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Submission to the Senate Community Affairs Committee

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

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1 Introduction

The political endorsement and support for large-scale industrial wind power installations is being driven by a minority of largely city-based voters who are desperately looking for a ‘quick-fix’ to allay their own fears and guilt about climate change. Naturally, these people would rather an industrial wind farm somewhere – anywhere – except their own back yard.

Their desire for absolution has gained wider momentum because the general public has been fed one-sided information about the benefits and drawbacks of industrial wind power.

The wealth of rose-tinted information about wind energy:

- stems largely from money-making industrial wind proponents who exaggerate claims about its benefits, for example the number of homes that a wind farm will ‘power’; the amount of greenhouse gases that a wind farm will ‘prevent the production of’; and the ability of wind energy to meet our growing energy consumption.
- is promulgated by a lazy, sensationalist media looking for a quick headline.
- is not questioned by many of our elected members and decision-makers who fear being labeled as “climate change deniers” if they do.

As a result, many people have been misled into believing that the solution is easy – just erect a few big windmills to replace our dependence on coal. Television advertisements for an energy retailer show happy power workers plucking a coal-fired power station off the landscape and replacing it with just three wind turbines. Peruse any internet discussion board and you will find plenty of people with the strongly held belief that wind energy is all good and that coal energy is all bad and must be done away with immediately.

The myth that our wealthy, fossil-fuel based economy can simply be transformed, by the flick of a switch, to source a large part of its massive energy needs from wind (and solar) is perpetuated by the naïve, and by those who have a vested interest in the expansion of industrial wind-power. These are:

- wind industry developers looking for a quick profit courtesy of the REC and government mandated “green energy” quotas;

- well-funded, organized environmental groups who see green symbolism in spinning turbines;
- a slack media looking for an easy-to-understand “visual” to illustrate the complexity of climate change; and
- Federal, State and local governments seeking ways to demonstrate their green credentials to the dwindling but still potentially (in electoral terms) significant proportion of voters who demand that we ‘do something’ about climate change.

At the sharp end of all this are the hapless communities who have been targeted by the industrial wind developers with their unwanted turbines.

There is a disturbingly similar pattern to the way wind farm developers behave, including a failure to consult local communities in a meaningful way and take notice of their concerns. This was demonstrated in submissions received by House of Representatives Standing Committee on Industry and Resources inquiry into Renewable Energy during the 41st Parliament¹. More recently, the same sorry story was related in submissions and public hearing witnesses to the NSW Legislative Council inquiry into Rural Wind Farms². In both cases, local residents – ordinary people – told how they found their lives turned upside down by the dual forces of developers and government determined to turn their quiet rural neighbourhoods into an industrial zone.

Industrial wind energy proponents completely deny the existence of any adverse impacts on communities targeted for industrial wind plants. Across Australia, communities are being severely disrupted and individuals face substantial losses, without compensation, as a result of having wind farms proposed or approved for their areas. Ordinary people are being forced into spending large amounts of time and energy to defend their life’s investments against wind farms, whose greenhouse gas benefits are at best dubious.

Wind farm developers deliberately use ‘divide and rule’ tactics by signing up some landholders to secret deals, a recipe for division in these inter-dependant communities. Even if the wind farm does not go ahead, the social fabric of the small, interdependent community is torn.

Like similar communities and individuals across NSW, we are all just ordinary people who have been forced to fight protect to our homes (and in some cases our livelihoods), and our local environment from being transformed from a peaceful rural residential area into an industrial zone. We have become the ‘test-cases’ – and have been told that we

¹ <www.aph.gov.au/house/committee/isr/renewables/subs.htm>

² <www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/5289EFFDED250AE4CA2575E10007D079>

should willingly, and without compensation, be sacrificed for the “greater good”. The “greater good” is largely a symbolic gesture – the erection of industrial wind-turbines whose primary value is not the generation of electricity, but rather a salve to those whose conscience is pricked by the fear of human-induced climate change, but who would rather others make sacrifices on their behalf.

Thanks to the NSW Government’s surprise announcement in February 2010 that we are now living in a declared wind industry precinct, we may yet face this ordeal again. This time, though, we can not expect the NSW bureaucracy to deal with any development application impartially since the Premier has committed the public service and Wind Farm Precinct committees to work on behalf of the developer against the legitimate objections and concerns of our community.

Industrial wind farms have no place close to rural residential areas. Industrial wind developers do not propose their turbines for rural and rural residential areas because they are inherently windy sites. The attraction of these sites is that they are close to existing transmission lines, and plugging into existing infrastructure reduces their start-up costs. The fact that the wind blows sometimes (even when it is not needed) is a secondary issue in the determination of a wind farm site. If this were not the case then wind farm developers would not be shunning the better wind resources available at further distances from existing transmission lines.

2 Our story – Molonglo Ridge

2.1 *Who we are*

The Molonglo Landscape Guardians is an incorporated association whose aim is to oppose the development of a wind-plant on the Molonglo Ridges. The MLG supports the development of alternative sources of energy. However, we consider the Molonglo Ridges are an inappropriate site for a wind-plant due to their proximity to residential areas, huge visual impact and environmentally sensitive location.

We are an independent body made up entirely of local residents. We receive no financial or other support, apart from than the huge amounts of personal time, and the occasional donation of materials (postage stamps, petrol for getting to meetings, etc) made by our members. We are not associated with any industry or industry group.

2.2 Where we live

The Molonglo Ridge is located to the south east of the City of Queanbeyan, and is visible from Parliament House in Canberra. Most particularly, it is visible from around a thousand rural residential homes on both sides of the ridge and from many parts of Queanbeyan and Canberra. It is surrounded by wildlife reserves, can be seen from the historic London Bridge homestead, and is next to the Googong Dam reserve and catchment. The Molonglo Ridge is currently protected by local planning laws that prohibit any construction on the ridgeline. In short, it is the least desirable place to locate an industrial power generation facility.

