

Noise Regulations and Guidelines

Office of Legislative Council

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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