away from Thompson's house. According to the Ontario Power Authority website, it serves the Melancthon I Wind Plant, a 67.5 MW facility in the southern portion of the Melancthon Township, Dufferin County, near the Town of Shelburne.

The first phase of the project utilizes 45 wind turbines. It became operational in March 2006, and the second and much larger phase (88 turbines) began producing electricity in March 2008.

The Ontario Power Authority website says that "manufacturers of modern wind turbines have … reduced noise levels to that of a quiet whisper."

That may be so, but evidence at the ARB hearing showed that the power station associated with Melancthon I produced a constant hum measured at more than 40 decibels in Thompson's home. (According to a 1999 World Health Organization report, sleep disturbance occurs when there is a continuous noise exceeding its indoor guideline value of 30 decibels.)

Thompson introduced evidence at the hearing showing that the transformer station noise was audible within the house with the windows closed. He described the noise as a "nightmare" and a constant nuisance that not only affects his day-to-day activity, but also impacts the sales value and marketability of his property.

In reaching its decision to cut his assessment in half, board member Marques wrote,

"The Board finds that the constant hum alleged by Mr. Thompson does exist and significantly reduces the current value of the subject property. The best evidence is the audio portion of the CD (Exhibit No. 1) and the testimony of both parties.

"Having heard this nuisance, apparently sanctioned by the Municipality, the Board accepts Mr. Thompson's testimony that the stigma of noise contamination has a negative impact on the value and marketability of the property, and that after learning of the hum, prospective purchasers will quickly lose interest in purchasing the property. The Board is satisfied that a very substantial reduction is warranted."

As I see it, Thompson's successful appeal of his assessment is only the first of many similar cases that are certain to follow. The result, of course, will be a significant reduction in the tax base of municipalities like Amaranth, which play host to wind turbine farms.

And now that the ARB, an arm of the Ontario government, has upheld a claim for loss of property value due to the proximity of a hydro substation and a wind farm, can a host of court cases and class action lawsuits for noise contamination and property devaluation be far behind?

Bob Aaron is a Toronto real estate lawyer and board member of the Tarion Warranty Corp. bob@aaron.ca.

Source: http://www.yourhome.ca/homes/columnsblogs/article/747191--aaron-arb-ruling-on-wind-power-noise-sets-precedent

The Ontario Real Estate Association (OREA) has a Seller Property Information Statement on which the seller discloses to the buyer any “latent or patent defects” about the property the seller is selling.

OREA Ontario Real Estate Association

Seller Property Information Statement
Residential

Form 220
for use in the Province of Ontario

ANSWERS MUST BE COMPLETE AND ACCURATE This statement is designed in part to protect Sellers by establishing that correct information concerning the property is being provided to buyers. All of the information contained herein is provided by the Sellers to the brokerage/broker/salesperson. Any person who is in receipt of and utilizes this Statement acknowledges and agrees that **the information is being provided for information purposes only and is not a warranty as to the matters recited hereinafter even if attached to an Agreement of Purchase and Sale**.The brokerage/broker/salesperson shall not be held responsible for the accuracy of any information contained herein.

BUYERS MUST STILL MAKE THEIR OWN ENQUIRIES Buyers must still make their own enquiries notwithstanding the information contained on this statement. Each question and answer must be considered and where necessary, keeping in mind that the Sellers' knowledge of the property may be inaccurate or incomplete, additional information can be requested from the Sellers or from an independent source such as the municipality. Buyers can hire an independent inspector to examine the property to determine whether defects exist and to provide an estimate of the cost of repairing problems that have been identified.
This statement does not provide information on psychological stigmas that may be associated with a property.

The following is the exact wording on the standard form.

Environmental:

1. Are you aware of any environment problems of any kind on the property or in the immediate area? eg: radon gas, toxic waste, underground gasoline or fuel tanks etc.

