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Renewable Energy?**

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PLANNING LAW: FRIEND OR FOE OF RENEWABLE ENERGY?*

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Introduction-Renewable Energy and Australia's Sustainable Energy Future

Currently roughly 90% of Australia's electricity is generated from fossil fuel sources.¹ As a consequence electricity generation is one of the largest contributors to Australia's greenhouse gas emissions. To bring about drastic cuts in Australia's greenhouse gas emissions therefore, we need to break the stranglehold of all fossil fuels, but especially coal, on electricity generation. It is widely accepted that renewable energy represents one of the world's most promising options for reducing electricity related emissions, while meeting growing global demands and addressing growing energy security concerns. Both the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report² and the International Energy Agency (IEA) in its energy scenarios³ suggest that renewable energy could play a greater role than carbon capture and storage or nuclear power in meeting major global emission reductions targets by 2050. Indeed, IEA scenarios suggest renewable sources of energy might provide almost 50% of electricity in 2050, up from their present 17% contribution.⁴

By 2020 Australia aims to generate 20% of its electricity from renewable sources. This target is legislated under the expanded renewable energy target scheme (eRet) under the provisions

* This paper is a modified version of a paper presented by the author at the Public Seminar, *Australia's Environmental Challenges* held at the Faculty of Law, University of Technology, 1 July 2013.

¹ Clean Energy Council (2011) *Clean Energy Australia 2010* <<http://cleanenergyaustraliareport.com.au/wp-content/uploads/Clean-Energy-Australia-2010.pdf>>, 5.

² Intergovernmental Panel on Climate Change (IPCC) (2007) *Climate Change 2007 Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

³ See for example International Energy Agency, *Energy Technology Perspectives-Scenarios & Strategies to 2050* (2010).

⁴ Ibid.

of the *Renewable Energy (Electricity) Act 2000 (Cth)* which now also operates in conjunction the carbon pricing mechanism enacted under the *Clean Energy Act 2011 (Cth)*. In public discourse the carbon price is often referred to as a carbon tax, but it is perhaps more appropriately described as an emissions trading scheme which has an initial fixed price.

However, no sooner have both these mechanisms been implemented, than we are already seeing calls for the repeal of both the renewable energy target scheme and the carbon pricing mechanism. Of course this is nothing new. One of the major obstacles the renewable energy sector has faced throughout its development has been a constantly changing regulatory environment, and great uncertainty has often surrounded renewable energy policy development and implementation. Indeed if there is one consistent theme running throughout the history of renewable energy policy development in Australia it is the fact the industry has constantly operated in an uncertain and constantly changing regulatory environment.

In this short paper I will argue that pricing carbon is only a very small part of the regulatory equation when it comes to renewable energy. In fact proponents of renewable energy projects face a myriad of regulatory hurdles that act contrary to the professed legislative objective of both the carbon price and the renewable energy target. This paper will show that regulation of the national electricity market and planning law in particular are actively undermining the move to a more sustainable energy future for Australia.

More than just pricing carbon

A key starting point in the debates on Australia's sustainable energy future needs to be to shift the legal and policy debate beyond just the narrow focus on carbon pricing. Nearly all the recent discussion in relation to the role of the law in responding to climate change and promoting the growth of renewable energy has focussed purely on the renewable energy target and pricing carbon. While the renewable energy target scheme and the carbon pricing mechanism can be regarded as key bedrock legislative initiatives relating to renewable and clean energy in Australia, they are by no means the only relevant legislation to consider when dealing with the commercialisation, development and commissioning of renewable energy projects in Australia.

Renewable energy law extends into areas as diverse as property law, mining law (in the case

of geothermal energy) and consumer protection and trade practices law (when we talk about Greenpower schemes for example) to name but a few. For example, with the notable exception of the cumbersome *Mining Act 1992 (NSW)* many jurisdictions in Australia have already developed reasonably robust and comprehensive regimes to deal with the emergence of geothermal energy as a source of renewable energy, despite only a handful of projects currently being developed. This willingness to legislate with respect to geothermal energy is, in part, related to the fact that exploration and exploitation of geothermal energy involves many techniques similar to the old fossil fuel sources of energy such as coal and other mineral resources with which policy makers and legislators are familiar.

