

Agricultural Competitiveness Green Paper Submission

Issue: Drought

One of the most potent emerging means of drought-proofing farming/agribusiness operations is that of on-farm wind tower hosting.

Reports from farmers/agribusiness operators themselves demonstrate that wind tower/turbine hosting, associated with power generation, on their landholding offers a powerful and genuine alternative income stream with significant positive implications for “drought-proofing”.

Direct first-hand reports indicate that such means to drought-proofing farming/agricultural ventures offers additional capacity to strengthen wider regional economies beyond the immediate farm gate.

Research by Sinclair Knight Merz (SKM) shows a typical 50-megawatt wind farm creates 48 direct construction jobs and five ongoing jobs for the life of the project. Wind farms of this size generate \$250,000 for wind farm hosts each year, and contribute up to \$80,000 annually to community projects.

The following illustrative primary reports pointing to the potent drought-proofing capacity to be derived from on-farm wind-tower hosting, has been sourced from an article published in The Canberra Times newspaper of June 13, 2014.

“It is these benefits my family and community can expect from the turbines proposed for my farm in Crookwell. The tens of thousands of dollars worth of income these graceful giants will generate each year will be spent in the local economy over and above any day-to-day farming expenses.

“It means wages for employees and jobs for construction, weed control and fencing contractors. This investment benefits small businesses while boosting farm productivity.

“It means community grants for sporting clubs and other associations, strengthening the ties that bind regional towns together.” (<http://www.canberratimes.com.au/act-news/weakening-energy-targets-will-hurt-the-bush-20140614-zs752.html#ixzz3JwDjtymi>)

The Canberra Times of May 6, 2014 reported:

“It [direct farm-based wind tower hosting] pumps \$3 million into the local economy every year in wages, land-owner payments, fencing and agricultural contracts,” [hosting farmer Luke] Osborne said.

“It supports many community events and has allowed land owners to plant tens of thousands of trees, protect and expand rare ecosystems on the site and better manage erosion...”

“Our neighbours are supportive, even though some would prefer they [the turbines] were not here,” he said.

He said more than 1500 tourists had called to see the wind farm since the 80 metre-high turbines were commissioned in 2008.

Alongside the income associated with on-farm hosting of the turbine towers themselves, the latter indicative account points to further, tourism-associated, potential earnings or value-adding, further enhancing the income-generating potential and drought-proofing capacity inherent in on-farm wind tower hosting.

The US experience points to the positive and multi-faceted potential that wind-tower hosting has in an Australian context in terms of delivering genuine capacity to address the global challenge of climate change, which has significant implications for the agricultural sector, while providing concomitant economic (drought-proofing) benefits for the agricultural sector.

The Clean Air Benefits of Wind Energy report released this year (2014) by the American Wind Energy Association (www.awea.org) observes that in the US “Wind energy reduced power sector emissions by more than 5 percent last year, saving the same amount of CO₂ as taking 20 million cars off the road”.

The report, published by the American Wind Energy Association, found that US-based wind energy production in 2013 resulted in carbon emission reductions of 126.8 million tons. *Some states achieved larger reductions than the national average, with 11 states reducing carbon emissions by 10 percent compared to 2011 levels through wind energy. Texas — a state which broke its record for highest wind generation ever in March — had the highest volume of carbon reductions, followed by Illinois, California, and Colorado.*

The imperative to address the current challenge of climate change is particularly critical for the agricultural sector as the sector is particularly vulnerable to the impacts of climate change including prolonged and severe drought events and increasingly severe extreme weather and/or catastrophic events including fire and flood associated with climate change.

The globally significant benefits to be derived from increasing market share and R&D investment for renewables, including wind energy, include positive (specifically drought-proofing) implications for Australia's agricultural sector.

Conversely, failure to address the current critical challenge of climate change, and to shift greater electricity market share to a broad range of renewables, will have extremely serious negative implications for the agricultural sector with ramifications for Australia's wider economy and society.

Associated with this, wind turbine tower hosting in an on-farm context represents a particularly efficacious and genuine means toward drought-proofing farming businesses and generating a critically important diversified income stream for the long-term.

Issue: Water and Natural Resource Management

Policy idea 18—Improving water infrastructure ... Stakeholders suggested some ideas to improve water infrastructure ... These included:

a. investment in new dam and infrastructure projects ...