2.3 Our experience

In November 2004, a Spanish energy generation company EHN (now named Acciona Energy) announced that they had plans to construct a 60 turbine industrial wind installation on the Molonglo Ridge. Although their plans had been in development for several years and they had already signed up a single landowner to host the 125 metre tall turbines, it was not until November 2004 that the developer condescended to inform the affected local communities of their plans.

At four meetings held by the developer in December 2004, the overwhelming response from the community was opposition to the industrial wind farm proposal.

Subsequent contact with the community by the developer, Acciona, was completely inadequate and thoroughly divisive. Acciona ceased all contact with the community in March 2005. Their website was not updated after March 2005, and the only public statements they made were that “studies are continuing” Then, in July 2006 it was reported in the media that the project was “on hold indefinitely”³. In May 2008, over four years after they had first dropped their bombshell into our community, and over two years since their last contact with residents, Acciona finally announced, quietly via a media release, that they had pulled the plug on their ill-conceived plans and had abandoned the project.

By any measure, this is reprehensible behaviour by the developer – they blew into our community uninvited, created anxiety and division, and then remained mute on the subject, seemingly content to just sit there keeping their options open at our expense for four, long years. No doubt they hoped that our determination would fade and burn out, like many communities weakened by the constant fight. We did not, but the wasted time and effort of many people spent on the campaign would have been better spent doing

³ < www.abc.net.au/news/newsitems/200607/s1693519.htm>

positive things for community. Our views on the consultation process for the Molonglo Ridge wind plant were detailed in our submission to the Australian Greenhouse Office's discussion paper on National Code for the Location of Wind Farms (May 2006)⁴

Like many other communities across the continent our main focus has been to challenge the imposition of an unwanted industrial wind energy development in our neighbourhood. By keeping the debate focused on individual developments, we have unwittingly allowed the Industrial Wind Industry and their supporters to successfully narrow the debate down to one of aesthetics and "bird kills". In fact, the wind industry is relaxed about these criticisms and keeps the kettle boiling on them – they can, after all, be batted away as "NIMBYism". Although these concerns are legitimate, the debate should and must be broader than this – the Industrial Wind Industry's dubious claims about the value and usefulness of their product must be challenged and tested. Importantly, it should not be left to under-resourced communities and individuals to do this work.

We simply want to protect our local environment while encouraging a broader, informed debate about the worth of industrial wind energy generation to do what it says it will do – displace coal fired power generation and reduce CO2 emissions. We welcome this inquiry process as a way of prompting a balanced discussion on the impacts of the wind energy sector on individuals and communities.

3 Adverse health effects for people living in close proximity to wind farms

It is our view that, whatever the after-effects of living with a wind farm may be, the detrimental health effects commence the moment residents learn of the developer's plans to install an industrial wind plant in their neighbourhood. Six years down the track in our fight against the Molonglo Ridge wind farm we now know that the 'surprise attack', the lack of meaningful consultation, the corrosive pattern of dividing communities and the buying of support is a consistent feature of wind farm developments across the continent and can only be construed as a deliberate attempt on the part of wind farm developers to weaken, and ultimately to crush any resistance.

⁴ <www.greenhouse.gov.au/renewable/publications/wind-discussionpaper.html>

3.1 Personal Impacts

Imagine going to your mail box one day and finding a leaflet telling you that the quiet, rural lifestyle you had chosen was about to be snatched away and that in the space of a few short months your quiet residential neighbourhood was to be turned into an industrial zone. Imagine your fears for your and your family's lifestyle, investment, health and safety. Imagine the shock, stress, concern, even panic that you might experience. That is the situation we faced.

Like similar individuals across NSW, we are all just ordinary people who were forced into the extremely stressful situation of having to fight on all levels to protect our homes (and in some cases our livelihoods), and our local environment from being transformed from a peaceful rural residential area into an industrial zone.

We were faced with Hobson's Choice: give up inordinate amounts of time, effort and income to fight the wind farm, or simply give up completely and allow the developers to ride rough-shod over us, our landscape and our communities.

We were forced to battle cashed-up wind-industry developers, green lobby groups, a misinformed public, a biased media and, in some cases, our own elected representatives. Our genuine concerns about our loss of amenity saw us labeled as 'selfish NIMBY's. We were accused of being in cahoots with the coal and nuclear industries and tagged, incorrectly, as 'climate change sceptics'.

We became the 'guinea pigs', the test-cases who were told that we should willingly, and without compensation, be sacrificed for the "greater good". The "greater good" of largely symbolic gesture – the erection of industrial wind-turbines whose primary value is not the generation of electricity, but rather as a salve to a collective conscience pricked by the fear of human-induced climate change.

The need to fight the wind farm meant that our work, families and farms were neglected. Other interests had to be put aside to accommodate the huge effort needed to mount, at extremely short notice, a credible case against a well-funded developer (in our case a multi-national corporation). In short, our lives were disrupted to the point where finding time for normal day to day activities was virtually impossible.

We know that the prospect of a wind farm on the Molonglo Ridge will never go away. We have had to accept that our lives could be turned upside down again at a moment's notice. We are resigned to the never-ending need to put our case at every opportunity, whatever other priorities we may have to put on hold to do so.

The cost to our emotional and physical health has been huge. The drain on our personal wellbeing and that of our communities cannot, and must not, be underestimated. It is not surprising that, when questioned by the NSW Legislative Council Inquiry into Rural Windfarms one resident told the Committee that what she would really like would be to ‘get the last five years of her life back’

3.2 Community Impacts

If a healthy community can be defined as one which experiences growth, interdependence, and cooperation, there is no doubt that wind farms are detrimental to community health.

A review of submissions to the House of Representatives Standing Committee on Industry and Resources inquiry⁵ and the NSW Legislative Council Inquiry into Rural Wind Farms⁶ reveals that wherever a wind development is planned, social upheaval follows.