2. Are there any existing or proposed waste dumps, disposal sites or landfills in the immediate area?

3. Are there any hydro generating projects planned for the immediate area? eg: Wind Turbines?

Billions of birds migrate annually, taking advantage of the same wind currents that are most beneficial for producing wind energy. As many as 440,000 birds are killed by existing wind turbines in the US every year.

Wind Power: Good Things in Good Places

Nature Canada supports the development of wind energy in Canada, coupled with conservation measures to reduce all forms of fossil fuel consumption.

But wind energy must not be produced at the expense of wildlife.

Wind turbines and wind farms should not be located in places – such as Important Bird Areas – where birds congregate, migrate and breed.

All wind farm proposals should be subject to an environmental assessment prior to development in order to evaluate their impact on all wildlife, including birds and bats.

Regulators such as the provincial and territorial governments should adopt policies and guidelines that exclude wind energy projects from Important Bird Areas and other areas that are known to be of importance to birds and bats.

Any wind farms that already exist within migratory corridors or bottlenecks should be subject to the best practices for mitigating their impacts on birds, especially during migration season.

Source: http://www.naturecanada.ca/advocate/wind.html?gclid=CNOt9u6027ICFexAMgodIlgAVQ

Bats, despite their ability to use sonar to avoid moving objects, are susceptible to "'barotrauma", a sense of disorientation caused by the rapid change of air pressure created by a turbines rotating blade.

"Dead bats are turning up beneath wind turbines all over the world. Bat fatalities have now been documented at nearly every wind facility in North America where adequate surveys for bats have been conducted, and several of these sites are estimated to cause the deaths of thousands of bats per year. This unanticipated and unprecedented problem for bats has moved to the forefront of conservation and management efforts directed toward this poorly understood group of mammals. The mystery of why bats die at turbine sites remains unsolved. Is it a simple case of flying in the wrong place at the wrong time? Are bats attracted to the spinning turbine blades? Why are so many bats colliding with turbines compared to their infrequent crashes with other tall, human-made structures?"

Source: http://www.mesc.usgs.gov/BatsWindmills/

Wind Turbines Burn

Wind Turbines Can Cause Liability Issues

Can this happen to a Wind Turbine?

Source for the Photos: the www

Certification by Ben Lansink – CASE STUDY

I, Ben Lansink, certify to the best of my knowledge and belief that:

This document is not an appraisal report, a technical review, or a consulting report, as defined by the Appraisal Institute of Canada. It is a Case Study, an analysis of facts pertaining to the wind turbine phenomenon.

The statements of fact contained in this case study are true and correct.

The reported analyses, opinions, and conclusions are my personal impartial and unbiased professional analyses, opinions, and conclusions. No one provided professional analysis assistance to me.

I have no bias and no present or prospective personal interest with respect to the Melancthon and the Clear Creek Wind Turbine Facilities, issues that are the subject matter of this Case Study, or to the public who may receive this Case Study.

The writing of this Case Study was not contingent upon developing or reporting predetermined results, the amount of the diminution estimate, or a conclusion favouring anyone.

My analyses, opinions, and conclusions were developed, and this Case Study has been prepared, in conformity with (1) the Canadian Uniform Standards of Professional Appraisal Practice (CUSPAP), Appraisal Institute of Canada; (2) the Uniform Standards of Professional Appraisal Practice (USPAP), Appraisal Standards Board, United States; and (3) the International Valuation Standards (IVS).

I have the knowledge and experience to complete this Case Study competently.

The Appraisal Institute of Canada has a Continuing Professional Development Program. As of September 2012, I have fulfilled the requirements of this Program. I am a member in good standing of the Appraisal Institute of Canada.

Should any evident errors or omissions or additional undisclosed or unavailable facts become known, I reserve the right to revise this Case Study and its findings.

Respectfully submitted,

Ben Lansink, AACI, P.App, MRICS Date: October 2012
Lansink Appraisals and Consulting
Telephone: 519-645-0750 Email: ben@lansink.ca

End of Case Study – Last Page

This is the last page of this Case Study.

