

Draft for consultation – Wind farms environmental noise guidelines

Issued 4 July 2019

What is new in the draft

In mid-2018 the EPA carried out a technical review of the *Wind farms environmental noise guidelines*, to ensure that the guidelines are still appropriate. It was last reviewed in 2013.

The technical review considered national and international research, and revised international standards on noise measurement techniques. It also reviewed the noise criteria, and information on infrasound, low frequency sound, tonality and amplitude modulation noise characters.

Subsequent to the review, the World Health Organization (WHO) noise guidelines for the European Region were released in October 2018. This triggered further review to compare the South Australian noise criteria with the WHO guidelines, other Australian and international jurisdictions.

This draft has addressed:

- Potential noise impacts from multi-stage wind farm developments and new wind farms potentially affecting community members already close by existing wind farms.
- Infrasound and low frequency sound, and a new section has been included.
- Issue of variation in the choice of turbine between the development application and construction phases.
- Required method for the processing of background noise and wind speed data which has been changed, to reflect the revised international standard (International Electrotechnical Commission 61400–11, updated June 2018).
- Background noise data requirements which have been strengthened.
- Alternative monitoring approaches for compliance checking, given advancements in acoustic equipment
- Tonality provisions which have been strengthened and clarified.



Why the EPA is consulting

The review confirmed that the South Australian noise criteria are still among the most protective in the world. However the EPA is also taking into account a number of recent events, international publications and public submissions. These developments include the recent WHO guidelines, ongoing National Health and Medical Research Council (NHMRC)

research, and submissions from the public to the State Commission Assessment Panel on the proposed Crystal Brook Energy Park.

Crystal Brook Energy Park

Submissions on the proposed Crystal Brook Energy Park with regard to the wind farm component raised a range of noise concerns including effects on human health and amenity, sleep disturbance, noise criteria, WHO guidelines, the precautionary principal, accuracy of noise modelling, infrasound, low frequency sound, infrasound, tonality and vibration.

NHMRC research

In 2015 the NHMRC published a statement *Evidence on wind farms and human health* (NHMRC ref # EH57) which stated there is currently no consistent evidence that wind farms cause adverse health effects in humans. However, it added that given the poor quality of current direct evidence and the concern expressed by some members of the community, high quality research into possible health effects of wind farms is warranted.

Consequently, two NHMRC research projects were initiated, with funding of over \$3 m:

- Flinders University of South Australia – *Establishing the physiological and sleep disruption characteristics of wind farm versus traffic noise disturbances in sleep*
- University of New South Wales – *Multi-dimensional assessment of the health impacts of infrasound: Two randomised controlled trials.*

The consultation process and what the EPA will take into account

The EPA is seeking feedback from the community, local government, other development authorities, state agencies, acoustic engineers, wind farm development proponents and other stakeholders on noise from wind farms in the updated guidelines.

This draft guidelines will be distributed directly to stakeholders who have already engaged with the EPA on this matter, including all parties making noise-related submissions to the recent State Commission Assessment Panel hearing on the proposed Crystal Brook Energy Park.

The EPA will take into account all submissions received as well as undertake a literature review of international research in this field and publications from bodies such as the WHO. Consultation will be carried out with other Australian jurisdictions to assess the opportunity to harmonise guidance for noise from wind farms across the country.

The EPA will finalise its review after the results from two current NHMRC research projects on noise are received. It will then issue updated guidelines.

How to make a submission

The draft guidelines is available the EPA website: https://www.epa.sa.gov.au/our_work/have_your_say.

Feedback can be submitted to:

Wind Farm Guidelines Consultation or epainfo@sa.gov.au (mark subject as Wind Farms Guidelines Consultation)
Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

Closing date: 2 September 2019

For further information, contact Tony Williams Anthony.Williams@sa.gov.au