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Community Affairs References Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600

By email: community.affairs.sen@aph.gov.au

Re: The Social and Economic Impact of Rural Wind Farms

Dear Committee Members,

Thank you for the opportunity to make a submission regarding the Social and Economic Impact of Rural Wind Farms.

RES is a global wind farm developer, owner and operator with over 30 years of experience. RES has constructed and/or developed more than 5GW of wind farms to date. Outside of Australia, RES is also involved in other sources of renewable energy including small and large-scale photovoltaic (a 5MW installation recently completed in France), heatpumps, building-integrated renewables and biomass boilers. In Australia we have a pipeline of wind farm development sites. Our most advanced projects are the 61 turbine Taralga site in the Southern Highlands of NSW and the 75 turbine Ararat project in regional Victoria. Both projects are fully consented and will shortly move into the construction phase. Further information on RES may be found at www.res-australia.com.au.

We address the specific concerns of the inquiry below but would first like to make some general comments about the social and economic impacts of rural wind farms.

Any form of development (wind farm or other) will cause a change to the existing environment. When assessing whether a development should receive planning consent authorities must balance the benefits of the development to the community (local and wider) along with any impacts on the community. Where the benefits outweigh the impacts and any impacts can be mitigated then the development should proceed.

It is RES' firm contention that the benefits of renewable energy projects, particularly wind, are many and varied. They include:

- Providing energy security and diversification benefits in a world of dwindling fossil fuel reserves and a general trend of increasing fossil fuel prices.
- The absence of fuel price uncertainty, unlike both coal and gas plants. Fossil fuelled generation plants are potentially exposed to both short term fuel uncertainty – due to disruption to supplies or changes in demand – or long term price risk – due to the inherent assumptions required to predict fuel costs in 20, 30 or 40 years time.
- Reducing greenhouse gas emissions and particulate pollution by providing a clean source of electricity. The linkage between increasing concentrations of greenhouse gases in the atmosphere and global warming has been heavily researched and accepted by the scientific community. Australia's enviable abundance of renewable energy resources and geographic size make it particularly well-suited to large scale renewable energy projects.
- Providing jobs, investment and general stimulus to rural communities. This helps rural communities survive and over time can help reduce pressure on overcrowded cities.

- Providing landowners and farmers with an additional income stream. The guaranteed income to wind farm landowners can act as an additional level of insurance against the vagaries of drought, pestilence and flood.

The impacts of wind farm developments are acknowledged as part of the planning process and a considerable amount of time, expertise and expense is dedicated by wind farm developers to address these impacts. Studies and consultations covering community, landscape and visual, noise, archaeology, geology, hydrology, flora and fauna can take up to 3 years and must take place prior to a planning application being submitted. Experts in each field are engaged and it is not uncommon for totally new knowledge to be acquired on land where no such studies have taken place since European settlement.

RES considers the current planning requirements to be more than adequate to mitigate any impacts of a wind farm development. In consideration of this, along with the wider benefits of wind farms mentioned above, RES believes that further restrictions on wind farm developments are not appropriate. This is particularly important if the Federal Government's 20% by 2020 Renewable Energy Target (RET) is to be achieved.

It is in RES' interests to maintain good relationships with the communities in which it operates, as has been the case in the 30+ years it has been operating around the world. Some experiences of local residents near a wind farm in central England are as below:

"I live two fields away from a wind farm and really enjoy living near it. I can see the wind turbines from my front window, I find them very interesting structures and they don't intrude into our daily lives...to be honest we hardly know it is there! We don't hear the wind farm at all. It was already built when we moved into our house and knowing that there would be a wind farm visible from the living room did not in any way effect our decision to move to the area."

"I really like the wind farm, initially I was concerned about one being built so close to my house (I live 800m away from the nearest turbine). I did some research on the internet and was shocked to find anti-groups protesting about noise, since the wind farm has been built I have changed my mind as none of the problems I read about on the anti-wind websites are true. We moved to the area for peace and quiet, I've never heard the wind farm and visitors to my house are always amazed at how quiet it is. I walk my dogs around the wind farm and even when you get right underneath a turbine, you can only hear a slight rush of the wind. The wind farm is an interesting landmark and I often see people parked-up facing it having a picnic."

The particular areas of interest to the inquiry are addressed below:

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

RES does not believe that wind farms operated in accordance with their planning conditions pose a health risk to people living nearby. This view is borne out by our experience in owning and operating wind farms around the world, along with independent research. For instance, The National Health and Medical Research Council conducted a literature review titled *"Wind Turbines and Health, July 2010"*. The review concluded that it supported the statement:

"There are no direct pathological effects from wind farms and that any potential impact on humans can be minimised by following existing planning guidelines."

RES strictly adheres to the planning guidelines in each of the planning jurisdiction that it operates. RES believes that planning guidelines should continue to be derived from science based principles.