The usual pattern is that a developer will sign wind turbine hosts to “commercial-in-confidence” agreements which ensure that the rest of the community is kept in the dark about their plans. They offer handouts to community bodies such as the volunteer fire brigade or struggling football club. They offer incentives to cash-strapped local councils in the form of road improvements (although inevitably these often fail to materialise once the development has been approved). When nearby landholders object to the wind farm development, they discover they are arguing with the fire brigade or football club stalwarts – their neighbours, people they have known for years, have been bought-off by the developer. They have to do battle with elected representatives, who invariably live nowhere near the wind farm, and who have difficulty accepting the argument that residents would rather put up with a dirt road than suffer a wind farm as the price of a few kilometres of bitumen.

It is difficult to conclude that this is anything but a deliberate strategy on behalf of the industrial wind industry. As such, it should be a matter of urgent concern for all levels of government that inter-dependent rural communities are being torn asunder by this mercenary industry.

It is our contention that the wind industry is fully aware of the impacts that industrial wind-plants have on people living in the areas surrounding a wind farm. However, rather

⁵ <www.aph.gov.au/house/committees/isr/renewables/subs.htm>

⁶ <www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/5289EFFDED250AE4CA2575E10007D079>

than act responsibly by accepting their industry's negative effects and developing strategies to deal with them, they instead deny they exist.

The reality is that poorly sited wind-farms have devastating impacts on local communities, the landscape, environmentally sensitive areas, wildlife, heritage conservation areas and water conservation.

There is currently NO COMPENSATION for any negative effects suffered by neighbours of a wind farm.

3.3 The myth of the happy 'community wind farm'

Our community, and individuals within it, are not alone in being left embittered, exhausted and in poorer health after being forced to fight unwanted industrial wind farms planned for their residential areas.

While the Molonglo Landscape Guardians were battling a huge multi-national corporation, the unfortunate residents of Denmark in WA and Hepburn in Victoria, found themselves fighting supposedly 'local community' wind farm proponents.

The Denmark and Daylesford industrial wind developments were heralded by their proponents as being benign, well-supported, community-centred proposals, however nothing could be further from the truth. The unpleasant reality is that a handful of wind supporters set about inflicting unwanted wind turbines on a distant settlement, and then sat back and watched individuals' lives being turned upside down as they fought to protect the things they value. The fact that the proponents do not walk away or amend their proposal when they encounter stiff opposition, when they know the personal hurt and trauma they have caused and will continue to cause people in their community – their neighbours – must surely raise questions about their professed, community-driven motives.

There is no reason to suggest that so-called 'community' wind farms proposed for NSW, or anywhere else, will be any different. Whoever the proponent is, these developments create deep community division and make winners and losers out of neighbours. In fact, supporters of the 'community-owned' model are as just as divisive as any commercial developer.

There is a disturbing disregard shown by the promoters of so-called 'community-owned' wind developments for the people in the community who do not share their benign view of wind energy. For example, in a paper prepared for the Southern Council's Group (a

collection of Local Government Authorities on the South Coast of NSW) the authors included the oft-repeated, inflammatory and untrue claims that opposition to Industrial Wind development is “founded on misinformation” and all that is required to ease the process is a “concerted education effort” and convince people that it will be locally controlled.

The authors of this paper claim that community-based wind power has “proven potential to overcome much of the resistance to the concept of wind turbines”⁷. To support this assertion, the authors promote the controversial Hepburn/Leonards Hill proposal as a model, yet they did not speak to any resident of Leonards Hill to ascertain their views on the project⁸. If they had, they would have concluded that the “community” acceptance of the project is very limited.

The Molonglo Landscape Guardians did, however, contact residents of Leonards Hill and Denmark to seek their views about the community wind farms proposed for their neighbourhoods. What we discovered was that far from being an inclusive and nurturing process, the proposals had left people broken in spirit, suffering health problems from stress and anxiety, and financial disadvantage. All reported that they and their neighbours were bitter about having to give up precious time with their families over a number of years to fight the proposals. Variations of the phrase “I would like to have the last five years of my life back” were said by more than one person. They felt that the personal cost is never recognized by decision-makers who they felt treated them like “cranks”.

Whatever small wins they had along the way, such as their local council not rezoning land for a wind farm, were quickly crushed by somebody higher up the political food chain swooping in and reversing the decision. Like us, the people we spoke to from Victoria and West Australia have been worn down from battling wind farm developers, uncaring bureaucrats, politicians looking for a way of establishing their green credentials, and distorted media reports about the respective projects. They told us that the worst thing was they felt betrayed by people in their own communities, that the process had not been open or fair, and that their views were ignored. This had caused division which, unhappily, they think will never be mended.

The authors of the paper presented to the Southern Councils Groups could have discovered this for themselves with a modicum of research that went beyond accepting the word of the wind farm developers and their supporters. Instead, they vilified

⁷ Van der Wijngaart, Ben, Pemberton, Carl; and Herring, David *Wind Power Concept Study Report*, August 2009.

<<http://www.southerncouncils.nsw.gov.au/system/files/f2/o229/Wind%20Power%20Concept%20Study%20Report%20for%20SCG%20Website.pdf>>

⁸ Van der Wijngaart *et al*, August 2009, Appendix A

opponents with the fabricated claim that they are members of a shadowy clique connected to the nuclear industry and bemoaned the cost to the project of the VCAT hearing⁹. There is no recognition that, thanks to decisions made by bureaucrats and their political masters in Spring Street (Melbourne), the people of Leonards Hill (who were not consulted about the proposal before it was submitted for approval) were left with no other legal options but to exercise their right to have aspects of the proposal reviewed by the Tribunal.