Consumer protection law is also rapidly emerging as an important part of the overall regulatory framework for sustainable energy in Australia. The recent trends in enforcement policy of the Australian Consumer and Competition Commission (ACCC) in relation to misleading and deceptive conduct under section 18 of the *Australian Consumer Law* highlights the very important role of consumer protection law in maintaining the integrity of the green credentials of sustainable energy and renewable energy in particular. More recently, the increased surveillance of the ACCC during the initial phases of the introduction of the carbon mechanism highlighted the increasing relevance of this body of law to Australia's sustainable energy future.

Australia has also implemented a wide range of policy and legislative mechanisms for funding or providing financial assistance towards the research and development, commercialisation and commissioning of renewable energy technology including feed-in tariffs, grant schemes, and taxation incentives etc. The establishment of the Clean Energy Finance Corporation as part of the legislative package associated with the carbon pricing mechanism arguably constitutes the largest clearly focussed boost for renewable energy in Australia to date. However, the effectiveness of financing and funding mechanisms have been undermined by the short term commitment by governments to their long term implementation.

Regulation of the national electricity market

While developments in many areas are positive, the regulation of the national electricity market operates in the opposite direction by slowing down the commercialisation of

renewable energy projects in Australia, and poses a significant challenge to the renewable energy sector. The prime culprit in this area, is the operation of the National Electricity Law (NEL) and National Electricity Rules (NER) which govern the operation National Electricity Market (NEM), or the interconnected power system stretching from Queensland to New South Wales (NSW), the Australian Capital Territory, Victoria, South Australia and Tasmania. Representing the largest electricity market in Australia and the most significant generator of carbon pollution, the legislative and policy framework in which the NEM operates, represents a significant barrier to moves to achieve renewable energy and climate change policy goals, in Australia in its own right.

Section 16 of the NEL sets out the manner in which the Australian Energy Regulator (AER) must perform or exercise its economic and regulatory functions or powers. In particular Section 16 (1) of the NEL requires that the AER in performing or exercising its functions and powers must perform or exercise that function or power in a matter that will or is likely to contribute to the achievement of the national electricity objective. The national electricity objective is defined in Section 7 of the NEL as follows:

“The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) Price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system”.

The national electricity objective has been one of the most controversial elements of the regulation of the NEM, especially with respect to the interaction of the NEM with climate change and renewable energy policy objectives. This is because the national electricity objective is notable for its failure to either explicitly or impliedly refer to environmental objectives or outcomes. The components of the objective are fundamentally about the supply of electricity irrespective of the impacts on the environment through pollution associated with electricity generation.⁵ The failure of the national electricity objective to take account of externalities such as pollution and climate change and other impacts on the environment of electricity generation can be regarded as a major defect in the NEL. Given that the national electricity objective is to guide all of the work in designing rules and regulations under the

⁵ McLennan, Magasanik Associates, *Role of the NEM in Responding to Climate Change Policies*, 15.

NEL this means that at all times economic interests are given priority over environmental outcomes.

A recent report notes that at least as early as 1998 through until the Garnaut Report, numerous Council of Australian Governments (COAG) and other government inquiries and reports have highlighted the need for the national electricity objective to be modified so as to incorporate environmental and in particular greenhouse gas reduction objectives.⁶ As the authors of the aforementioned report have noted:

“The failings of the current NEO [national electricity objective], and ultimately the NEM, have received widespread comment, which makes it clear that there is an increasing recognition that environmental and social considerations have been for too long ignored or excluded from the economic debates surrounding the development and operation of the NEM. The over-reliance on “economic rationalist” approach to developing and operating the NEM is something that demands greater attention and reconsideration. As TEC has pointed out, the economic rationalist framework does not free policy designers and decision makers from the responsibility of taking the broader context of policy into account. Thus, while the focus on competition and efficiency may have been acceptable when the national regulatory framework was limited to economic functions, the same cannot be said for the current situation. As the national market has expanded to incorporate retail and non-economic distribution functions, the need to expand the definition of the NEO [national electricity objective] to reflect these significant changes warrants serious attention and consideration by all stakeholders”.⁷

