

ATTACHMENT A NVDA Wind Study Committee Propositions on Health 5.0

1. Turbine neighbors report negative health impacts that they attribute to turbine operations.
2. The health impacts that Vermonters report are similar to those reported by turbine neighbors in other states and countries.
3. It is the position of Vermont's Department of Health (DoH) that:
 - 3.1. If installed and operated within noise level guidelines, wind turbines would not be expected to directly impact human health. Despite this, I suspect that there may be effects on health related to anxiety, disturbed sleep and stress. These effects are real to the individuals but not specifically related to wind turbines but rather more generally to annoyance from an unpleasant situation.¹
 - 3.2. No evidence has been found of a direct link between turbine noise and ill health.²
 - 3.3. There is a direct link from turbine noise to sleep disturbance.³
 - 3.4. Turbine noise can annoy some people.⁴
 - 3.5. Sleep disturbance and annoyance are known to cause ill health.⁵
 - 3.6. If turbines operate within the Department of Health's noise guidelines, then their noise will not disturb sleep.⁶
 - 3.7. Turbines produce infrasound at such low levels that it cannot affect health.⁷
 - 3.8. It is important to evaluate every home where there are complaints of wind turbine effects.⁸
4. DoH acknowledges that:
 - 4.1. The studies that it has used to develop its position are flawed and insufficient in number.⁹
 - 4.2. There are turbine effects (including flicker) that have not been investigated.¹⁰
 - 4.3. Turbine noise is qualitatively different from other common noise (like traffic or wind).¹¹
 - 4.4. No DoH employee has evaluated a home where there have been complaints of turbine-related health effects.¹²
5. The NVDA Wind Study Committee takes the following positions:
 - 5.1. We are concerned that our neighbors have health complaints that they attribute to turbine operations.
 - 5.2. The relationship between turbine operation and health is not well understood.
 - 5.3. There may well be a direct link from turbines to ill health that has yet to be discovered.
 - 5.4. If turbine noise will disturb sleep only if it exceeds noise guidelines, then assuring the health of neighbors may require continuous noise monitoring and rigorous enforcement of noise standards.

¹ Harry Chen (Commissioner, Vermont Department of Health), 25 March 2014, email to Mark Whitworth,.

² William Bress, William Irwin, and Austin Sumner, *Potential Impact on the Public's Health from Sound Associated with Wind Turbine Facilities*, Vermont Department of Health, 15 October, 2010, http://healthvermont.gov/pubs/ph_assessments/wind_turbine_sound_10152010.pdf (accessed 1 December 2013), 2.

³ Bress, *Potential Impact*, 5.

⁴ William Irwin (Vermont Department of Health), Legislative Hearing, Vermont State House, 16 April 2013, Testimony before the Vermont House Committee on Natural Resources and Energy.

⁵ Bress, *Potential Impact*, 2 & 4.

⁶ David Grass (Vermont Department of Health), Telephone conversation with Mark Whitworth, 26 March 2014.

⁷ David Grass (Vermont Department of Health), NVDA Wind Study Committee Meeting, Barton Town Offices, 7 November 2013, Question and Answer Session.

⁸ Irwin, House Committee Testimony.

⁹ Grass, NVDA Wind Meeting.

¹⁰ Grass, NVDA Wind Meeting.

¹¹ Grass, NVDA Wind Meeting.

¹² Grass, NVDA Wind Meeting.

5.5. DoH should actively investigate the health claims made by turbine neighbors in Vermont.

5.6. There is not enough known about:

- the potential health impacts (direct or indirect) of turbines,
- the distances over which those impacts might be felt, or
- the effectiveness of possible mitigation measures

to allow the NVDA to recommend further turbine development in the Northeast Kingdom.