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31 January 2011

Department of the Senate  
PO Box 6100  
Parliament House  
Canberra ACT 2600  
Australia

By email: [community.affairs.sen@aph.gov.au](mailto:community.affairs.sen@aph.gov.au)

Dear Sir/ Madam,

**Re: The Inquiry into the Social and Economic Impact of Rural Wind Farms**

REpower Australia thanks the Senate Community Affairs Committee for the opportunity to make this submission. We are happy for this submission to be made public.

REpower Australia was formed in 2004 and has supplied and installed 72 wind turbines in Australia, all of which we currently maintain. REpower Australia is a fully owned subsidiary of REpower Systems AG, a wind turbine designer, manufacturer, supplier and maintenance provider based in Germany. Worldwide REpower has supplied over 3,000 wind turbines. REpower Australia currently has 36 employees based in Australia, about a third of them are based in regional areas.

Wind is a key element in achieving Australia's Renewable Energy Target (RET) of 20% renewable energy by 2020. REpower is committed to wind energy and to meeting our health, safety and environment responsibilities.

Our submission is based around the key topics identified by the committee. References referred to in the submission have been attached at the end.

**Any adverse health effects for people living in close proximity to wind farms**

The Australian Government's National Health and Medical Research Council's review found there was no credible evidence of adverse health effects due to wind farms<sup>1</sup>. Our service technicians both in Australia and around the world work in wind farms on a daily and report no adverse health effects. Some of our service technicians have worked on wind farms for more than ten years.

**Concerns over the excessive noise and vibrations emitted by wind farms, which are in close proximity to people's homes.**

Australia's planning guidelines, especially in regard to noise, are some of the strictest in the world<sup>2</sup>.

Due to these strict planning laws, wind turbines in Australia are typically sited further away from houses than in other countries in which REpower operates.

There have been questions raised in other submissions about low frequency noise and infrasound. Low frequency noise and infrasound emissions from modern wind turbines are very small. Even only 200 m from a turbine the levels measured were similar to those experienced from waves on a beach or motor vehicles.

The rumour that vibration is an issue seems to have originated from a study conducted for the Eskdalemuir Observatory which houses one of the most sensitive seismic measurement instruments in the world. It was found that the instruments could detect vibrations from a wind farm within 10 km of the facility. They could also detect traffic in the local area or low magnitude earthquakes on the other side of the world. The level of ground vibration from a wind farm within 10 km of the instrument would be about one millionth of a millimetre, far below the level detectable by people.

### **The impact of rural wind farms on property values, employment opportunities and farm income.**

Studies in Australia have agreed with those overseas and found that rural wind farms do not have an impact on neighbouring property values which can see the wind turbines<sup>3</sup>. There are large benefits for landowners who host wind farms. In most cases in Australia the agreements with landowners who agree to have wind turbines on their property are based on a fixed yearly payment. This is generally the landowner's preferred option as it gives the farm a guaranteed income stream which helps them, and the businesses that depend on them, survive in times of hardship.

A large number of jobs created<sup>4</sup> during wind farm construction and a significant number of these are taken by local people. For instance most of the civil work will be done by local people and companies. This includes things like site security, supply of local plant (excavators, graders, compactors, tip trucks etc.), labour, fencing, gravel and concrete supplies. REpower prefers to employ local companies and people for site work. Typically our personnel will be employed for many years after construction to service the wind turbines so it is in our interest to maximise the benefits of the wind farms presence to the local community.

It has also been estimated that for every job directly created by the wind farm, there are at least three jobs are created indirectly<sup>6</sup>. These include accommodation, meals and fuel which would all be sourced in the area of the development. Some of these services are also needed by the operations and maintenance staff after the project is constructed.

Wind farm operating costs are primarily due to replacement parts and maintenance. Typically there will be two full time service personnel employed for every ten to fifteen turbines. REpower's preference is to employ skilled tradespeople from the local area and train them in turbine maintenance. Our service technicians come from electrical and mechanical trades and often have additional further qualifications. Except for small wind farms where roving service technicians may be used these tradespeople live and work in the local community. For large wind farms the wind farm owners typically also have their own local staff to manage operations.

**The interface between Commonwealth, state and local planning laws as they pertain to wind farms.**

The Australian planning system appears to work reasonably well. REpower is in favour of improvements which refine and streamline the process but the uncertainty of major changes would, in our opinion, be counterproductive. Disappointingly, there have been some recent moves to require wind farm developers, who are our customers, to provide payments to all neighbours of a proposed project, which is not required for any other infrastructure developer. If this constraint is implemented it will make many projects unfeasible.

**Any other relevant matters.**

There are a number of other benefits of wind farms that are not generally discussed, including...

- Modern wind turbines are the most cost competitive renewable option.
- The Australian economy needs raw material exports in order to continue successful development in the next decades. Power generation from wind turbines would not stay in conflict with increasing exports as wind turbines only need wind as “fuel”.
- Decentralised supply of power which can result in a more robust power network with better power quality.
- Diversity of supply helps protect Australia from price shocks of a particular fuel type or types.
- Wind turbines take up only a small amount of land leaving the rest available for farming.

If you require any further information please contact me.

Yours faithfully,

<original signed>

Jan Gasche  
Managing Director

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1 NHMRC, “Wind Turbines and Health – A Rapid Review of the Evidence”, July, 2010.

2 Sonus, “Wind Farms Technical Paper – Environmental Noise”, November, 2010.

3 Duponts & PRP Valuers and Consultants, “Preliminary Assessment of the Impact of Wind Farms on Surrounding Land Values in Australia”, August, 2009.

4 Sinclair Knight Merz, “Economic Impact Assessment of the Hallett Wind Farms”, July, 2010.