

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

Australia is amongst the largest per capita emitters of carbon dioxide on Earth and within that embarrassing statistic, the stationary energy sector is the major contributor to our emissions. It is essential that Australia's electricity generation is rapidly decarbonised. As such I am a supporter of wind energy development as a part of this necessary transition. Renewable energy is an essential part of our response to climate change. Of all the renewable energy technologies that are available to us, wind is currently the most commercially and technically viable form.

I have worked for a renewable energy company for the last 3 ½ years. I actively sought employment in the renewable energy sector hoping that I could contribute to the necessary energy transition in some way. Prior to my current employment for a renewable energy company I was an environmental planning consultant for over 8 years for a large Australian consultancy and therefore worked for variety of large infrastructure and energy industry clients.

I would like to offer some more personal thoughts with regards the terms of reference:

### **Health and Infrasound Studies**

It appears that the concern regarding alleged health impacts from wind farms is related to low frequency noise and/or infrasound. Yet low frequency noise and infrasound is all around us everyday and are not phenomena unique to wind farms. Numerous natural and man made sources of low frequency noise and infrasound exist in urban and rural environments. Motor vehicles generate low frequency noise and infrasound and we surround ourselves with them. Recent research by Adelaide consultancy Sonus has recently shown that infrasound levels at a beach and in the Adelaide CBD are typically higher than those within 2-300 metres of a wind turbine. This is consistent with earlier European research.

Within Australia, the National Health and Medical Research Council (NHMRC), Victorian Chief Medical Officer and South Australia EPA have all concluded that there is currently no scientific or medical evidence that wind farms lead to adverse health impacts and have made statements to that effect.

In the NSW 2009 Rural Wind Farms Inquiry the Committee considered the issue of health impacts and "Wind Turbine Syndrome" as it has been labelled by Dr Pierpont. The Committee's closing comments on "Wind Turbine Syndrome" included the following:

*The Committee is concerned that the significance of 'Wind Turbine Syndrome' is being unnecessarily exaggerated because Dr Pierpont is a medial [sic] doctor and has published a book on the issue, rather than any scientific merit of such a syndrome. As a result, a degree of fear is being instilled in communities that may host wind turbines. The Committee is concerned that, based on evidence received, this unwarranted fear may be causing greater health impacts than the presence of any actual 'Wind Turbine Syndrome'.*

During Professor Gary Wittert's (Professor of Medicine and Endocrinology and at Adelaide University) sworn evidence during the recent Allandale Wind Farm in the South Australian Environment Resources and Development (ERD) Court, he confirmed the close mind/body connection and the ability for anxiety and stress to have physical health impacts. Professor Wittert also expressed serious concerns about the fundamental deficiencies of Dr Nina

Pierpont and Dr Sarah Laurie's work with respect the assumed wind farm health impacts. It is recommended that the Senate Committee review this Court transcript further.

Personally I have spent many hours and days on operational wind farm sites. I have recently holidayed with my family in close proximity to the Cape Bridgewater Wind Farm in Victoria for several days. Neither I or any member of my family has at any time during those visits experienced any of the symptoms that some people attribute to wind farms.

Like all other developments, whether a new road, medium density residential development, pub, retail or agricultural development; there is a potential to cause annoyance to neighbours if inappropriately sited, designed or operated. However the rigorous approvals process that wind farms must comply with is designed to prevent inappropriate development. I share the concern that reported health impacts near wind farms has more to do with the anxiety and stress associated with unwarranted fears than infrasound or low frequency noise.

Finally with respect health impacts I would like to draw comparison to existing coal fired power stations. Coal pollution includes a range of noxious chemicals (including arsenic, lead, nitrogen and mercury) and small particulates. A 2009 United States report by the Physicians for Social Responsibility (PSR) titled *Coal's Assault on Human Health* stated that coal pollutants contribute to four of the five leading causes in death in the USA: heart disease, cancer, stroke and chronic respiratory diseases. It intrigues me that the alleged health impacts of wind farms are the subject of a Senate inquiry, despite the scientific evidence across the globe and statements of peak health organisations across Australia that find no link. Yet in a nation that is so reliant on coal for its electricity there does not seem to be a similar level of concern regarding the known health impacts of coal fired power stations !?