The authors of the Southern Councils Group's paper refer to people who oppose Industrial Wind developments as NIMBYs (sometimes as "acutely NIMBY")¹⁰. They repeat the false claim made by other Industrial Wind advocates that Landscape Guardian groups "rel[y] heavily for its information and campaign tactics on overseas groups that have been linked to the nuclear power industry."¹¹ This ridiculous claim is completely without foundation and is used by industrial wind developers and their supporters to discredit credible individuals and grassroots community groups. If the worth of these projects is so strong, why do Industrial Wind promoters need to invent fanciful stories about those who object?

Presumably the authors prepared their report to inform their Councils about the effect that industrial wind developments could have on surrounding communities and the range of responses that Councils may encounter. Given this, it is puzzling they did not present both sides of the information that Councils need to consider, unless it was the authors' intention to promote industrial wind installations at all cost.

If the paper prepared for the Southern Councils Group is any guide, it appears that the promoters of 'community' wind farms are just as eager to smear people who would be impacted by their unwanted developments as the most aggressive commercial developer. In the scenario the authors paint, the 'community' they want to engage with consists only of people who agree with the proposal and everybody else can be written off with untrue claims that they are ill-informed "NIMBYs" and nuclear industry flunkies.

⁹ Van der Wijngaart *et al*, August 2009, page 42.

¹⁰ Van der Wijngaart *et al*, August 2009, pages 22 and 29

¹¹ See, for example *It's an ill wind...*, Sydney Morning Herald, 19 May 2006

<<http://www.smh.com.au/news/national/its-an-ill-wind-133/2006/05/18/1147545460802.html>> and the Molonglo Landscape Guardian's website at <<http://www.mlg.org.au/exposed.htm>>

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

4.1 Noise complaints from wind farm neighbours

The wind industry and its supporters have, for the most part, attempted to flatly deny that wind farms are noisy and instead claim that noise is not a problem. Yet the complaints from residents living near wind farms continue.

The NSW Legislative Council inquiry into Rural Wind Farms heard from a witness, Mr George McLaughlin, who lives near the recently completed Capital Wind Farm near Bungendore NSW. Mr McLaughlin reported that the noise from this industrial wind farm was so bad that his family would have no choice but to sell up and move¹². He reported that this would necessitate a substantial financial loss for his family and they would receive no compensation from the developer for this loss.

This is consistent with reports over a long period of time from people living next to Australian wind farms about noise from modern wind turbines. Neighbours next to wind farm installations in Toora in Victoria reported that the noise from the turbines made it difficult to sleep at night, ultimately forcing them to put their property on the market¹³. On the Atherton Tablelands in Queensland, neighbours of a wind farm reported that they were forced to keep their windows closed at night to avoid the noise from the turbines¹⁴.

More recently, residents in Bungendore (NSW)¹⁵ and Waubra (Victoria)¹⁶ have complained of excessive noise from wind turbines even though these turbines are using the latest technology.

Acciona recently bought several properties close to its Waubra wind farm due to complaints about noise after conceding that there were problems “with noise levels exceeding those stipulated by the project's planning permit”.¹⁷

¹² <www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/5289EFFDED250AE4CA2575E10007D079>, see Public Hearing Transcript, 1 October 2009.

¹³ *Residents rail against the wind*, Courier-Mail, 4 October, 2004

¹⁴ *Ibid*, Courier-Mail, 4 October, 2004

¹⁵ Bungendore Mirror, 5 August 2009

¹⁶ Pyrenees Shire questions wind farm noise, ABC website, 18 August 2009
<<http://www.abc.net.au/news/stories/2009/08/18/2659515.htm?site=ballarat>>

¹⁷ *Waubra wind farm buys more properties*, The Courier, 18 November 2010

These complaints are not restricted to neighbours. Even landholders hosting wind turbines on their land and receiving financial compensation confirm they are noisy (Appendix A):

On bad days, it is something like the sounds of heavy traffic. If you are the leaseholder receiving payments, you can put up with it but we understand why neighbours who get no direct benefit from the wind farm would find it objectionable.¹⁸

Ironically, wind farm proponents argue that the people most likely to complain about noise are those who find them unattractive to look at. They infer that it is the finding of turbines unattractive that makes people sensitive to the noise they make. We submit that it is the reverse – the noise problems that many people who live near wind farms have to suffer eventually make people sick of the very sight of them.

Another often repeated claim is that the sound of the wind drowns out the sound of the turbines. We have our own experience that this is not the case. During many nights throughout the year, and particularly in Autumn and Winter, the Southern Tablelands experiences windless conditions at ground level due to thermal inversions. For example, during the autumn of 2005, it was peacefully still and quiet on the nearest property only 500m from the proposed wind farm site on top of the Molonglo Ridge. The owner of the neighbouring property reported that, from his house, he could hear a single sheep bleating at the top of the Molonglo Ridge. Yet the wind farm proponent, Acciona, reported that their monitoring equipment was recording an average wind speed of 25 km per hour on the ridge-top – more than enough for the turbines to work. So if there's wind on the top of the ridge and the turbines will work, but no wind at our properties, how will the wind noise drown out the noise of the turbines for the families living in neighbouring houses?

4.2 Flawed noise measurements by the wind industry

The wind industry would like us to believe that it can predict noise impacts very accurately. However, GP van den Berg, a University of Groningen physicist, has studied many wind farms including the Rhede wind-plant on the Dutch/German border and has concluded that actual sound levels are considerably higher than predicted, and that wind turbines can produce sound with an impulsive character.

After extensive measurements, Van den Berg discovered that the methods used by wind turbine developers in the UK and elsewhere to predict noise are seriously flawed. This is

¹⁸ *Not happy in hindsight*, Monaro Post, 9 May 2007 (attached as Appendix B)

partly because they use the wind speed at 10m to predict the wind speed at hub height (80m) resulting in seriously underestimates of wind-speed, and therefore turbine noise, at hub height¹⁹.