It is interesting to contrast the provisions of the national electricity objective with similar provisions in other jurisdictions. For example in the United Kingdom the principal regulator, the Office of Gas and Electricity Markets (OFGEM) is required to observe the following electricity market objective:

“The Authority’s principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution or transmission systems. The interests of such consumers are their interest taken as a whole, including the interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them”.⁸

⁶ N. Ison, J. Usher, R. Cantley-Smith, S. Harris and C. Dunstan, *The NEM Report Card: How well does the National Electricity Market serve Australia?* Prepared by the Institute for Sustainable Futures and the Monash University Faculty of Law for the Total Environment Centre., 21-22.

⁷ Ibid, at 25.

⁸ OFGEM, *The Gas and Electricity Markets Authority*, www.ofgem.gov.uk/About%20US/Authority/Pages/TheAuthority.aspx

The absence of alignment between the national electricity objective and climate change and other environmentally driven energy policies is a significant defect. If an environmental or climate change objective were to be incorporated into the NEM this would provide an incentive for greater alignment between climate change and energy policies and portfolios in government.⁹

Beyond this conflict connection to the Electricity Grid under the NEL and the NEL poses even further regulatory challenges for proponents of renewable energy projects. The regulation is incredibly complex. The starting point is that a person must not engage in the act of owning, controlling or operating a generating system connected to the interconnected national electricity system unless the person is registered in relation to that activity or has otherwise been exempted by the Australian Energy Market Operator ('AEMO') under the NEL and NER.¹⁰ Similarly the NEL also prohibits a person from engaging in owning, controlling or operating a transmission or distribution system that forms a part of the interconnected national electricity system unless the person has registered or has otherwise been exempted by AEMO under the NEL and NER.¹¹ The NEL also makes explicitly clear that no person other than AEMO may engage in the activity of operating or administering a wholesale exchange for electricity.¹² A person also must not engage in the activity of purchasing electricity directly through a wholesale exchange unless the person is a registered participant or is exempted by AEMO under the provisions of the NEL or NER.¹³ It is clear therefore that if a person wishes to participate in the NEM in any way, they must be a registered participant.

Chapter 2 of the NER sets out and describes the various Registered Participants and the registration procedures. Chapter 2 deals with registration of Generators, Customers, and Network Service Providers. It provides a person must not engage in the activity of owning, controlling or operating a generating system that is connected to a transmission or distribution system unless that person is registered by AEMO as a Generator.¹⁴ To be eligible

⁹ McLennan Magasanik Associates, *Role of the NEM in Responding to Climate Change Policies*, 56.

¹⁰ NEL, rule 11(1).

¹¹ NEL, rule 11(2)

¹² NEL, rule 11(3).

¹³ NEL, rule 11(4).

¹⁴ NER, rule 2.2.1(a).

to register as a Generator a person must obtain the approval of AEMO to classify each of the generating units that form part of the generating system that the person owns operates or controls, or from which it otherwise sources electricity as either a:

- scheduled generating unit;
- semi-scheduled generating unit; or
- non-scheduled generating unit.¹⁵

A scheduled generating unit is a generating unit which has a nameplate rating of 30MW or greater or is part of a group of generating units connected at a common connection point with a combined nameplate rating of 30MW or greater unless AEMO otherwise approves. A non-scheduled generating unit is a generating unit with a nameplate rating of less than 30MW (not being part of a generating units which is classified as a scheduled generating unit).¹⁶ The third category of generating systems recognized by the rules are semi-scheduled generating units which are generating units that have a nameplate rating of 30MW or greater or are part of a group of generating units connected at a common connection point with a combined nameplate rating of 30MW or greater.¹⁷

Another key concept that is important to understanding the operation of the NER in relation to renewable energy and electricity more generally is the concept of a Network Service Provider. The Network Service Providers own, control or operate the transmission or distribution systems. A person must not engage in the activity of owning, controlling or operating a transmission or distribution system unless that person is registered with AEMO as a Network Service Provider.¹⁸

Chapter 5 of the NER provides the framework for connection to a transmission network or a distribution network and access to the national grid. It sets out details as to the principles and guidelines governing access to a network as well as establishing the process to be followed by a Registered Participant or a person intending to become a Registered Participant for establishing or modifying a connection to a network or for altering generating plant connecting to a network.¹⁹ A Registered Participant or person intending to become a

¹⁵ NER, rule 2.2.1(e)(1).

