



9 February 2011

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

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

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

Dear Sir/ Madam,

Thank you for the opportunity to provide a submission regarding this important issue.

In its Synthesis Report in 2007 the Intergovernmental Panel on Climate Change claimed that “Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level”¹ and called for urgent, drastic cuts to global greenhouse gas emissions. According to one the world’s most respected climate scientist, NASA Goddard Institute for Space Studies’ Director, Dr James Hansen continued coal use will result in “**catastrophic climate change and a ‘transformed planet’**”.² Yet more than 75 per cent of Australia’s electricity needs (and over 90% of Victoria’s and NSW’s) are being generated by coal-fired electricity, with plans for new plants in the pipeline. With its so called ‘developed nation’ status and **enviable wind resources**, Australia has no excuse for remaining one of the world’s largest per capita greenhouse gas emitters.

The Green Economy is the Future Economy

With only a fraction of our renewable energy resources, countries such as Denmark, Germany, Spain, USA, Austria and Sweden, to name a few, are enjoying the **social and economic benefits** of a burgeoning, multi-billion dollar renewable energy industry, largely driven by wind power. In many places around the world wind power is already generating new investment and new jobs in rural and regional areas while stabilising local greenhouse gas emissions and increasing **energy security**. According to a report by the University of Newcastle’s Centre of Full Employment and Equity, a shift to a renewable energy economy in the Hunter/Wyong region could generate between 7,500 and 14,300 jobs— **a net gain of between 3,900 and 10,700 jobs**³. Note, the lower

¹ http://www.ipcc.ch/publications_and_data/ar4/syr/en/spms1.html

² David Spratt and Phillip Sutton, *Climate Code Red* (Scribe Publications, 2008)

³ <http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/just-transition-report.pdf>

estimate, while a marked gain on current employment figures, is extremely conservative because it assumes there will be no manufacturing of renewable energy technologies in the region⁴.

As an example of wind's enormous potential for growth, feasibility studies have shown that the UK has offshore renewable energy capacities representing six times its current electricity demand. Using existing technologies—wind turbines with both fixed and floating foundations, wave machines, tidal range and tidal stream devices and accepting the usual constraints on offshore renewable (maximum water depths, the need to avoid dense shipping lanes and other obstacles, and technical limits)—the UK could be a large exporter of electricity. And in realising this renewable resource, it is estimated that **145,000 new jobs** would be created⁵.

Meanwhile, according to the World Wind Energy Report (2009), China has doubled its installed wind power capacity every year for the past four years. At the end of 2009 China was generating 26 GW annually, which is enough wind power to replace Australia's entire installed capacity every six weeks.

In recent years investments in renewable energy capacities and manufacturing have grown strongly and steadily, up from just \$30 billion in 2004 to more than \$150 billion in 2009. In fact in both 2008 and 2009 more money was invested in new renewable energy capacity than in new fossil fuel capacity⁶. This happened even while fossil fuel energy sources continue to enjoy massive public subsidies, a virtual monopoly of the energy market and the rights to freely pollute. Even in the heat of the Global Financial Crisis, the renewable energy industry grew at over 30 per cent per annum worldwide. With such serious money now being injected into alternative technologies, all indicators are suggesting that a major transformation in the way the world makes and uses energy is well on its way.

Where will Australia be? Unless we move quickly to develop our zero carbon energy resources, our reliance on coal-fired electricity will not only continue to force dangerous climate change but will also ensure that our economy falls behind because everything coming out of Australia will carry an enormous carbon footprint at a time when **world economies are transitioning** away from polluting technologies and practices.

Health Impacts of Wind versus Coal

Regarding the relative health impacts of wind power, we have found no current research from anywhere in the world to directly link adverse health effects to wind farms. Further to this, after examining both peer reviewed and validated scientific research, we note that the Victorian Department of Health (Worksafe, 2010) concluded that *'the weight of evidence indicated that there are **no direct health effects** from noise (audible or inaudible) at the levels generated by modern wind turbines.'*

By contrast, pollution from coal combustion has been directly linked to serious diseases including asthma, lung cancer, heart disease, and stroke. It interferes with lung development, increases the

⁴ Ibid

⁵ http://www.offshorevaluation.org/downloads/offshore_valuation_full.pdf The Offshore Valuation A valuation of the UK's offshore renewable energy resource, First Published in the United Kingdom 2010 by the Public Interest Research Centre on behalf of The Offshore Valuation Group

