



New England Visions 2030 Institute Catalyst for Change

Submission Draft NSW Wind Energy Guidelines¹ 29th January 2024

Executive Summary

We are a local futurist Think Tank based in Armidale NSW. We investigate local issues, bring stakeholders together, publish reports, write submissions, circulate petitions, host Forums and ensure wide media coverage of issues of concern to the local community.

The New England Renewables Energy Zone (REZ) is well underway with several solar and wind farms already constructed, two big batteries and the Oven Mountain Pumped Hydro Scheme in the planning stages. Last year our Institute held two Forums in Armidale to inform local residents of developments in the planning stages of the REZ in three Local Government areas within our region. The first was on the social impact of the REZ on our communities and the second was on Wind farms. We had an excellent panel for both Forums and have received very positive feedback from both events.

While some opponents are genuinely concerned, there are some who appear to be more politically motivated. Our NEV2030 group feels that challenges to these REZ developments are free from political bias. We try to ensure the information we publish is authentic, evidence based and in many cases peer reviewed and/or vetted by members of our group. The New England REZ is a revolutionary development in our region and it can be said as a fair criticism that the introduction of many projects has been somewhat uncoordinated and hasty. The number of community consultations has now increased with major stakeholders and interested members of the public given numerous opportunities to discuss the issues. Councils have become involved in the planning process and will be called upon to administer community benefits programs.

The truth is that people in rural areas will be most affected by the changes with large scale solar and wind developments being constructed on rural properties. Townspeople are only now beginning to be engaged even though they will be beneficiaries of the windfall being paid out to relevant LGAs.

Many landowners are happy to reap the monetary benefits of leasing their land for these projects as it is a way of 'drought proofing' their grazing properties. Neighbours are not as enthused due to the visual impact of such projects on the landscape and a feeling that they are 'missing out'. Wind farms have particularly attracted the ire of such rural residents as they are large structures which can be seen from a distance. The same residents don't appear to have a problem with phone towers or power poles which also intrude into the natural landscape but it takes a while for people to accept new ideas. For this reason the Department of Planning and Environment has updated the Wind farm guidelines to make such projects more acceptable to genuinely concerned residents. These are our considerations.

1. DPE Draft Wind Energy Guidelines: for state significant wind energy development, November 2023.

1.2 Objectives

We agree with the following statements:

- *facilitate better outcomes by requiring early identification of impacts to drive better siting and design;*
- *facilitate meaningful, respectful and effective community and stakeholder engagement across the development assessment process, from pre-lodgement to post-approval;*

2.2 Planning pathways

We agree with the following statements:

Once permissibility has been established, a proponent needs to determine the appropriate assessment pathway for its wind energy project. The majority of wind energy development in NSW will be SSD, which requires approval from the Minister for Planning under the EP&A Act. In practice, the independent Planning Assessment Commission determines applications under its delegation where:

- *there have been 25 or more objections to the application; or*
- *the local council has objected; or*
- *there has been a disclosure of a reportable political donation or gift, made in connection with the application or a previous related application.*

(This guideline applies to onshore wind energy development declared as State Significant Development (SSD). Wind energy projects offshore are not covered).

2.3.2 Other legislation

We agree with the following statements:

An environment protection licence (EPL) under the Protection of the Environment Operations Act 1997 (POEO Act) is required for wind energy projects which are SSD or designated development.

Some wind energy projects also have the potential to impact on 'matters of national environmental significance' under the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and may require a separate approval under that legislation.

3. Assessment issues for wind energy development

We note concerns about the following:

Biodiversity: *A key biodiversity issue for wind energy development is bird and bat strike and whether suitable measures are proposed to manage potential bird and bat strike fatalities resulting from either direct collision or through barotrauma (rapid changes in air pressures associated with the movement of the blades).*

However, we are informed that the majority of bird and bat deaths are caused by diseases and other environmental factors. We are also informed that there are proven measures available to avoid bird strike on wind blades. Some consideration needs to be made to avoid common migratory routes or positioning near wetlands and other water features.