The wind industry says night-time turbine noise is not a problem because, on still nights, the turbines will not cut in until the wind reaches about 10kph. This rationale completely ignores the prevalence of thermal inversions, which, according to the Bureau of Meteorology, occur on most nights in the NSW Southern Highlands. Night time thermal inversions can occur all year round, but are particularly strong in winter. Thermal inversions cause the wind speed at blade height to be stronger – strong enough to turn the blades and operate the turbines. At ground level there is no wind so it is very still and quiet. The wind industry relies on the sound from the non-existent, night-time, ground-level wind to drown out the noise of the turbines.

Van den Berg's article says that developers' noise predictions do not reflect atmospheric conditions (like the thermal inversion) that affect the wind profile, especially at night, resulting in noise levels being higher than predicted.

When the MLG spoke to an acoustic expert responsible for the noise impact assessment on an approved wind farm, we were told that only the variables specified by the wind farm developer were factored-in to the noise impact assessment model. The Sydney-based acoustic expert said he had not been asked to factor-in the effects of temperature inversion.

The thermal inversion causes sound which might otherwise dissipate into the atmosphere to travel further, and curve downwards to touch the ground. Noise from distant sources is thus amplified²⁰. The lone sheep bleating at the top of the Molonglo Ridge is an example of this. The combined noise impact of 60 industrial wind turbines would be another, albeit much louder, example.

4.3 Background noise

When developers say residents will not be affected by turbines noise, they mean that their models say the noise regulations won't be exceeded. The noise regulations permit noise levels of 35dBA. That's a quadrupling of the average night time rural background noise levels. The noise regulations are designed for urban areas, where background noise is a

¹⁹ *Effects of the wind profile at night on wind turbine sound*, GP Van den Berg, Journal of Sound and Vibration, November 2004. <www.nowap.co.uk/docs/windnoise.pdf>

²⁰ *Temperature Inversions and Sound Propagation*, Dr Mike O'Connor, MO'C Physics Applied, California, USA <<http://users.lmi.net/moc/inversion.html>>.

fact of life, not for rural areas where, for much of the time, background noise is almost non-existent and any noise is noticeable and carries a great distance.

4.4 Come clean on noise

The wind industry is in denial about the amount of noise their turbines create and the effect this has on neighbours. The problem is not created by “envy”, or a collective imagination. The problem is created by wind turbines.

People who move to rural neighbourhoods do so because they value the stillness and silence, especially at night. The wind industry know this but instead of resolving the problem by improving the technology and developing a best practice model for placement of wind turbines, they fudge their noise calculations and plough on with a strategy of denial.

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

When wind farm proponents claim that there is no evidence that wind farms in Australia affect property values, they are often relying on the findings of a qualitative study, ‘Social Economics and Tourism’ undertaken by Sinclair Knight Mertz, a consulting firm employed by wind-farm developers to assist in preparation of environmental impact assessments²¹. The study found that, for highly sought after properties along Salmon Beach, Australia closer than 200 meters from wind turbines, the general consensus among local real estate agents is that “property prices next to generators have stayed the same or increased after installation.” However, the wind industry almost always fails to quote the following words from the study’s conclusion:

“...while properties with wind turbines on them may increase in value, other properties may be adversely affected if within sight or audible distance of the wind turbines”.

In other words, every landowner in the vicinity of the wind turbine suffers apart from the few landholders who actually host turbines on their land (and receive an income from the

²¹ *Social Economics and Tourism*. Sinclair Knight Mertz, Environmental Effects Statement Supplement for the Pacific Hydro Limited Portland Wind Energy Project Volume C 2001

activity). To cite this damning report as “proof” of their claim to the contrary is, unfortunately, typical of wind industry spin.

Wind industry proponents will claim that people who oppose wind farms do so only because they are jealous of the financial gains made by ‘host’ landowners. This fails to take into account that many wind farms are now proposed for relatively affluent areas close to cities, rather than remote rural locations. People in these areas value lifestyle more than a supplementary income from wind-turbines, and are likely to be relying on equity in their homes to support their self-funded retiree status, sooner or later.

Real cases of loss of property value exist and have been reported. When Stanwell Corporation constructed a 12 turbine wind farm at Toora in South Gippsland, local residents, Kath and Terry Hurst were told by Stanwell that they would not be disturbed by the wind farm. Stanwell built two 50m turbines 750m and 810 m from the Hurst's house. However, the Hursts reported that they had trouble sleeping at night due to noise, and then when they decided to move, were unable to sell their property.²² Mr Hurst said that while the local property market was booming, they lost money selling their house. A rates notice issued after the wind farm was built showed that the property dropped in value.²³

Bruce Richards, managing director of PBE Real Estate in South Gippsland, said that it was nearly impossible to sell a property within one kilometre of a wind turbine or a proposed wind turbine.²⁴ The Hursts wrote to Stanwell Corporation in 2003 asking for compensation for the mental, physical and financial trauma they received as a result of the Toora wind farm being constructed next to their home. They received no reply from Stanwell.

An approved but not constructed wind farm proposed for Taralga, near Goulburn is already affecting property values. Goulburn real estate agent, Graeme Welsh, said his experience was that properties within view of the proposed wind farm at Taralga were hard to sell.²⁵

"We get a lot of people from Sydney wanting to buy hobby farms or retirement blocks around Taralga and Crookwell", he said. "A majority have told us they're not interested in looking at anything near an existing or proposed wind turbine. They're coming out here to get away from man-made structures"²⁶.

²² *Ibid*, Courier-Mail, 4 October, 2004

²³ *How a dream was blown away*, The Age, 5 May 2003

²⁴ *Ibid*, Courier-Mail, 4 October, 2004

²⁵ *Ibid*, The Land, 19 May 2005

²⁶ *Squalls of dissent ruffle the wind harvesters*, Sydney Morning Herald, 14 June 2005

Acciona have recently bought several properties located near their Waubra wind farm. If properties around wind farms were not difficult to sell (and hence lower in value than their non-wind farm affect equivalents) surely there would be no need for wind farm companies to buy-up these dwellings.²⁷

6 The interface between Commonwealth, state and local planning laws as they pertain to windfarms

6.1 State government interference in local planning

For most people, their first point of reference in planning matters is their Local Environmental Plan. This is the planning instrument adopted by the local council in consultation with residents, and with the approval of the NSW state government. In Palerang council's case, the current planning instrument is the Yarrawlumla LEP (YLEP).

