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

Sent Via Email: community.affairs.sen@aph.gov.au

Dear Sir/ Madam,

Submission to the Senate Inquiry into the Social and Economic Impact of Rural Wind Farms

Australia faces an urgent need to cut emissions of greenhouse gases and reduce our reliance on fossil fuels in order to mitigate climate change, and so renewable sources of electrical energy – especially wind and solar – have an essential role to play in our transition to a lower carbon society. The scope for Australia's economy and workforce to rapidly scale up wind energy production is illustrated in the recent report by Beyond Zero Emissions and Melbourne University's Energy Institute, which shows the technical feasibility of a transition to 100% renewable energy by 2020 (for electricity and largely replacing transport fuels), including a substantial contribution from wind energy (~ 40%).

Many positive effects of wind farm development have been demonstrated:

- wind energy is safe, non-polluting, involves no primary fuel costs, and is inexhaustible.

- wind farms in a range of locations can contribute strongly to meeting local power demand, and can be integrated within a grid of distributed sources to balance supply and demand

- there are many clear environmental and health benefits of wind energy relative to coal or natural gas, and transitioning to a higher supply of wind energy would enable us to enjoy cleaner air and river systems, to reduce water consumption from power generation, and to reduce public health problems associated with fossil fuel extraction, transport, burning, and waste disposal
See Doctors for the Environment Australia:
http://dea.org.au/news/article/policy_paper_on_the_health_impacts_of_coal_pollution_and_renewable_energy

- wind farms generate very low greenhouse gas emissions, and can displace the need for generation from polluting sources:
For example in NSW, a 2010 study by McLennan Magasanik Associates "Estimating Greenhouse Gas Emissions Abatement from Wind Farms in NSW" found that wind displaces fossil fuel generation and can act to lower wholesale electricity prices. A wind farm of average size (150 MW) is estimated to displace between 150,000 and 450,000 tonnes of CO_2-equivalents per year; scaling up to large wind farm (500MW) expected to displace between 900,000 and 1,600,000 tonnes CO_2-equivalents per year.
Furthermore, it is estimated that the emissions entailed from production and installation of wind turbines represents less than 2% of the emissions reductions expected through displacement of the need for energy from fossil fuel sources.

- wind farms offer financial benefits to landowners where turbines are placed,

- wind farms have the potential to generate thousands of good jobs in manufacturing and in rural and regional areas (see Australian Conservation Foundation report: http://www.acfonline.org.au/articles/news.asp?news_id=3135) For example, wind farms in Australia generate between two and three times the number of 'job years per KWh' compared to coal mining and power generation, and the employment opportunities are much more equitably spread around the country.

- countries in the EU have found that the growth of wind generation is causing reductions in wholesale power prices, pointing to a clear advantage to their further development especially in light of current concerns over increasing costs of energy generation.

In contrast, few possible negative effects of wind farm development have been identified, and those that have can be mitigated to levels acceptable to local communities and the wider public.

- Health effects: The NHMRC's review of health studies, conducted in 2010, found "no published scientific evidence to positively link wind turbines with adverse health effects." (See National Health and Medical Research Council review of the literature http://www.nhmrc.gov.au/publications/synopses/new0048.htm) Similarly, the World Health Organisation has released a statement on infrasound that “There is no reliable evidence that sounds below the hearing threshold produce physiological or psychological effect”. Lastly, it should be noted that current turbine designs entail the production of infrasound and low frequency noise a levels that are below accepted threshold values.

- Impacts on wildlife, for example through deaths or injuries to birds and bats, can be minimised through turbine design, placement and management practices. As an ecologist I am very concerned about declines in threatened species and ecosystems, but believe that well designed wind farms pose only a small risk in most areas, and that the risks from unmitigated climate change and from fossil fuel extraction and burning are vastly higher.

Community support for wind energy is high in regions around the country:

Community-based surveys and polling by research companies have shown that community support for renewable energy, and for wind in particular, is very high.
For example, a Newspoll survey conducted in December 2009 found that 90% of people in regional areas thought that that Australia should produce more renewable energy.
Further, a survey by AMR Interactive in 2010 (commissioned by the Government of New South Wales) found that wind farms were viewed as an acceptable form of power generation by 81% of the population; that 80% of residents were supportive of wind farms being built in their region; and that over 60% of residents were supportive of wind farms being installed at a distance of 1–2 kilometres from their residence. This survey also reported widespread recognition of economic and employment benefits arising from wind farms.

Thank you for your consideration of this submission,

- Jessie Wells