Wildlife Health Australia has published a Factsheet (December 2023) which reports on the causes of mass avian mortality in Australia. The majority of causes fall within the following categories:

1. pesticide or other ingested intoxications (e.g. lead)
2. botulism
3. starvation and exhaustion.

Other occasional causes of mass mortalities include:

4. heat stress
5. storm trauma

visual impacts:

We are aware that this issue has caused the most concern among affected landowners and that offset distances between towers and residences have been included in the guidelines.

the height, scale and mechanical character of wind turbines creates an unavoidable level of visibility and contrast with the natural environments in which they are situated. This can alter the character of the landscape and people's enjoyment of the landscape. Multiple wind energy projects in close proximity may create cumulative impacts on a particular landscape. Assessment of these impacts is a complex endeavour. In recognition of these challenges the Department has prepared an Assessment Bulletin which is designed to bring greater transparency, consistency and objectivity in visual impact assessments for wind energy development.

The consent authority will give consideration to the acceptability of impacts on landscape values and the amenity of landholders and communities, and the adequacy of the measures which are proposed to avoid, reduce or otherwise manage these impacts, having regard to the Visual Assessment Bulletin;

As wind towers increase in height the guidelines will need to be amended to create the least amount of visual disruption. Off shore wind farms have become popular around the world as they avoid such visual impacts on the landscape. This issue is a sensitive one at present but may decline in importance as the community grows used to seeing wind turbines in the landscape. We also note that visual impact is a major issue put forward by politically motivated activists.

noise impacts:

We are also aware that there is some misinformation being spread around the community by opponents to wind farms regarding the noise effects of wind turbines. In particular people point to Infrasound created by wind turbine blades as having deleterious health effects. However people living near beaches or in towns experience Infrasound all the time.

the rotation of wind turbines generates both aerodynamic and mechanical noise. When assessing the potential annoyance from a noise source, both the level and character of the noise need to be taken into consideration. To ensure an adequate assessment of potential noise impacts, the Department has developed a Noise Assessment Bulletin. This Bulletin identifies the noise assessment requirements for SSD wind farm projects and includes a noise limit of 35 dB(A) or the prevailing background noise plus 5 dB(A), whichever is the greater for each operational wind speed.

The consent authority will give consideration to whether the predicted noise levels comply with the noise criteria, having regard to the advice of the EPA and the adequacy of measures which are proposed to avoid, reduce or otherwise manage these impacts.

We note that Infrasound can result from both natural and man-made sources:

(<https://en.wikipedia.org/wiki/Infrasound> - The webpage lists a number of research studies on this subject).

- *Natural events: infrasonic sound sometimes results naturally from [severe weather](#), [surf](#),^[7] [lee waves](#), [avalanches](#), [earthquakes](#), [volcanoes](#),^{[8][9]} [bolides](#),^[10] [waterfalls](#), [calving of icebergs](#), [aurorae](#), [meteors](#), [lightning](#) and [upper-atmospheric lightning](#).^[11] [Nonlinear ocean wave interactions in ocean storms produce pervasive infrasound vibrations around 0.2 Hz, known as \[microbaroms\]\(#\).](#)^[12] [According to the Infrasonics Program at NOAA, infrasonic arrays can be used to locate avalanches in the Rocky Mountains, and to detect \[tornadoes\]\(#\) on the high plains several minutes before they touch down.](#)^[13]*
- *Animal communication: [whales](#), [elephants](#),^[14] [hippopotamuses](#),^[15] [rhinoceroses](#),^{[16][17]} [giraffes](#),^[18] [okapis](#),^[19] [peacocks](#),^[20] and [alligators](#) are known to use infrasound to communicate over distances—up to hundreds of miles in [the case of whales](#)...It has also been suggested that migrating birds use naturally generated infrasound, from sources such as [turbulent](#) airflow over mountain ranges, as a [navigational aid](#).*