¹⁶ NER, rule 2.2.3(a).

¹⁷ NER, rule 2.2.7(a).

¹⁸ NER, rule 2.5.1(a).

¹⁹ NER, rule 5.1.2(a).

Registered Participant who wishes to establish a connection to the network must follow the procedures set out in Rule 5.3 of the NER. A person who wishes to make an application to connect generating plant must first make a connection enquiry by advising the local Network Service Provider of the type, magnitude and timing of the proposed connection to the provider's network.²⁰ The Network Service Provider is then obliged to respond to the connection inquiry and provide information regarding automatic and minimum standards, plant standards and capacity of the network and program for assessing the connection application.²¹

Following receipt of a response to their connection inquiry the Registered Participant may then make an application to connect to the Network Service Provider.²² The Registered Participant in making their application must comply with the requirements of the rules and in particular must include in their application, *inter alia*, details of their connection requirements and specifications of the facility to be connected, relevant technical data, commercial information to allow the Network Service Provider to make an assessment of the ability of the applicant to satisfy prudential requirements set out elsewhere in the Rules, and other information.²³ The Network Service Provider then assesses the application for connection and identifies any relevant technical issues and then after processing the application to connect must make an offer to connect the facilities dealt with in the application.²⁴ The offer to connect must contain the proposed terms and conditions for connection to the network. At the time that the Network Service Provider receives a connection request it is obliged to notify the applicant of requirements regarding automatic and minimum standards which are the technical requirements for a new generating unit.²⁵ A proposed generator is required to either comply with the automatic and minimum standards or alternatively negotiate an access standard with the Network Service Provider which is no less onerous than the minimum standard.²⁶ A negotiated access standard must be set at a level that will not adversely affect

²⁰ NER, rule 5.3.2(a).

²¹ NER, rule 4.3.3.

²² NER, rule 5.3.4(a).

²³ This is not a detailed list. For further detailed requirements see in particular the provisions of NER, s5.3.4(b) and s 5.3.3(c).

²⁴ NER, rule 5.3.6(a).

²⁵ NER, rule 5.3.3(b1).

²⁶ NER, rule 5.3.4A.

power system security and be set at a level that will not adversely affect the quality of supply for other network users.²⁷

If the applicant wishes to accept an offer to connect they must negotiate and enter into a connection agreement with the relevant Network Service Provider and in doing so must use its reasonable endeavours to negotiate in good faith with all parties with which the applicant must negotiate such a connection agreement.²⁸ The connection agreement includes proposed performance standards with respect to each of the technical performance requirements based on either the automatic access standard or negotiated access standard.²⁹ A connection agreement will generally also cover a range of matters relating to connection and operation of a generating system and connection assets. The provisions of connection by any Network Service Provider may also be made subject to gaining environmental and planning approvals for any necessary augmentation or extension works to the network.³⁰

New renewable energy generators seeking to connect to the existing network face having to deal with network operators who control access to information regarding their networks and the ability and incentive to impede new network connections by renewable energy generators.³¹ Similarly given many new renewable energy projects are located some distance from existing networks, addressing free riders and economies of scale is a significant issue for the connection of new generating plant to existing networks.³² This means that the first mover to construct a new generator bears the costs of connecting to the electricity grid. This places developers of new plant at a cost disadvantage.³³ This appears to be a recurrent issue with solar, wind and geothermal generators particularly in remote areas.³⁴

²⁷ NER, rule 5.3.4A(b).

²⁸ NER, rule 5.3.7.

²⁹ NER, rule 5.3.7(b) and s 5.3.7(c).

³⁰ NER, rule 5.3.7(d).

³¹ Glen Wright, 'Facilitating efficient augmentation of transmission networks to connect renewable energy generation: the Australian experience' (2012) 44 *Energy Policy* 79, 86.

