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Senate Community Affairs Committee
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RE: The Social and Economic Impact of Rural Wind Farms

Bipartisan support in successive Australian Parliaments has increased the contribution of renewable energy to the electricity needs of the country's homes, businesses, and communities.

In 2009, Australia's Renewable Energy Target (RET) was extended to a 20% share of the country's electricity generation by 2020 – the equivalent of 45,000 gigawatt hours (GWh).

Wind is expected to be the major contributor to achieving the RET with 1880MW¹ of installed capacity and 7000MW of projects planned.

¹Clean Energy Council, "Clean Energy Australia 2010", December 2010, page 52

The Clean Energy Council (CEC) has estimated there are currently 2184 full-time equivalents jobs in wind construction, operation and maintenance, and this is forecast to grow to 19,139 FTEs by 2020.

In addition to job generation, the sustainable development of the wind industry in Australia provides enormous opportunities to diversity rural and regional economies, as well as for individual landholders.

The vulnerability of many rural and regional communities to weather and vagaries of agricultural markets was highlighted by the prolonged drought of the last decade, and is again a focus for government with the proposed implementation of the Murray-Darling Basin Plan.

Wind and other forms of renewable energy provide opportunities for landholders to diversify their on-farm income and sustain their farming enterprises during "droughts and flooding rains".

The Queensland Government has recognized this and late last year included wind projects as eligible for concessional loans of \$650,000 under its QRAA Sustainability program.

QRAA Chief Executive Officer Colin Holden said:

"By providing loans for activities that lead to improved productivity and sustainable resource management, we are assisting Queensland's producers to move from disaster management to preparedness".²

The increased development of wind farm projects has raised concerns in some communities and among some public policymakers; citing health, amenity and other socio-economic impacts as a result of recently established and proposed developments.

² The Honourable Tim Mulherin MP, "New and improved loans for primary producers", December 22, 2010

Despite the requirement for wind farm projects to comply with established environmental assessment and planning approval processes for major projects, additional conditions are being proposed, including a two-kilometre setback from residences for an installed wind turbine.

Rather than encourage renewable energy generation, such wind farm-specific conditions are prescriptive, compromise project development and viability, defer new investment and job generation, and ultimately undermine efforts to meet the RET.

General Electric

General Electric (GE) is one of the world's leading wind turbine suppliers. With over 13,500 wind turbine installations worldwide comprising more than 218 million operating hours and 127,000 GWh of energy produced.

With local partners, GE has ambitions to encourage new investment and employment in renewable energy generation under the RET by developing new wind farms and eligible projects. GE employs 5800 staff in Australia and New Zealand.

The established, comprehensive environmental assessment and planning approval processes for major projects should also apply to wind farm projects; and these proposed projects should be assessed in a timely manner based on its features, potential impacts and benefits.

Australia's Renewable Energy Target

Electricity in Australia has one of the highest emission intensities in the world due to its dependence on fossil fuel primarily coal. The emission intensity is 98 per cent higher than the OECD average and 74 per cent above the world average³.

³ Professor Ross Garnaut AO, "The Garnaut Climate Change Review", September 2008, page 160

The RET was established under the Renewable Energy (Electricity) Act 2000. The objectives of the Act are three-fold –

- encourage the additional generation of electricity from renewable sources;
- reduce emissions of greenhouse gases in the electricity sector; and
- ensure renewable energy sources are ecologically sustainable.

Wind accounts for almost a quarter of Australia's current clean energy generation with approximately 5000GWh of electricity generated by 1052 wind turbines accounting for 1880MW on installed capacity across 52 farms in 2010. There is an estimated 7000MW of installed wind capacity planned, of which 1043MW is under construction.⁴

The recent and projected development of wind farms in Australia has caused policymakers to consider the potential impact on communities and their residents, primarily related to noise.

To assist regulators, the Australian, State and Territory governments commissioned via the Environment Protection and Heritage Council (EPHC) to prepare the draft National Wind Farm Development Guidelines. When these Guidelines were released in July last year, the EPHC noted that:

*"In light of the expected increase in wind farm development in coming years EPHC has prepared a set of draft National Wind Farm Development Guidelines which aim to outline best practice for industry and planning authorities in areas including, heritage, threatened species and turbine noise. It is not the intention of these guidelines to be mandatory or change existing jurisdictional statutory processes, but to provide a basis for further consultation and consideration of the role of national guidelines in existing state approval processes."*⁵

⁴ Clean Energy Council, "Clean Energy Australia 2010", December 2010, page 52

⁵ Environment Protection and Heritage Council, "Wind farms", July 2010.