Dam-building comes with a significant carbon footprint, thereby exacerbating the very issue it sets out to address, namely that of water security. Dam infrastructure is expensive but is of demonstrably (even ironically) little use in a prolonged drought scenario.

In the current climate the emphasis would more usefully, and cost-effectively, be placed on addressing the profoundly critical issue of climate change and on safeguarding existing riparian and artesian/underground water supplies (specifically including preventing potentially damaging mining and fracking/coal seam gas exploration and extraction activities).

Fracking/coal seam gas exploration and extraction activities represent an extremely serious fundamental threat to future water security and therefore to the future viability and health of the wider agricultural sector.

While presenting as a simplistic solution to anticipated drought and water shortage challenges, dam building is a complex and problematic proposal as a means to addressing anticipated future water shortages and challenges in the current context of climate change.

Current research/data indicates dam construction contributes to, and exacerbates climate change and global warming indicating dam-building is an inappropriate (and expensive) response to drought and water shortage in a paradigm in which climate change is contributing to the very water shortage issues that such proposed dam building would presumably set out to address.

Dam-building entails a significant carbon footprint in terms of embodied energy, processes of construction (ie: including carbon intensive transportation and the use of fossil fuels and carbon intensive materials) and also in terms of the ongoing and long-term impacts of specific processes on the natural environment associated with disrupted natural water flows.

In addition to contributing to climate change as a driver of drought, dam building poses known and significant risks in terms of fragmenting and disrupting naturally occurring environmental flows in riparian environments which in themselves hold an increasingly critical role in addressing the climate change challenge.

Disrupted, fragmented and altered environmental flows present serious negative consequences for the overall health of riparian ecosystems and environments, with serious negative implications for the overall long-term viability of primary production and agribusiness ventures that depend on the stability and health of such systems.

More than any other sector, the agricultural sector is vulnerable to the impacts of climate change and to environmental degradation. Environmental damage/disruption/fragmentation to natural ecosystems, particularly to riparian ecosystems carry highly negative consequences for agricultural operations at an economic, ecological, and psycho/sociological level for those engaged in the immediate practice of primary production and for the wider community.

The following are merely an indicative sample of websites featuring reputable reports and data which point to the inadvisability of dam building as an approach to anticipated severe and prolonged water shortage issues which are increasingly driven by climate change.

<http://scholar.google.com.au/scholar?q=climate+change%2Bimpact+of+dam+building>

<http://www.bbc.com/news/magazine-26512465>

<http://www.internationalrivers.org/environmental-impacts-of-dams>

<http://www.internationalrivers.org/resources/greenhouse-gas-emissions-from-dams-faq-4064>

<http://sourceable.net/dams-emerge-as-key-climate-change-suspects/>

http://wwf.panda.org/what_we_do/footprint/water/dams_initiative/problems/environmental/

<http://ecowatch.com/2014/08/14/dams-not-clean-energy-climate-change/>

Issue: Water and Natural Resource Management

Policy idea 19 ... a. amending the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999* to remove onerous on-farm conditions and provide right of way to national transport and infrastructure goals ...

This policy idea raises several questions. The first is: why does this suggestion imply that national transport and infrastructure goals **cannot** be designed so as to be compatible with on-farm conditions required under the Environmental Protection and Biodiversity Conservation?

Surely it's possible to set national transport and infrastructure goals in a sufficiently smart manner that they should not be at odds with protecting our environment and biodiversity? For example, this might mean scaling such goals back, strategically relocating/altering them, and/or using rail (which affords significant economy-of-scale advantages in transporting primary industry commodities) instead of road? etc....

The second question this idea raises is: What exactly is meant here by “onerous on-farm conditions”?

Is it “onerous” to consider the need to conserve the health of the wider natural environment on which all agricultural undertakings inherently depend?

Is it “onerous” to act in order to consider the conservation of our natural heritage and biodiversity for future generations?

Is it “onerous” to consider the possible linkage between the destruction of natural habitat and the incidence of farmer depression and suicide?

Having posed these questions, I strongly suggest that it would be remiss of any policy-maker to consider formulating policy which impacts on the wider natural environment and agricultural practices dependant upon its health, to proceed without taking into account the bigger picture.

The [2014 Living Planet Report](#) released in September this year by the World Wildlife Fund (WWF) revealed that between 1970 and 2010 populations of mammals, birds, reptiles, amphibians, and fish around the globe dropped **more than half** (52 percent).