³² *Ibid.*, 87.

³³ *Ibid.*

³⁴ *Ibid.*

Similarly the NER do not impose any obligation on a Network Service Provider to augment a connection to enable connection by a renewable energy generator.³⁵ Likewise there is no legal obligation on any party to pay for network augmentation and issues associated with who pays for the cost of augmentation are typically dealt with in the connection agreement with the Network Service Provider.

Network augmentation can therefore in theory take a number of different forms: (1) the Network Service Provider can undertake the augmentation and this is paid for by the generator; or (2) the Network Service Provider can undertake and pay for the augmentation; (3) the Network Service Provider can undertake the augmentation and a third party may pay.³⁶ Where the Network Service Provider undertakes the augmentation and contributes to the cost, typically Australian experience is that the Network Service Provider only funds additional costs associated with incremental capacity beyond that requested by the generator as part of a shared network.³⁷ The bulk of the costs in this second scenario are met by the generator. The third scenario involving a third party, involves so called contestable services (i.e. services which may be provided by more than one provider) are rare in Australia.³⁸

While in theory three different forms of cost sharing arrangements may exist for network augmentation, the reality is that in the overwhelming majority of projects it is the generator who must carry the cost. Recent rule changes relating specifically to network augmentation (i.e. upgrade of the electricity network) do not appear to have gone far in overcoming these problems.

Planning law as a barrier to renewable energy

Beyond the complexity of regulation of the national electricity market it is clear that the existing planning law in many parts of Australia is one of the major obstacles to Australia achieving its emissions reduction and renewable energy targets. Planning law and climate change policy objectives often seem to be pulling us in opposite directions.

³⁵ NER, rule 5.3.6 (k).

³⁶ Glen Wright, 'Facilitating efficient augmentation of transmission networks to connect renewable energy generation: the Australian experience' (2012) 44 *Energy Policy* 79, 82.

³⁷ Ibid.

³⁸ Ibid. That author gives the Moorabool wind farm in Victoria as one example.

This is perhaps most obviously demonstrated by the way the planning system in most Australian jurisdictions deals with proposals for wind farms. Wind farm proponents face a regulatory framework characterised by complexity and inconsistency in implementation. Wind farms fall under numerous pieces of legislation often implemented by many different government departments. For example the Gullen Range Windfarm which was proposed for construction about 140 kilometres south west of Sydney. This wind farm involves the construction of Seventy-three wind turbines and was given planning approval in 2010. In obtaining this approval though the proponents had to apply for licenses and permits under no less than 12 pieces of state legislation, at least 3 pieces of Federal legislation as well as 14 Australian standards and other codes and guidelines.

This was just to obtain planning approval to construct the wind farm. It doesn't include the rather complex approval processes involved in connecting to the electricity grid outlined above, or in applying for accreditation as a renewable energy generator under the renewable energy target scheme and a range of other relevant legislation.

It is true wind farms do raise a range of very complex environmental issues. Key planning issues include their visual impact, perceived noise and perceived health impacts, shadow flicker, perceived impacts of the value of neighbouring land, impacts on flora and fauna such as bats and birds, hazards to aviation as well as heritage issues such as the impact on sites of significance to Aboriginal people. Other issues of less prominence that arise from time to time include impacts on local traffic, geotechnical and hydrology issues. Although not all issues will arise at all sites. That is to say issues are site specific and different issues may arise or assume greater or lesser significance on a case by case basis.

While the complexity of planning approvals for wind farms is due in part to the complexity of environmental issues that need to be examined, it is also true that proponents often face opposition to wind farms on quite spurious grounds. One of the outstanding features of recent developments in planning law relating to wind farms has been the ability of climate change sceptics and other vested interests to mobilise popular opposition to wind farms on, at times, questionable and spurious scientific basis. This is most vividly illustrated by the quite regressive changes to planning laws introduced in Victoria and more recently those introduced in NSW; changes to the law which appear to be based on a perverted application

of the precautionary principle and without any support from the peer reviewed scientific literature.

