Attachment to Dissenting Report by Senator John Madigan and Senator Nick Xenophon

Senate Economics Legislation Committee's inquiry into the *Renewable Energy (Electricity) Amendment (Excessive Noise from Wind Farms) Bill 2012*: Dissenting Report by Senators Madigan and Xenophon (Tabled 17 September 2012)

Dissenting Report by Senator John Madigan and Senator Nick Xenophon

Introduction

1.2 The Renewable Energy (Electricity) Amendment (Excessive Noise from Wind Farms) Bill 2012 was introduced as a result of the disappointing response of the Federal Government to the Community Affairs Committee's report into the Social and Economic Impact of Rural Wind Farms. The Community Affairs Committee inquiry received over 1000 submissions and heard evidence from a wide variety of witnesses, including rural residents, doctors, lawyers, community groups, environmental groups and wind farm operators. In response to the evidence received the committee made the following seven unanimous recommendations:

> **Recommendation 1**
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> The Committee considers that the noise standards adopted by the states and territories for the planning and operation of rural wind farms should include appropriate measures to calculate the impact of low frequency noise and vibrations indoors at impacted dwellings.
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> **Recommendation 2**
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> The Committee recommends that the responsible authorities should ensure that complaints are dealt with expeditiously and that the complaints processes should involve an independent arbitrator. State and local government agencies responsible for ensuring compliance with planning permissions should be adequately resourced for this activity.
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> **Recommendation 3**
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> The Committee recommends that further consideration be given to the development of policy on separation criteria between residences and wind farm facilities.
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> **Recommendation 4**
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> The Committee recommends that the Commonwealth Government initiate as a matter of priority thorough, adequately resourced epidemiological and laboratory studies of the possible effects of wind farms on human health. This research must engage across industry and community, and include an advisory process representing the range of interests and concerns.
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> **Recommendation 5**
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> The Committee recommends that the NHMRC review of research should continue, with regular publication.
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> **Recommendation 6**
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> The Committee recommends that the National Acoustics Laboratories conduct a study and assessment of noise impacts of wind farms, including the impacts of infrasound.

Recommendation 7

The Committee recommends that the draft National Wind Farm Development Guidelines be redrafted to include discussion of any adverse health effects and comments made by NHMRC regarding the revision of its 2010 public statement.

1.3 It should be noted that Recommendations 4 and 6, relating to epidemiological studies of wind farms and human health and studies of the noise impacts of wind farms are yet to be conducted, despite the passing of more than a year since the committee reported. Furthermore, recommendations 1 and 2 are yet to be acted on by any of the states or territories.

1.4 The NHMRC is currently undertaking a "systematic review of the scientific literature to examine the possible impacts of wind farms on human health including audible and inaudible noise". Given the NHMRC's "rapid review" in 2009 could not reasonably be referred to as a thorough examination of the evidence, we welcome this further examination of all available literature. We understand the 2009 review did not include an examination of a report by the United Kingdom's Department of Food and Rural Affairs entitled 'A Review of Published Research on Low Frequency Noise and its Effects'. Given the relevance of such a study to the NHMRC review, we encourage the NHMRC to include this report in their examination of the literature.

1.5 With respect to the current NHMRC review, there are concerns that the bulk of anecdotal evidence (in the form of personal testimonies from affected residents) will not be included in the review unless it is submitted in an 'organised' fashion with accompanying analysis. Such an examination of first hand claims is precisely what the Community Affairs Committee recommended, but no studies of this kind by independent researchers have taken place. Should affected communities be able to collate their experiences in the required format, any analysis they may perform could be labelled as 'amateur' or 'non-scientific' due to their lack of qualifications.

1.6 Therefore, appropriate weight may not be afforded to individual testimonies, even where analysis has been attempted.

1.7 Over the past 12 months we have spoken to many residents who have complained about the noise produced by nearby wind farms. Many of these residents had requested the wind farm operators conduct noise monitoring at their properties. To our knowledge, none of these residents has been given access to a full range of noise monitoring results.

1.8 It should also be noted that AGL withdrew their development application for the Hallett 3 wind farm only days before they were due to produce noise monitoring data, including wind mast data, for their Hallett 2 wind farm, as ordered by the Environmental, Resources and Development Court in South Australia.

1.9 Wind farm operators claim their wind farms are compliant with noise guidelines. For instance, Acciona have said their Waubra wind farm is operated in such a way so as to ensure that all noise compliance guidelines are met. However, noise monitoring by acousticians who are not employed by wind farm operators have

revealed that some wind farms are not. Relevantly, a study by acoustician Dr Bob Thorne has found that the wind farm at Waubra is operating outside noise regulations.

1.10 In June 2012 Senator Madigan submitted a copy of Dr Thorne's report to the Victorian Minister for Planning, the Hon Matthew Guy MLC, who had committed to suspending the operation of any wind farms found to be non-compliant with noise guidelines. No response has been received from the Minister's office to date.

1.11 We are also aware of concerns raised by acousticians independent of the wind industry that the noise monitoring conducted by wind farm operators is not performed using equipment sensitive enough to measure infrasound and low frequency noise. Furthermore, we have been told that when noise monitoring equipment is installed, it is not positioned inside homes.

1.12 Of further concern are doubts that the current noise guidelines – with which wind farm operators purport to comply - do not protect the quality of life which was enjoyed by nearby residents prior to the construction of the wind farm.

1.13 If the Federal Government is to subsidise wind farms by way of Renewable Energy Certificates (RECs) this must not be at the expense of the quality of life of nearby residents. Therefore, RECs should only be issued where an operator can show they are consistently operating within acceptable noise standards.