The Guidelines also referred to Australian Standard AS 4959-2010 Acoustics— Measurement, prediction and assessment of noise from wind turbine generators, which *“provides wind farm developers and relevant regulatory authorities with a suitable framework to develop a method for the measurement, prediction and assessment of noise from wind farms. While it sets out assessment methods and a framework for noise level limits based on background noise limits and wind speed, the Standard does not explicitly prescribe noise limits”*⁶.

The base noise level requirement of 35 or 40dB(A) provided in the main assessment tool in Australia is already significantly more stringent than the World Health Organisation’s recommended guideline value of 45dB(A).

Despite this, the recently-elected Victorian Government and a NSW Parliamentary Inquiry into Rural Wind Farms have proposed a two-kilometre setback from any residence for a wind turbine installation.

Before its election to office in November 2010, the Victorian Liberal Party committed to restrict *“the placement of turbines no less than two kilometres from the nearest home unless a contract between the resident and wind farm developer is agreed... the establishment of a shared payment system for landowners whose properties are within one kilometre of the nearest turbine, as a compensation mechanism for adjacent landholders, the establishment of ‘no-go’ zones for wind farms [and] the exclusion of wind farms in or near National and State Parks, designated tourist areas and designated regional population growth corridors”*⁷.

In 2009, the NSW Parliamentary Inquiry into Rural Wind Farms recommended that *“a minimum setback distance of two kilometres between wind turbines and residences on*

⁶ EPHC, “Draft National Wind Farm Development Guidelines”, July 2010, page 1.

⁷ Ted Baillieu, “Wind farm fairness and certainty under a Baillieu Government”, May 13, 2010.

neighbouring properties should apply... [but] be waived with the consent of the affected neighbouring property owner"⁸.

Noise-related health concerns for residents have been cited as the rationale for prescribing a setback distance.

It is also within the terms of reference for this Inquiry - the Senate Community Affairs Committee Inquiry into the Social and Economic Impact of Rural Wind Farms. In addition to examining *"any adverse health effects for people living in close proximity to wind farms [the Committee is considering] concerns over the excessive noise and vibrations emitted by wind farms, which are in close proximity to people's homes [and]... planning laws as they pertain to wind farms"*⁹. The Committee is due to report in April 2011.

However, the National Health and Medical Research Council (NHMRC) released a public statement and its finding that *"there is currently no published scientific evidence to positively link wind turbines with adverse health effects"*. As part of its Evidence Review, NHMRC concluded *"there are no direct pathological effects from wind farms and that any potential impact on humans can be minimized by following existing planning guidelines"*¹⁰.

GE agrees any setbacks should be *"derived on a site specific basis through a merit assessment approach taking into account surrounding land use, topography and potential noise and visual impacts"*¹¹ and *"relevant authorities will assess the application based on a balanced consideration of the individual merits of the specific wind farm development"*¹².

⁸ Department of Premier and Cabinet (NSW), "Government response to Legislative Council's General Purpose Standing Committee No 5 Inquiry into Rural Wind Farms", June 2010.

⁹ Senate Community Affairs Committee, "The Social and Economic Impact of Rural Wind Farms", October 2010.

¹⁰ National Health and Medical Research Council, "Evidence Review Wind Turbines and Health", 2010, page 8

¹¹ DPC, June 2010

¹² EPHC, page 5.

To do otherwise pre-empts environmental assessment and planning approval processes, dictates project configuration, undermines project viability and the objective of the RET.

Recommendations

1. The Australian, State and Territory governments reaffirm their commitment to the finalise development of the National Wind Farm Development Guidelines through the EPHC, after consultation with stakeholders, in 2011.
2. Governments note the NHMRC findings about noise levels from wind turbines and the appropriateness of existing planning guidelines.
3. Governments apply the same environmental assessment and planning approval processes, including those for the Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth), to proposed wind farms as are applied to other energy and major projects, providing consistency and opportunities for consultation and input from project proponents, developers, investors, employees, dependent businesses, local communities and stakeholders.

GE would welcome the opportunity to appear before any Inquiry hearings and if we can provide additional information or clarification, please contact me

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