Under the YLEP, the Molonglo wind farm site is zoned 1A General Agricultural. This zoning permits electricity generation, however, we believe that the spirit of this zoning was intended to allow farmers to generate an electricity supply for their farm and domestic use. We do not believe it was intended to permit large-scale industrial wind installations. While the site itself is zoned 1A General Agricultural, all the land in close proximity is zoned as rural residential or as some form of environmental conservation area.

Although the YLEP permits electricity generation on land zoned 1A we were relieved to note that the document contains specific provisions for protecting local ridgelines from development.²⁸ Put simply, residents could not even build a shed on a ridgeline, let alone sixty 125 metre wind towers. Unfortunately, our relief was short lived.

With a hypothetical generating capacity of 120 MW, the Molonglo wind farm was considered a state significant project and, had a development application been lodged, would have been 'called in' by the NSW state government who would have become the decision-making body. Palerang council's role would have been downgraded from that of decision-maker to mere consultee. Discussions with the Sydney-based NSW Dept of Planning staff indicated that they were in favour of supporting wind farm developments and considered compliance with the YLEP to be 'optional'.

²⁷ *Waubra wind farm buys more properties*, The Courier, 18 November 2010

²⁸ Yarrawlumla LEP 2002, Clauses 57 & 58

Palerang Council is currently reviewing the YLEP and is in the process of adopting the new land zonings developed by the state government. Land formerly zoned as '1D rural residential' (and where wind farm development is currently not permissible) is to be re-zoned E4 Environmental Protection. As currently worded, the E4 zone will permit electricity generating works.²⁹ The Working Draft LEP definition of electricity generating works is: *A building or place used for the purpose of making or generating electricity*. Thanks to the NSW state government's interference in local planning instruments, we seem likely to lose even the meager protection from wind farm developments afforded by the current YLEP 1D rural residential zoning.

6.2 Use of State government powers to override local community wishes

6.2.1 NSW State Government 'wind farm precincts'

Any remaining hope that residents could protect themselves from inappropriate wind farm developments evaporated in February 2009 when Premier Nathan Rees announced that five regional areas of NSW, all of them outside the Sydney basin, had become "Renewable Energy Precincts for wind energy". Overnight, and without any consultation with the communities within the new 'precincts', the NSW Government effectively rezoned large areas of rural and rural-residential land, including the Palerang Council area, for industrial power generation.

Instead of acknowledging the documented social harm that the wind industry and its unwanted developments do to rural communities, the NSW State Government plans to use its own employees to work on behalf of the developers to convince residents to feel good about having their rural amenity shattered, peace and quiet wrecked, and property values demolished by an industrial wind-plant in nearby paddocks.

Planning procedures normally required of any large-scale industrial project have been discarded as industrial wind energy developments now enjoy a "streamlined planning and approvals processes". Application fees are waived and the state Government has issued a guarantee that the project approval process will be concluded in only four-months from submission.

Premier Rees announced that, instead of taking the role of impartial assessors of development applications, public servants employed in the NSW Department of Planning would act on behalf of wind-industry developers, their role being to "consult with local

²⁹ Palerang Draft LEP 2010

communities to gain support for investments in the development and operation of wind energy projects”.

The new arrangements include the establishment of Wind Farm Precinct Advisory Committees whose main role appears to be to convince local governments and their communities of the benefits of establishing industrial wind installations in their areas.

According to the terms of reference, membership of the precinct committees will represent ‘the range of interests in the precinct’.³⁰ The website of the NSW Government Department of Environment, Climate Change and Water (DECCW)³¹ states that membership of the precinct advisory committees are yet to be announced, however, this apparent lack of announced membership did not prevent the ACT/NSW Border Precinct Committee from meeting in Yass on 6 December 2010. To our knowledge, no members of any local wind farm opposition groups, or indeed any local community representative groups, were informed about the meeting or invited to attend, and the event was not advertised in the local media, nor on the DECCW website (which was last updated on 18 November 2010), even though members of the pro-wind farm lobby and wind farm developers were invited to give presentations.

Attempts such as this to exclude the ‘host’ communities from any consultation or discussions is standard practice for wind farm developers but we had hoped for a more inclusive approach from our NSW government officials and elected representatives. It is simply not acceptable that the NSW Government devotes taxpayer resources to the task of silencing its own citizen’s objections. Worse, it directs NSW public servants from the Department of Planning – of all places – to act in a partisan manner and assume the default position of supporting the developer.

Top-down coercion of local residents and their councils by a heavy-handed and ‘wind-happy’ state government will not encourage “local buy-in and ownership”. It will simply further disenfranchise rural communities who will conclude that they have nobody in a position of power to protect their interests, that resistance is futile, and that an electoral change to a more ‘in touch’ state government is essential.

6.2.2 Local councils over-riden by call-in powers

There are many instances where local councils’ objections to proposed wind farms have been over-riden. One notable example of this is the Denmark wind farm in WA.

³⁰ Precinct Advisory Terms of Reference, NSW Dept of Environment, Climate Change and Water website <http://www.environment.nsw.gov.au/climatechange/renewableprecincts.htm>

³¹ <http://www.environment.nsw.gov.au/climatechange/renewableprecincts.htm>

In 2005 the West Australian Minister for Planning used her call-in powers to overrule the Denmark Shire Council and rezoned land at Wilson's Head to permit the erection of two industrial wind turbines and associated works.