- *Man-Made sources: infrasound can be generated by human processes such as [sonic booms](#) and [explosions](#) (both chemical and [nuclear](#)), or by machinery such as [diesel engines](#), [wind turbines](#) and specially designed mechanical [transducers](#) (industrial vibration tables). Certain specialized [loudspeaker](#) designs are also able to reproduce extremely low frequencies; these include large-scale [rotary woofer](#) models of [subwoofer](#) loudspeaker,^[31] as well as large [horn loaded](#), [bass reflex](#), [sealed](#) and [transmission line](#) loudspeakers.^{[32][33]}*

traffic and transport:

A common complaint brought up at our Renewables Forums was on the subject of transport disruption and the requirement for upgrades to existing roads. Graziers were concerned that their transport of livestock to markets would be disrupted. Councils need to be involved in the planning process as they are responsible for local road networks.

the consent authority will give consideration to the extent to which the local and classified road network can accommodate the type and volume of traffic generated by the wind energy project, including the adequacy of any proposed road upgrades and maintenance commitments, having regard to the advice of relevant road authorities;

aviation safety:

The aviation industry has safety standards for the airspace around obstacles. Wind towers would be factored into flight plans. This issue is rarely mentioned in conversations.

wind energy projects need to consider potential safety hazards for aircraft through intrusion of the wind turbines into the airspace; and potential effects on navigation instruments;

bushfire hazard:

A representative of the NSW Fire Service has informed us that there is more risk from transmission lines than from wind turbines which are made of concrete. In fact the extra service roads would be of benefit to fire fighting.

consider potential hazards and risks associated with bushfires and the adequacy of measures to manage this risk;

telecommunications:

This issue is never mentioned in conversations with concerned landowners.

the consent authority will give consideration to the risk of electromagnetic interference with telecommunication services in the area, and the adequacy of the measures proposed to ensure the level of service is maintained;

blade throw:

This issue is never mentioned in conversations with concerned landowners.

consider blade throw risks;

decommissioning:

Many people have expressed concern over decommissioning. Our Institute believes that decommissioning and disposal of waste products will be the responsibility of the developer. However it is not really clear where the responsibility lies. The contract between landowner and developer needs to be very clear over this issue. Councils also do not want to be saddled with e-waste from decommissioned projects. We do not know what improvements are down the track and whether these wind turbines will be replaced, renovated with new technology or disposed of. A fund needs to be established to ensure any decommissioning costs are fully met.

consideration will be given as to whether suitable arrangements for decommissioning and rehabilitation of the site are in place;

5.1 Importance of consultation

We believe that the guidelines regarding the consultation process are comprehensive and detailed. One thing lacking is a Drop In Information Day giving residents an overview of the total REZ. This could be a static display run by Energy Co or the Department of Planning and Environment. Somehow we have consultations on individual projects but no clear understanding of the whole picture. The question that we often hear is 'Why New England'. Such an information event could answer such questions.

Other issues, such as economic and social impacts, historic and Aboriginal cultural heritage, and water will continue to be dealt with through existing policies and practices which apply to all SSD proposals.

Aboriginal Cultural Heritage should be a strong consideration in specific areas which have been identified as significant sites both at a community and Government level. This should happen in the early planning stages and will require a large amount of consultation with traditional owners, elders and other indigenous stakeholders. Failure to do so could result in a major financial loss to the developer and others through legal action. An example of such failure can be seen in the following news story: *'Federal Court rules in favour of Tiwi traditional owner Simon Munkara, Santos Barossa pipeline blocked again'* Roxanne Fitzgerald, ABC News Online Wed 15 Nov 2023.

5.2.1 Shared benefits and negotiated agreements

There is much discussion about shared benefits and it appears that Councils are being used as the bodies selected to administer community grants and other funds coming to the community from the REZ. Our Institute has recommended an independent panel be set up to oversee dispersal of such funding. We have heard of Community Reference Groups being set up possible for this purpose. It is very important that that the REZ funds be administered efficiently and reporting be transparent.

Compliance

While the document outlines a number of measures which sound very good in principle it is the practice which often falls down. Restructures, changes of government, loss of corporate knowledge often lead to compliance regulations not being adhered to. Such situations may lead to conflict or even dangerous conditions. We strongly recommend compliance safeguards.

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