⁶ http://www.ren21.net/Portals/97/documents/GSR/REN21_GSR_2010_full_revised%20Sept2010.pdf REN21 Renewables 2010 Global Status Report, Forward by the Chairman

risk of heart attacks, and compromises intellectual capacity.⁷ Of major concern is that the particulate (that is very tiny) nature of dust pollution (from coal mining) is fine enough to enter the bloodstream through the lungs. Elevated rates of mortality, lung cancer and chronic heart, lung and kidney disease have all been reported among people living near coal mines.⁸ The calculation is that for every ten micrograms increase in the concentration of dust pollution from coal mining, the findings show a half-a-per cent increase in the mortality rate.⁹ In the upper Hunter Valley of NSW in 2008 alone, 113 tonnes of toxic metals and their compounds (including antimony, arsenic, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, selenium and zinc) were emitted into the air from mines and electricity generators, along with 132,700 tonnes of sulphur dioxide and 62,600 tonnes of oxides of nitrogen.¹⁰

Meeting 21st Century Challenges

If Australia is to maintain living standards and quality of life for current and future generations, we must immediately commence a rapid transition away from 'old' centralised and highly polluting fossil fuel based infrastructure and energy sources towards 'new' decentralised and more sustainable alternatives, such as **wind power**. In addition to drastically reducing GHG emissions, the adoption of renewable energy sources located close to end power users will ensure a more **robust and secure power supply** than the current one. This is because centralised power supplies are more vulnerable to major disruptions caused by accidents, fires and storms (which are predicted by scientists to become even more frequent and ferocious¹¹), accidents and/or deliberate attacks.

We know the big test for Australia, and indeed all countries, will be how to manage the **twin challenges of climate change and peak oil**. Climate change is here and our environment is already showing the predicted signs due to excessive GHG emissions in our atmosphere, as clearly demonstrated by this summer's tragic events. Further, the era of cheap crude oil for transportation is gone. Given the tyranny of distance and our increased vulnerability to draught and flooding, it is even more critical for Australia to prepare itself for the changed economic and ecological circumstances that will be part of life in the 21st Century.

According to Beyond Zero Emissions widely endorsed report, *Zero Carbon Australia 2020 (ZCA2020)*—which demonstrates precisely how Australia could transition its stationary electricity system from polluting energy to **zero emission energy** using off the shelf renewable energy and energy efficiency technologies that are readily available now—**wind power could be providing 40 per cent of our stationary electricity needs within a decade**. Further to this, the report shows that such a transition would be feasible, affordable (3 to 3.5 per cent of GDP or \$8 per household per

⁷ <http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf> *Coal's Assault on Human Health: A Report from Physicians for Social Responsibility* by Alan H. Lockwood, MD FAAN, Kristen Welker-Hood, ScD MSN RN, Molly Rauch, MPH and Barbara Gottlieb, November 2009

⁸ <http://www.abc.net.au/4corners/content/2010/s2870687.htm> *A Dirty Business: the hidden costs of the coal boom, and dark deeds in a once green and pleasant land*, Reporter Andrew Fowler, Broadcast on ABC, 12 April 2010

⁹ Ibid

¹⁰ <http://www.smh.com.au/environment/life-in-the-shadow-of-coal-central-20100318-qjia.html> *Life in the shadow of coal central* by Nick O'Malley, SMH, 19 March 2010

¹¹ Climate Institute of Australia, *Briefing: Intergovernmental Panel on Climate Change Report: Implications for Australia*. January 2007.

week for ten years), create an estimated **140,000 new jobs** in regional economies where they are needed most and ensure energy security for at least the next 70 years. Given the billions Australians are now spending to mop up after successive climate related natural disasters, alternative technologies such as wind power are looking cheaper and more attractive by the minute.

A safe climate and healthy environment are the **foundations** on which all else we know and value depends. The most cited argument for slow and inadequate responses to climate change and peak oil, are driven by a combination of ignorance of the current science, greed by those with vested economic interests, fear of change and the failure to recognise the bountiful economic opportunities that are ready to be taken up. Anti-wind campaigners typically fall into one or more of the categories above. Yet, as previously stated, with the adoption of wind power as a much greater proportion of our energy mix—in addition to mitigating catastrophic global warming—there will be the added benefit of a boost to our local economies and **new, more secure and sustainable ‘green collar’ jobs**.

Further, I emphasise the point that we only have to look at a few recent extreme weather events in Australia and around the world to appreciate that the cost of inaction far outweighs the cost of taking preventative measures. The more climate change we experience the more costly it will be for the nation’s economy.

In concluding I wish to emphasize that this submission, along with numerous others located at <http://live.org.au/index.php/political-activities/live-submissions>, has been prepared to voice the deep climate concerns of private citizens associated with LIVE (an independent, non profit climate change action group with more than 3,000 people). In other words, we have no vested interests, nobody is paying or compensating me in any way and there is nothing covert about LIVE’s access to our democratically elected representatives.

Thank you for your attention to this submission. I would welcome the opportunity to discuss any part of this submission with you.

Yours faithfully

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