## **Economic Impacts**

It saddens me that the public debate on wind energy, typically played out in the mainstream media, frequently portrays wind energy as being solely reliant on subsidies. Yet the enormous subsidies provided to the fossil fuel sector for many decades are frequently ignored. At present the fossil fuel sector still receives billions of dollars of assistance each year in the form of various subsidies, rebates and extremely generous water rate discounts. The long running influence of the fossil fuel lobby upon the media and Australian politics has continued to perpetuate skewed misinformation.

Similarly, suggestions that renewable energy will significantly inflate the cost of electricity are simplistic and misleading. South Australia has the greatest number of wind turbines in Australia, over 45% of all Australian turbines and by far the greatest percentage of wind in its energy mix (approximately 17%). During 2010, ROAM Consulting study concluded that South Australia's electricity prices will rise relatively less than other States. During hot summer days in south-eastern Australia when energy demand and prices peak, South Australia, the State with by far the greatest proportion of wind power, typically has a significantly cheaper wholesale electricity prices than Victoria.

In the recently released Garnaut *Climate Change Review Update 2011* (Paper 1), it is stated that electricity generation costs will rise rapidly regardless of any policy to reduce greenhouse gas emissions. Capital costs increases associated with the resources boom, increasing coal prices internationally (which flow to domestic power generation), the emerging gas export industry and the increasing cost of maintaining electricity transmission networks are all more significant impacts on electricity price.

The renewable energy company I work for creates numerous real jobs. It employs engineers (wind, electrical, civil and mechanical), project managers, construction crews, occupational health and safety officers, accountants, economists, town planners, environmental scientists, compliance officers, GIS and IT specialists. For the full life cycle of a wind farm, direct and indirect employment and economic benefits flow to the rural communities which host wind farms. Communities benefit from job creation, local investment and the community funds that are commonly implemented by project proponents.

## **Community Support**

It is clear to me that my current employer engages with local communities in a far more meaningful, genuine and on-going fashion than any of the large infrastructure and energy industry clients that I worked for during my 8+ years as a consultant.

Polling consistently shows that the majority of Australians support wind power. My personal experience is that the majority of people within the rural communities within which I have worked that host wind farms also support wind energy.

I have observed that this supporting majority is often relatively silent, whereas the opposing minority is often extremely vocal. It is also human nature that people that oppose change are more vocal than those that support change. Obviously we need to allow for all views to be heard and respect the right of people to object to wind farms. Objections and community concerns can and do influence projects to reach better outcomes. However I am disappointed when I observe deliberate and aggressive mis-information and fear campaigns which some anti wind farms groups employ. These campaigns needlessly increase anxiety levels within communities.

## **Approvals Process**

Wind farm planning applications are considered pursuant to State planning and environmental legislation. Some Commonwealth legislation such as the EPBC Act also applies, however the primary approvals processes remains a responsibility of State legislation. Wind energy proposals required comprehensive environmental impact assessments. In my experience on a range of large infrastructure developments, the wind industry has typically adopted a far higher standard of rigour when carrying out these assessments than other large infrastructure developments.

Furthermore, the approvals process for wind farm proposals ensure numerous and comprehensive mitigation measures are embedded within the design or adopted during construction and operation. Long term monitoring of identified potential impacts is carried out in order to verify the accuracy of the environmental assessments.

The need for a rigorous approvals process and post construction monitoring for wind farms is not disputed, however it is negligent not to apply the same standards to other sectors and development that have a similar or even greater potential for amenity and environmental impacts.

Land use planning in Australia is traditionally the realm of State Government legislation. Given the rigorous approvals processes that already apply within the States, there does not appear to be any need for further Commonwealth involvement with respect wind farms beyond the existing environmental legislation where it relates to matters of National environmental significance.

## **Conclusion**

Electricity demand in Australia continues to grow due to increasing per capita demand and on-going population. Meeting this demand remains a huge challenge for Governments, which ultimately rely on the private sector to deliver. To help mitigate climate change, Australia's economy needs to be less carbon intensive. However beyond climate change mitigation there remains a compelling case for a cleaner, diversified and decentralised energy mix. Wind farms are a crucial component of an electricity generation mix needed to contribute to Australia's long term sustainable energy needs.

The need for appropriate and rigorous planning controls is not disputed, however the existing controls on Australian wind farms are already amongst the world's most rigorous. If any changes were contemplated to these controls, they must be equitably and consistently applied across other industries, other power generators and be informed by the best available science.

**Mr Kim Derriman**