1.14 We acknowledge the Economics Committee believes an examination of the practical operation of the bill, its interaction with state and local government laws and its impact on the Clean Energy Regulator falls outside of the expertise of this committee. However, we believe that the property rights of residents are affected by wind farm developments as many are being denied the quiet enjoyment of their homes, and in some cases are being forced to abandon their properties without compensation, just or otherwise.

1.15 It has been reported that over 20 homes have been abandoned at Waubra in western Victoria. We are told a further 5 homes in Waterloo, South Australia, have also been abandoned. Investment in the property markets in rural communities may suffer as a result, particularly if populations begin to dwindle. Declining rural populations and the associated reduction in economic productivity are, in our view, economic issues worthy of further examination.

1.16 Therefore, whilst we disagree with the Economics Committee's view (given the quality and depth of the reports provided by the committee in relation to other inquiries), we will seek for this matter to be referred to another committee for inquiry which ought to involve public hearings and evidence called by both sides of the wind farm debate. It is also worth nothing there is an urgency that the empirical and scientific research necessary to thoroughly examine the issue of noise standards for wind farms and human health take place within a reasonable time frame.

Adequacy of current noise guidelines

1.17 Currently the South Australian Environment Protection Authority 'Wind Farm Environmental Noise Guidelines 2009' ('SA EPA Guidelines) and the New Zealand Standard 'NZS6808:2010 Acoustics – Wind Farm Noise' are the primary guidelines

against which wind farm noise are assessed. These documents address both audible and inaudible characteristics of noise.

1.18 However, these standards require the use of dB(A) sound meters, which do not adequately take infrasound and low frequency noise into account. Infrasound can only be measured using equipment that does not use an A-weighted scale.

1.19 Wind farm operators have also been known to compare their noise emissions with the World Health Organisation's 'Guidelines on Community Noise'. It should be noted the WHO Guidelines do not address the inaudible characteristics of noise and were written in the context of issuing guidelines for densely populated European cities rather than rural environments.

1.20 Concerns have been raised that the SA EPA Guidelines do not protect nearby residents from "adverse noise impacts", which is contrary to the aim of the Guidelines. This is partly due to the belief that the background noise level which has been set by the EPA is already too high for rural zones. Another concern is the lack of attention paid to infrasound and low frequency noise in these guidelines, other than describing them as "annoying characteristics" of noise which are not "present at modern wind farm sites."

1.21 Until such time as the recommended epidemiological study into the possible effects of wind farms on human health and the National Acoustics Laboratories study have been conducted, complaints from residents about the possible effects of wind farms noise cannot continue to be dismissed as "hysteria" or the results of a "nocebo" effect.

Difficulty faced by residents in obtaining noise monitoring results

1.22 Given the confident assertions of wind farms operators that they are operating within the current noise guidelines, their reluctance to release noise monitoring data to residents must be viewed with suspicion. That residents have been forced to initiate legal proceedings in order to access this data serves to compound the suspicion surrounding wind farm operators' claims.

1.23 The Renewable Energy (Electricity) Amendment (Excessive Noise from Wind Farms) Bill 2012 sought to create transparency in the operation of wind farms by requiring the publication on the internet information about noise, wind speed and direction, weather conditions and power output. It is our belief that the publication of such data would be of immense benefit to both communities and wind farm operators alike.

1.24 Such data would make it clear when wind farms are non-compliant which will enable their operators to take steps to adjust their operations in order to achieve compliance. Developers spend large amounts of time and money convincing communities around proposed developments that they take noise concerns seriously. However these efforts are undermined by the lack of transparency when it comes to releasing noise data from existing wind farms.

Concerns about wind energy intermittency and RECs

1.25 The intermittent nature of wind energy raises concerns about wind's ability to cope with peak demand. The Australian Energy Market Operator (AEMO) anticipates the contribution of South Australian wind farms during future summer and winter peak demand will be 5% and 3.5% respectively of installed wind farm capacity. Furthermore, figures obtained by the AEMO demonstrated that during the heatwave between 20 January 2011 to 2 February 2011 "as demand (for electricity) increased, the contribution from wind generation fell".

1.26 We hold reservations that this technology should be subsidised to the extent that it is, given its shortcomings in replacing baseload power due to its inherently intermittent nature. Further there is a concern that in economic terms, given the nature of the structure of the REC scheme and the issue of RECs in their current form, that investment in alternative renewable energy sources is being compromised, particularly geothermal, solar thermal and tidal power. Those forms of alternative energy have the real potential to replace coal fired power stations.

1.27 Further to the previous paragraph, wind farm output can be bid into the National Electricity Market at zero dollars because wind farm owners can access RECs as an income stream once eligible energy has been generated. As the lowest cost output is the first to be dispatched to the grid, wind energy – with the assistance of RECs – has the ability to displace electricity from sources that have higher marginal costs of generation. This leads to the following questions:

- Is wind energy the most cost efficient form of renewable energy to achieve greenhouse gas abatement? and;
- Are RECs driving out investment from other forms of renewable energy technology that could provide baseload generation, such as geothermal technology?
- It is time the energy production and efficiency of wind farms is examined against the impact this technology is having on rural communities. Wind farm operators cannot continue to be rewarded with RECs if wind farms are not complying with acceptable noise standards.

1.28 It is hoped the Senate will support a resolution to refer this bill to another Senate Committee in order to allow for public submissions and evidence to be called from those who both support and oppose this bill.

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Democratic Labor Party Senator for Victoria

Senator Nick Xenophon
Independent Senator for South Australia