The Impacts of Wind Turbines on Property Values in Ontario: Public Perception and Empirical Evidence

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Background

- 2003: 10 wind turbines operating commercially in Ontario
- 2013: over 1,000 turbines
- Growth anticipated to continue
The Fallout

- Concerns about impacts of turbines have become very prominent in Ontario’s public forum
- Plenty of anecdotal evidence of impacts reported in popular press articles
  - Health impacts of turbines
  - Reduction in property values
  - Inability to sell properties
Examples of comments posted in response to online news stories on turbines:

- “We have all been stricken with symptoms that we did not have prior to the installation of industrial turbines near our homes.”
- “Properties under wind turbines can go for as much as 40% less than what they were valued at before the turbines appeared.”
- “No one buys these properties. They often end up abandoned.”

Not everybody shares these concerns:

- “Fear-mongering by the anti-wind lobbyists and some media is what is creating the false perception of diminished property values.”
Taking Action

- Increasing number of community wind action groups against wind farm development
- These organizations have been calling on the government to delay wind farm development until impacts are better understood
Previous Studies

- Existing literature fails to make a strong case
- Some studies found evidence of negative impacts
- Others were inconclusive or found no significant impacts
- Surveys vs. sales data
Study Area

- Melancthon wind farm
  - Dufferin County
  - Phase I: 45 turbines, completed in 2006
  - Phase II: 88 turbines, completed in 2008

- February 18, 2005 – Orangeville Banner:
  “...concern was also raised with the impact a wind farm will have on property values, and despite what developers say, residents feel it will have an unfavourable effect.”
Methods

- Hedonic approach
- Residential and farm sales data – MPAC
  - Melancthon Township & 10 surrounding townships
  - 2002–2010
- Models estimated separately for residential sales and farm sales
Variables to Account for Turbine Impacts

- Proximity – distance to nearest turbine
- Visibility – rating (0–3) based on turbine visibility
- Two variables that combine proximity and visibility
  - Proximity if visibility rating > 0
  - Visibility rating divided by distance to nearest turbine
Results

- No significant impacts of turbines found
  - This outcome is consistent across the four approaches to accounting for the turbine impacts

- Results are robust across alternate model specifications
  - Alternate post-turbine period specifications
  - Repeat sales model
  - Accounting for turbine density
Implications

- Does empirical evidence match public perception?
- How do results compare to those of related studies?
Next Steps

- Estimate impacts of other wind farms across Ontario
- Do impacts on property values vary from one wind farm or one jurisdiction to another?
Thanks for your attention!