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

The noise emitted from wind farms is very low when compared to everyday environmental noise (e.g. cars on roads, wind in the trees, local wildlife, household appliances and farm machinery).

It is important for wind turbines to be appropriately sited to ensure that any noise received at nearby houses, which is attributable to the wind farm, does not exceed guidelines. Extensive data collection and noise modelling is conducted prior to a planning application being submitted. Noise compliance testing is then

performed after construction to ensure that wind farms are operating within the planning conditions. Within this framework there already exists sufficient powers for action to be taken against a wind farm which fails to comply with its conditions of planning, which could ultimately result in erected wind turbines either not being useable, or only for severely restricted periods. The economic implications of restricted operating periods are significant, and sufficient for wind farm operators to ensure compliance.

A report prepared for the Clean Energy Council by noise experts Sonus¹ addresses a lot of issues that have been raised relating to wind farm noise. Some of the key findings in the report are as follows:

"The rate of complaints relating to environmental noise emissions from residents living in the vicinity of operating wind farms is very low"

"measurements of infrasound noise emissions from modern upwind turbines indicates that at distances of 200 metres, infrasound is in the order of 25 dB below the recognised perception threshold of 85 dB(G) and other similar recognised perception thresholds (Hayes McKenzie Partnership Ltd, 2006)"

"The Victorian Department of Health (WorkSafe, 2010) has examined both the peer reviewed and validated scientific research and concluded that the weight of evidence indicated that there are no direct health effects from noise (audible and inaudible) at the levels generated by modern wind turbines"

RES believes that wind farm noise restrictions should not be applied at a higher standard than other developments, particularly critical infrastructure projects.

c) The impact of rural wind farms on property values, employment opportunities and farm income

Property values

A report prepared for the NSW Valuer General² concluded that for properties not directly associated with the wind farm:

"The main finding was that the wind farms do not appear to have negatively affected property values in most cases."

Properties directly associated with wind farms are likely to increase in value due to their additional turbine rental stream, improved roads and drainage. In turn, the contribution of the wind farm to local employment and the economy generally has a positive impact on real estate values.

Employment opportunities

The direct and indirect employment opportunities created through wind farm development are significant. An economic impact assessment prepared by SKM³ for AGL revealed that the Hallett group of wind farm projects in South Australia will result in the creation of 640 construction job years and 42 ongoing maintenance jobs. Additional jobs are created where the wind turbine towers are manufactured in Australia.

In the Hallett instance local employment was utilised in the areas of transport, labouring, electrical, machine operation, concreting and quarrying. Through the multiplier effect further local indirect jobs are created by servicing these employees with accommodation and sustenance. The Hallett experience has and will be replicated at other wind farm sites.

Farm income

Wind farms provide a significant supplement to wind farm income and can provide an important buffer against the vagaries of the weather and changes in commodity prices. Many landowners that RES has dealt with in Australia and overseas welcome the additional income that a wind farm provides. Wind farms do not substantially impede the existing operations of farmers and the additional income can be used in a variety of ways to improve farm properties.

¹ Wind Farms Technical Paper, Environmental Noise, Sonus, November 2010

² Preliminary Assessment Of The Impact Of Wind Farms On Surrounding Land Values In Australia, NSW Department Of Lands, August 2009.

³ Economic Impact Assessment of the Hallett Wind Farms, Sinclair Knight Merz, July 2010

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

RES generally supports the streamlining of planning laws across the jurisdictions. However, we caution against simply taking the most stringent guidelines from each of the state jurisdictions and combining them to form a national policy. RES seeks for any national guidelines to be derived from scientific principles and in consultation with the wind industry.

e) Any other relevant matters

Australia currently has approximately 2,000MW⁴ of installed wind capacity. This compares with 158,000MW installed globally to the end of 2009. Under moderate assumptions global wind capacity is predicted to grow to 832,000MW by 2020⁵. Australia is not alone in its embrace of wind power.

If Australia is to reach its 20% by 2020 renewable target at the lowest possible cost, up to 10,000MW of new wind capacity will need to be installed. The enhanced renewable energy target was only recently endorsed by all major political parties in July 2010. Increasing impediments on wind farm development will ensure that the 2020 target is not met and will simply result in energy retailers paying the shortfall charge, an undesirable outcome for all parties.

Wind farms can provide an important stimulus to rural communities. Increased employment, business opportunities, increased farm viability and the common practice of establishing a community fund can often revitalise small communities struggling with the impacts of population decline, drought and centralisation of essential services.

Thank you again for the opportunity to put forward our views.

Yours sincerely,

Chris Sweatman
Chief Operating Officer

⁴ Clean Energy Australia 2010, Clean Energy Council

⁵ Global Wind Energy Outlook 2010, Global Wind Energy Council