These changes are motivated by concerns about the perceived impact of noise from wind farms and their purported impact on human health. This debate centres on so called 'infrasound' generated by wind farms. Infrasound is generally regarded as sound below 20 Hz which is typically beneath the threshold of human hearing.³⁹ It is worth noting that infrasound is always present in the environment stemming from many sources including ambient air turbulence, waves on the seashore, traffic, aircraft and other machinery.⁴⁰ It has been suggested that pulsing infrasound low frequency has been associated with wind farms.⁴¹ However recent design changes to wind turbines have attempted to reduce the level of infrasound which wind turbines emit.⁴²

Despite this unproven allegations persist that infrasound has significant human health impacts. Such assertions are not supported by the peer reviewed scientific literature. A recent statement issued by the Australian National Health and Medical Research Council characterised the lack of scientific evidence to support these assertions in the following terms:

"While a range of effects such as annoyance, anxiety, hearing loss, and interference with sleep, speech and learning have been reported anecdotally, there is no published scientific evidence to support adverse effects of wind turbines on health. Reported health concerns primarily relate to infrasound (sound that is generally inaudible to the human ear), generated by wind turbines. The World Health Organisation states that 'there is no reliable evidence that sounds below the hearing threshold produce physiological or psychological effects.' A recent expert panel review in North America found no evidence that audible or sub-audible sounds emitted by wind turbines have any direct adverse physiological effect. The principle human response to perceived infrasound is annoyance.

A study of three UK wind farms also supports this conclusion, finding that sound associated with modern wind turbines is not a source which will result in noise levels which may be injurious to the health of a wind farm neighbour. However, there is also the argument that if people are worried about their health, they may become anxious, causing stress related illnesses which are genuine health effects arising from their worry, but not from the wind turbine itself. For this reason, NHMRC recommends

³⁹ Anthony Rogers, *Wind Turbine Acoustic Noise*, (2006) [insert web reference], at 8.

⁴⁰ Ibid.

⁴¹ Nina Hall, Peta Ashworth and Hylton Shaw, *Exploring Community Acceptance of Rural Wind Farms in Australia: A Snapshot* (2012), at 36.

⁴² Ibid.

that people who believe they are experiencing any health problems should consult their GP promptly.

This situation is further complicated by findings that people who benefit economically from wind turbines were less likely to report annoyance, despite exposure to similar sound levels as people who were not economically benefitting.⁴³

More recently a detailed study of infrasound in urban and rural environments conducted by the South Australian Environment Protection Authority concluded:

“that the level of infrasound at houses [near wind farms]... is no greater than that experienced in other urban and rural environments, and that the contribution of wind turbines to the measured infrasound levels is insignificant in comparison with the background level of infrasound in the environment.”⁴⁴

Some public health experts have gone so far as to suggest that those who complain of health effects from noise associated with wind farms may in fact have other motivations. In a recent opinion piece published in the *Sydney Morning Herald*, Professor of Public Health at the University of Sydney, Professor Simon Chapman stated:

"Complaining about wind farms appears confined largely to parts of Australia, Canada, the US, Britain and New Zealand. And these complaints have accelerated in the past five years, despite turbines being operations in many locations for more than 20 years.

This contagious 'wind turbine syndrome' - a condition not recognised by any international disease classification system and which appears not once in any title or abstract in the massive US National Library of Medicines Pub Med database - appears to be spread by the vector of anti wind farm activist groups.

In Australia, the leading opponents are the Waubra Foundation and the Australian Landscape Guardians, which share a post office box with a mining investment company, Lowell Resources. Australian Landscape Guardians has been totally silent on any other intrusion on the landscape, apparently unperturbed by mining, highway construction or suburban encroachment."⁴⁵

⁴³ National Health and Medical Research Council, *Public Statement - Wind Turbines and Health* (2010) available at < <https://www.nhmrc.gov.au/guidelines/publications/eh53>>.

⁴⁴ Environment Protection Authority (South Australia), *Infrasound levels near windfarms and in other environments*, available at < http://www.epa.sa.gov.au/xstd_files/Noise/Report/infrasound.pdf> .

