



A summary from the study conducted into infrasound levels near wind farms and in other environments

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The Environment Protection Authority (EPA) has recently presented the findings of a study conducted in conjunction with Resonate Acoustics on infrasound levels near wind farms and in other environments <www.epa.sa.gov.au/xstd_files/Noise/Report/infrasound.pdf>.

Measurements were undertaken over a period of approximately one week at seven locations in urban areas and four locations in rural areas including two residences approximately 1.5 km away from the wind turbines.

Both indoor and outdoor testing was undertaken for infrasound and low frequency noise and this was done at locations adjacent to the wind farms. Organised shutdowns of the wind farms were arranged to determine any noticeable contribution from the wind farm to the G-weighted infrasound level measured at either house. (G-weighting refers to one of a number of different options for showing curves of noise 'volume' in dB against frequency in Hz; it is thought best to reflect human perception of infrasonic noise levels.)

Overall the study indicates that measured infrasound levels at rural locations both near to and at a distance away from wind farms were no higher than infrasound levels measured at urban locations.

The study also showed that both indoor and outdoor infrasound levels were well below the perception threshold and that the most obvious difference between urban and rural locations was that human activity and traffic appeared to be the primary source of infrasound in urban locations, while localised wind conditions are the primary source of infrasound in rural locations.

While the study concludes that the level of infrasound at houses near the wind turbines is no greater than that experienced in other urban and rural environments, it should be pointed out that testing has only been undertaken at two locations adjacent to wind farms and therefore general conclusions cannot be drawn based on these data alone.

Further testing is to be undertaken by the EPA at four locations near the Waterloo Wind Farm in the Clare Valley during April and May which will provide longer term data that, along with this current study, will assist the EPA in better understanding the nature of any impacts on the community and whether existing guidelines need to be reviewed.

Overview issues in relation to wind farms

The following points may assist in considering the EPA's locus in wind farm issues.

The EPA gave evidence to the SA Parliament on wind farm noise issues in August 2012 and this is available at <www.epa.sa.gov.au/xstd_files/Noise/Other/wind_farm_select_com.pdf>.

The EPA is aware of and acknowledges community views and reports of direct and indirect negative impacts from wind farm activity in their neighbourhoods. We also recognise that community views are variable and individual experiences differ. Some people find wind farms attractive and welcome; others take the opposite view.

The EPA seeks to understand the impacts reported and wishes to gather robust evidence of any impacts and their cause or causes so as to develop and deploy better science in managing environmental and health issues.

The EPA supports a policy of renewables development and pragmatic decarbonising of the economy and will continue to assess energy developments where it has an agreed role as its powers and expertise allow.

The EPA provides input to local and state planning processes in assessing applications for developments and uses the guidance of the NHMRC and other key health information and guidance providers to frame its advice.

The EPA notes that the factors influencing the impact of a wind farm development upon local communities may include:

- The scale of individual turbines and turbine and pylon technology used.
- The physical layout of the farm.
- The landscape in which the farm is set.
- The geology of the substrate and the general area.
- Proximity to population.
- Wind directions and strengths locally, both dominant and otherwise.
- Existing noise levels in the locale, especially at night.
- Community engagement in the development.

The EPA will report openly on research conducted.

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