The Denmark Shire Council had previously refused the application to rezone the Class 1A Reserve land for this purpose, with a Council vote of 8/4 against. Prior to this vote, commencing in August 2004, the Council had conducted an extensive community consultation period which included advertising the proposal, holding a public information session attended by 150 people, and called for public submissions on the proposal. By March 2005, 181 submissions were received –130 opposed to the proposal and 50 in support. Despite this, the WA Minister subsequently approved the rezoning.

On 24 March 2009, the Denmark Shire Council again voted 7/5 against supporting the excision of land and amending the Town Planning Scheme that would permit the industrial wind installation of two turbines on Wilson's Head.

Opposition to the Denmark Community Wind (DCW) installation has centred on its location on the prominent headland close to a local beach. Opponents of the project continue to argue that if the purpose for the project is to offset Denmark's greenhouse emissions, the turbines could be located anywhere on the grid, including the Industrial Wind installation at Albany, 50 km to the east or at the off-grid Industrial Wind installation further east at Esperance. They argue that it is not necessary to sacrifice their valued, undeveloped coastline vistas, which are a key feature of the district's flourishing tourism industry³², to establish the community's environmental credentials.

6.2.3 Community views quashed by 'the greater good' argument

The so-called Hepburn 'Community' wind farm proposed for Leonards Hill, 10 kilometres south of Daylesford in central Victoria, is claimed by its proponents to be driven by a desire to offset its investors' greenhouse emissions. This proposal of two turbines with a meagre installed capacity of 4 megawatts is opposed by the residents of Leonards Hill, a closely settled rural residential district, who will be left with the problems of living near a wind farm so that far-distant supporters can appease their guilt about the environment and profit from the proceeds of the sale of Renewable Energy Certificates (REC).

With the exception of the landholder, who will host the two turbines in return for annual rent payments, the neighbours are opposed. Far from enjoying universal community

³² See Denmark tourism website <<http://www.denmark.com.au>>

support, the project has been plagued by the usual pattern of community division that has arisen and individuals have been placed under enormous personal and financial pressure in fighting the development.

Community members from Leonards Hill took the Hepburn Shire Council to the Victorian Civil and Administrative Tribunal (VCAT) to challenge a number of planning conditions for the project. The Tribunal noted that:

Unfortunately, in raising these types of concerns [issues raised during the hearing], this proposal has caused deep community divisions, as has also occurred in other places when wind farms are proposed. No matter what decision is reached by us, there will be an impact – either for those who have invested considerable time and effort to advance and support this innovative community-based project, or for those property owners and residents in the Leonards Hill community who consider the wind farm to be inappropriate for their area.³³

It is little wonder that the residents of Leonards Hill objected: it was revealed during this hearing that the 16 closest dwellings (which excludes two dwellings owned by the turbine's absentee landlord) are located between 519 metres and 895 metres from the closest respective turbine. Of these, two would be less than 600 metres from the closest turbine, four would be between 600 and 700 metres from the closest turbine and four would be between 700 and 800 metres from the closest turbine. One of the closest residences had been overlooked by the developers when they submitted their proposal.

Like the residents of Taralga in NSW, the residents of Leonards Hill were unsuccessful in halting the project because the Tribunal placed undue weight on the argument about the 'greater good' and the project's potential to contribute to local, state and national renewable energy goals – all 4 megawatts of it. The Tribunal relied on a policy document developed by Sustainability Victoria which allows for an estimated capacity factor to be used when modeling is not available to predict the actual output of the wind energy facility. In other words, they simply accepted that the meagre 4 megawatts generated by the two wind turbines would actually displace fossil-fuel generation and this was the basis for the 'greater good' decision.

Unlike the residents of Taralga, VCAT did not make any recommendations that the Hepburn Wind developers buy out the most seriously affected residents. Instead, they are left to suffer the real and detrimental consequences of somebody else's symbolism. The full VCAT decision can be read on their website at:

<http://www.austlii.edu.au/au/cases/vic/VCAT/2007/1309.html>

³³ VCAT, Perry vs Hepburn SC, July 2007, No 17
<<http://www.austlii.edu.au/au/cases/vic/VCAT/2007/1309.html>>

7 Other relevant matters

7.1 *Who is really pushing the wind energy barrow?*

According to a survey commissioned by AUSWind³⁴, “Australians are open minded about wind farms and the positive effect an expansion of their use would have on the environment”.

In this survey, the responses to the statements “I think the government should look at setting up more wind farms in Australia” and “Wind energy is a good alternative energy source” were 77% and 74% in the affirmative, respectively. Responses like these reflect the lack of information available to the general population to help inform their opinions. The results would probably have been quite different if the respondents were also told that:

- Wind turbines operate at an average of less than 30% installed capacity;
- Wind energy is an intermittent power source that only displaces other forms of low-impact energy such as hydro and gas, not coal³⁵;
- Electricity generated by wind turbines does not respond to demand, but is a response to the weather (i.e. the wind blowing, and blowing at the right speed);
- Wind farm operators earn a valuable Renewable Energy Certificate (REC) for every megawatt that they dribble into the grid, regardless of when that electricity is generated and whether that power is required at that time.

With the benefit of this information, it is likely that respondents to the AC Nielson survey would be less equivocal in their support of wind energy as a useful response to curbing CO² emissions.

7.2 *What really decides the siting of Industrial Wind?*

The MLG believes that industrial wind farms have no place near people’s homes. However, the absence of sensible planning guidelines for the siting of industrial wind installations that would keep them well away from human settlements means that any

³⁴ *Wind Industry Study (NF5370)*, AC Nielson, prepared for AUSWind, October 2006. (www.auswind.org/auswea/downloads/mediareleases/AuswindEnergyReporhandout201006.ppt)

³⁵ *Air power will only blow hot and cold as state seeks grid boost*, The Age, 5 August 2006

rural or rural residential community within striking distance of a transmission line is at risk of being picked off by a wind energy speculator.

7.3 Proximity to the grid

The assertion by the wind industry that defining factor in the choice of site for any particular wind energy development is that there is a good wind resource is a fallacy. In fact, the proximity of a site to a transmission line is the over-riding factor that makes a site 'suitable'.

