Recognizing health concerns in wind energy development a key recommendation in new study

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A Vestas wind turbine. Image credit: Vestas

As wind energy development blossoms in Canada and around the world, opposition at the community level is challenging the viability of the industry. A new study with research from the University of Waterloo, published in *Nature Energy*, identifies four major factors leading to disputes over wind farms, and offers recommendations on avoiding disagreements.

The research project focuses on the province of Ontario. It lists socially mediated health concerns, distribution of financial benefits, lack of meaningful engagement and failure to treat landscape concerns seriously, as the core stumbling blocks to a community's acceptance of wind energy development.

"There has been debate over whether reported negative health outcomes in nearby residents are valid" says Tanya Christidis, a PhD researcher at Waterloo's School of Planning, who contributed to the study by looking specifically at the health impacts section in the publication. "Regardless of whether or not people are sick from wind turbine noise or from social factors they deserve to be acknowledged if renewables are going to become a key part of our future energy mix."

The study makes recommendations for all four identified major areas of dispute.

For community members who feel the distribution of financial benefits is unfair, it recommends the province, which is constitutionally responsible for managing all energy resources within its territory, mandate more community-level decision-making and ownership. It also recommends increased transparency and compensation distribution for everyone in a community.

The study suggests that Ontario's approval process does not encourage enough meaningful engagement. Acknowledging that this is difficult to mandate, its recommendation is that improvements in this area should still be pursued.

Finally, the study recommends greater consideration for the impact on landscapes, and in particular changes to the cultural landscapes of areas with wind energy development.

Over the past decade global wind energy capacity has increased eight-fold. Ontario, with a population of close to 13 million people and land area of 1.1 million km2 is approximately equivalent in population, size and contracted wind energy capacity (5,700 vs 6, 200 MW) 2 to Sweden and Norway combined.

Research for the report was assembled by researchers, from Waterloo. York University, Western University, Queen's University, University of Ottawa as well as Trent University. The study is unique as it also includes a community representative and a wind industry advocate engaged in the Ontario wind energy industry.

More information: Stewart Fast et al. Lessons learned from Ontario wind energy disputes, *Nature Energy* (2016). DOI: 10.1038/nenergy.2015.28

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