



**STATE OF VERMONT**  
SENATE COMMITTEE ON HEALTH AND  
WELFARE

April 13, 2016

James Volz, Chair  
Margaret Cheney, Member  
Sarah Hofmann, Member  
Vermont Public Service Board  
112 State Street  
Montpelier, VT 05620-2701

Re: Sound Standards for Generation Facilities

Dear Chair Volz and Members Cheney and Hofmann:

The Senate Committee on Health and Welfare writes to urge the Public Service Board (PSB or Board) to use its existing authority to adopt sound standards for electric generation facilities, particularly for wind generation projects.

As you know, the Board has a pending docket on establishing these standards. Because the docket is not a contested case, there is no bar on direct communications. Docket No. 8167, Order of Jan. 29, 2014 at 2; 3 V.S.A. § 813.

We are concerned that there has been no activity on this docket since the deadline for response comments of October 24, 2014. It appears therefore that the matter has been awaiting action by the Board for over a year.

We urge you to take action soon and, in deciding what action to take, to consider sound standards for wind generation adopted in other states and countries. We attach a list that illustrates standards adopted in various jurisdictions. We also suggest that, when you require monitoring of the sound actually created by wind generation in Vermont, the results of such monitoring be viewable in real time online by the public.

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in blue ink that reads "Claire Ayer".

Sen. Claire Ayer, Chair (for the committee)

enc.

**Noise Regulations and Guidelines**  
Office of Legislative Council  
11/16/2015

**Abbreviations/ Terms**

*dBA*- the weighted sound pressure, which is sound perceptible to human ears  
*db*- unweighted sound pressure levels. For example: A 100 dB level at a frequency of 100 Hz will be perceived to have a loudness equal to only 80 dB at 1000 Hz.  
*Leq, L or LA*- a measurement, resulting in a single decibel value, which takes into account the total sound energy over the period of time.  
*m*- meters  
*s*- seconds

**Vermont (PSB cases)**

- A noise standard of 45 dBA (exterior)(Leq)(1 hr) and 30 dBA (interior bedrooms)(Leq)(1 hr) at nearest receptor locations
- For proposed substations, new power transformers must comply with sound emissions at least 5 dBA below National Electric Manufacturing Association standards at nearest receptor locations, unless the petitioners can demonstrate that these transformers are not cost-effective

**Maine (Regulations)**

- Shall not exceed 75 dB(A) at any time of day at the property line of the wind development or contiguous property owned or controlled by the wind energy developer
- 55 dB(A) during day and 42 dB(A) during night at any protected location
- Limits for low frequency noise (no limits for infra sound)

**Denmark (Regulations)**

- For dwellings, summer cottages, etc.: 39 dB(A) (wind speeds of 8 m/s) and 37 dB(A) (wind speeds of 6 m/s)
  - Measured at most noise-exposed point in areas with noise-sensitive land use
- For dwellings in open country: 44 dB(A) (wind speeds of 8 m/s) and 42 dB(A) (wind speeds of 6 m/s)
  - At the most noise-exposed point in outdoor living area no more than 15 meters from dwelling in open countryside
- For both categories of areas the limit for low frequency noise is 20 dB(A). The limit for low frequency noise applies to the calculated indoor noise level at both 6 and 8 m/s wind speed

**France (Regulations)**

- Day: increase of 5 dB(A) from background noise level
- Night: increase of 3 dB(A) from background noise level
- Point of measurement unclear

**Ireland (Guidance)**

- Recommended limit of 45 dB(A) (L90) or a maximum increase of 5dB(A) above background noise
- Where background noise is less than 30 dB(A), it is recommended that the daytime level of the LA90/10min of the wind energy development noise be limited to an absolute level within the range of 35-40 dB(A); 43dB(A) at night
- Measurements should be taken at nearest noise sensitive location(s) to the site; measurement locations may be specific under license with Ireland's EPA

**Sweden (Guidance)**

- 40 dB(A) at 8 m/s wind speed, measured at 10 m height
- 35 dB(A) in areas where the ambient noise has low levels (coastal areas and the mountain range or in wind shielded positions)
- 5 dB penalty for tonal components (defined as irregular or uncharacteristic noise- such as screeching)
- Point of measurement unclear

**New Zealand (Regulations)**

- The New Zealand noise standard sets noise limits as the greater of 40 dB(A)/10 min or 5 dB above the existing background noise, with a more strict limit of 35 dB(A)/ 10 min for quieter areas
- Measured at any point within the "notional noise boundary of any sensitive location."

**Provinces of Australia (Guidance)**

- New South Wales guidance recommends a limit of 35 dB(A); or 5 dB above the background level (average over 10 minutes)
  - In general, noise measurements should be taken at any outdoor area with 30 meters of a sensitive non-associated receiver (e.g. a primary residence) and in the direction of the wind farm
- Southern Australia guidance recommends a limit of 35 dB(A) for rural; 40 dB(A) for other zones; or 5dB above the background level (average over 10 minutes)
  - Measurements are taken at "relevant receiver locations"
- Tasmania and Western Australia have adopted Southern Australia's guidelines but have no set limits
- Victoria has no set limits but has published guidance documents that require noise to be considered with the issuance of permits