Wind developers pretend that this is some happy coincidence – a good wind resource and an existing transmission line. In fact, many of the best sites in terms of wind resource are not near an existing transmission line, so are disregarded. Quite simply, the industrial wind developer does not want to incur the cost of building a transmission line. Instead, to cut costs they intend to piggy back on the existing infrastructure. This was described in by Simon Grosse in The Canberra Times as:

Windy sites tend to be some distance from suitable connection points to our national grid. Distribution and transmission companies have no obligation or incentive to provide those connections for power generators. Nor can they spread the costs of these connections across all power generators because the Australian Competition and Consumer Commission and state energy regulators do not allow it...

...The intermittent nature of wind energy generation also imposes costs on distributors who have to invest in infrastructure - called power conditioners - to manage that input. As the quantum of variable wind energy available to the grid increases, that cost increases...

Existing wind farms got in relatively cheaply because their impact on the grid was relatively minor, but Tasmanian and SA grid managers are now facing increasing costs of power conditioning as wind energy supply increases in those states...

...That is part of the motivation for wind farm developers to push for approval now, to get in as early as possible at lower cost. In the medium term, they expect the MRET to be raised, enabling a guaranteed market for their product for years, despite its higher cost. If they get subsidised connections to the grid, then all the better for the bottom line.³⁶

This deliberate strategy of looking for an existing transmission line as the main priority is problematic because transmission lines are invariably near human settlements. In the case of the Molonglo Ridge proposal, the fact that the site is surrounded by rural residential

³⁶ Getting in on ground floor more about positioning than pioneering; Simon Grose, The Canberra Times, Wednesday, 17 May 2006 <
http://canberra.yourguide.com.au/detail.asp?story_id=480723>

development of over 1000 homes was ignored by the developer. A ridge and a nearby transmission line were the crucial factors that made the site 'suitable'.

The portability of inefficient industrial wind gives it an unfair advantage over other forms of renewable energy generation such as Geothermal "hot rocks" or tidal power generation. These renewable energy sources have potential to displace coal-fired generation yet are put at a distinct disadvantage because the operators of those power plants will incur the cost of building a transmission line to get the electricity they generate into the grid. In the case of geothermal, the current exploration site in the Cooper Basin is hundreds of kilometers from the national power grid. The prohibitive cost of building a transmission line is factored into the cost of providing that power source while inefficient industrial wind enjoys a free ride.

Appendix A

Not happy in hindsight, Monaro Post, 9 May 2007

Wednesday May 9 2007 **the MONAROp**ost

Not happy in hindsight

Editor,

Our family property is "Doonbar" at Codrington and it accommodates eight of the 14 turbines that make up Pacific Hydro's Codrington Wind Farm.

It might seem hypocritical for farmers hosting a wind farm to object to wind farms, but we feel that we are amongst the few people who have the benefit of hindsight.

Living with a wind farm is a daily reality for us and while we do receive financial income from it, we are now aware of many of the costs and repercussions that occur after installation. It is for these reasons that we object to the wind farm proposed for Yambuk.

When we agreed to lease land to Pacific Hydro, we were driven by self-interest. With falling health and no children interested in taking over the farm, we had already put our property on the market. We saw the turbines as something that would make the property a more attractive proposition to buyers and hopefully result in a quick sale. While we had some reservations, we felt pressured to sign the contract by specified time.

The outcome has been quite different to what we hoped for. While we have many prospective buyers, none have been willing to purchase the property and some have stated that they were put off by the lease arrangement with Pacific Hydro (specifically, the clause relating to a caveat).

What we hoped would be our ticket out has turned out to be an obstacle to a sale.

It would also be true to say that our relationship with Pacific Hydro has soured. After installation, there was a very little contact and whatever goodwill existed at the outset has disappeared now.

My advice to farmers considering wind farms would be to have the contracts checked out very carefully and to make sure that they understand what impact it might have on their primary production.

Having a wind farm has altered our farming practices and other farmers who are considering wind farms should be aware of this, our lease includes right of access and that means that gates can be (and have been) left open or not secured properly. We now feel compelled to check the gates regularly an extra job taking up time that we can't really spare.

We also found that some people want to see the turbines up close but don't have to pay for the tour. They jump the fence and walk on the farm (without asking), scare the stock and run risk of injury.

Wind farming has not worked for us and we now very much regret the decision to proceed with the lease. The wind farms have spoiled the coastline and spoiled the view belong to everyone and they have been damaged by this development. Additional turbines at Yambuk would only serve to make this blot on the landscape a far bigger one.

We have also learned from our experience that wind turbines are not 'bird friendly'. Doonbar is located between the Eumeralla River and the Southern Ocean. These water bodies attract sea birds, water birds, falcons etc. and we have always enjoyed the presence of birds. It was therefore very upsetting to find dead birds, under the wind turbines, particularly during the first few months of their operation. These were mostly falcons about one a week for the first two months.

The Yambuk site includes the Lake, rivers, wetlands and beaches and has a far greater variety of birds. They congregate there in much larger numbers than at Codrington. Given their experience here, Yambuk would seem to be a very bad location for a wind farm in terms of its impact on birds.

For those people who face the prospect of living near a wind farm, we can confirm that they can be noisy. On bad days, it is something like the sounds of heavy traffic. If you are the landholder receiving lease payments, you can put up with it but we can understand why neighbours who get no direct benefit from the wind farm would find the noise objectionable.

Finally, we should briefly mention that the conflict that wind farm proposals cause between neighbours and in the community does not disappear after they start operating.

For ourselves, we remain hopeful of finding a buyer for our property and retiring from farming. We have enjoyed the many pleasures and privileges that living on the coast brings, and we believe that the wind farm here was a mistake.

More turbines in a more sensitive area would only worsen the situation. There must be better sites than those that are being proposed.

Name supplied & Witheld