The [2014 Living Planet Report](#) reveals that humanity's demand on the planet is now more than 50 per cent greater than that which nature can sustain, with dramatic declines in biodiversity in just two generations.

I suggest that any policy formulation for the future direction of agriculture, in Australia or anywhere else, would be negligent in the extreme were it to fail to take this finding into account.

“Of the populations of mammals, birds, reptiles, amphibians and fish tracked around the world since 1970, we’ve lost more than half in just two generations,” WWF-Australia CEO Dermot O’Gorman observes.

“The scale of biodiversity loss and damage to the ecosystems essential for our well-being is alarming, and a direct consequence of the way we produce and consume.”

The [2014 Living Planet Report](#) measures [Australia's footprint](#) as being made up mostly of carbon emissions, followed by the biologically productive area required for cropland and grazing. **If the rest of the world lived like we do in Australia, we'd need 3.6 Earths to sustain our demands on nature**, the report observes.

The report observes that this means *we are eating into our natural capital, making it more difficult to sustain the needs of future generations. Humanity's well-being and very existence depends on healthy ecosystems and the services they supply, from clean water and a liveable climate, to food, fuel, fibre and fertile soils.*

At the conclusion of the report, WWF recommends the following actions:

- 1. accelerate shift to smarter food and energy production*
- 2. Reduce ecological footprint through responsible consumption at the personal, corporate and government levels*
- 3. Value natural capital as a cornerstone of policy and development decisions.*

David Nussbaum, chief executive of WWF-UK said: "The scale of the destruction highlighted in this report should be a wake-up call for us all.

To now propose a policy idea, such as Policy idea 19 in this green paper, which holds as its main aim the prioritising of transport and infrastructure (carbon intensive drivers of climate change) *at the expense* of an existing Act of Parliament whose goal is to adequately protect the wider natural environment, on which any successful agribusiness intrinsically depends, should be a "wake-up call" and a matter of grave concern to any responsible policy-maker.

Adequately protecting our naturally occurring environment and biodiversity is critical and has profound implications for the long-term viability of our agricultural sector.

Remnant tracts of natural vegetation: deliver natural water harvesting services; act as a carbon sink countering the impacts of climate change which seriously threatens the future viability of the wider agricultural sector; enhance productivity through windbreak provision delivering measurably superior stock outcomes; prevent top soil erosion which is an increasing threat to the long-term viability of cropping in Australia.

Having more infrastructure/roads to deliver agricultural commodities to market will be of highly dubious benefit if the production of those commodities itself has declined/deteriorated overall.

The future long-term viability of our agricultural sector cannot be considered in isolation from the wider health of our natural environment. Nor can it be considered in isolation from the grave threat of climate change and those factors which drive climate change specifically including carbon intensive infrastructure developments. No other sector is as vulnerable to the impacts of unchecked climate change as is the agricultural sector.

Deterioration/depletion of top soil, of water catchments, loss of natural shelter belts and degradation of broader supportive ecosystems and natural environments will have obvious long-term negative impacts on primary production undertakings which seek to operate in such degraded contexts.

Policy idea 19 which seeks to “provide right of way to national transport and infrastructure goals” by watering down the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999* threatens to prove detrimental in the long-term, not only to agribusiness or primary production undertakings (which are most vulnerable to the impacts of climate change and to environmental degradation) but also to wider, income-generating sectors of Australian society including the tourism sector, and all industries involved with value-adding to primary produce.

The above-mentioned WWF *2014 Living Planet Report* has pointed to the national and international acceleration of species loss. This has implications for the responsible formulation of any policy that impacts on remnant habitat/ecosystems/environments. We, as a society now have a moral and legislative opportunity to act to better protect our natural heritage against further decline with significant benefits for our agricultural sector and wider community.

There are countless accounts of farmers who, having acted decisively, specifically in order to protect/enhance remnant native vegetation as a top priority, have gone on to record enhanced agribusiness success/productivity. There is a discernible correlation between protecting on-farm biodiversity and enhanced agribusiness success.

Any policy idea which would place infrastructure and transport goals (that can obviously be modified as required) *above* existing legislation which serves the greater globally critical imperative of addressing climate change and reversing species loss and environmental decline, would be to the long-term detriment of all sectors of our society, including the agricultural sector more than most.

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