⁴⁵ Simon Chapman, *"Much Angst Over Wind Turbines is Just Hot Air"*, available at < <http://www.smh.com.au/federal-politics/political-opinion/much-angst-over-wind-turbines-is-just-hot-air-20111220-1p3sb.html>> .

Given the absence of peer reviewed scientific studies verifying the alleged effects of infrasound associated with wind turbines it is legitimate to question who benefits from such spurious objections.

Despite the absence of reliable scientific evidence to support claims of the impact of human health on wind farms several jurisdictions have imposed stringent regulation in response to these concerns. In 2010 Victoria was the first state to implement regulation in response to perceived health impacts caused by noise from wind farms, introducing a prohibition on wind turbines within two kilometres of an existing dwelling, except where written consent to the location of the turbine is provided by the owner of the dwelling. The operation of any wind facility constructed in Victoria must comply with the noise limits recommended for dwellings and other noise sensitive locations in the New Zealand Standard NZS 6808:2010 Acoustics which specifies a general 40 decibel limit for wind farm sound levels.⁴⁶ Under section 5.3 of this standard a ‘high amenity noise limit’ of 35 decibels applies in special circumstances and all applications for approval must be assessed to see if these special circumstances apply.⁴⁷ These requirements are stricter than earlier standards which applied up until 2010.⁴⁸

More recently NSW has adopted similar regulation of noise from wind farms . In December 2011 the NSW Department of Planning and Infrastructure issued *draft Planning Guidelines for Wind Farms* which were subsequently adopted which will have a significant impact on the length of the planning approval process for wind farms in NSW.⁴⁹ These guidelines impose an additional complex regulatory scheme for any proposal to install wind turbines within 2 kilometres of existing residences. Under this revised system an increased level of assessment or ‘Gateway’ process will apply if the applicant does not receive written consent from landowners with residences within 2 kilometres of proposed wind turbines. If such

⁴⁶ Victoria Department of Planning and Community Development, *Policy and Planning guidelines for development of wind energy facilities in Victoria* (2012), 30.

⁴⁷ Ibid.

⁴⁸ The implications of these changed standards for one development in particular were considered by the Victorian Supreme Court in *The Sisters Wind Farm Pty Ltd v Moyne Shire Council and others* [2012] VSC 324.

⁴⁹ See NSW Department of Planning and Infrastructure, *Draft NSW Planning Guidelines Wind Farms* (2011), available at http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=5yeY6yw_wRE%3d&tabid=205&mid=1081&language=en-AU.

written consent is not secured then the proponent will also be required to apply for a Site Compatibility Certificate ('SCC). The SCC will be assessed by the Department of Planning and Infrastructure before it makes its recommendations to the Joint Regional Planning Panel assessing the application.

This process will require the proponent to supply additional information in relation to noise and visual amenity which will then be subject to lengthy public exhibition and consultation requirements.

These new tighter restriction on wind farms have caused the peak industry body for renewable energy in Australia, the Clean Energy Council to express their concern that the NSW Government appears to be pursuing an excessively burdensome planning process which will in turn place unnecessary burdens on electricity consumers.

An even more disturbing development is that in addition to the Gateway Process amendments introduced by the *Protection of the Environment Operations Amendment (Scheduled Activities) Regulation 2013 (NSW)* vests the Environmental Protection Authority with responsibility for regulating noise from Wind Farms in NSW. These regulations will prevent wind farms from exceeding a baseline noise level of 35 decibels day or night.⁵⁰ No other jurisdiction in Australia, New Zealand, Europe or North America has adopted such stringent noise controls on wind farms.⁵¹

However, as noted by the NSW Environmental Defenders Office in its submission in relation to the public exhibition draft of the regulations these regulations are not consistent with regulation of noise from a range of other activities within the remit of the EPA. As the EDO observed:

⁵⁰ NSW Department of Planning and Infrastructure, *Draft NSW Planning Guidelines Wind Farms* (2011), available at http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=5yeY6yw_wRE%3d&tabid=205&mid=1081&language=en-AU>, 6. For a technical review of these requirements see Justin Adcock, Christophe Delaire and Dan Griffin, 'A review of the draft NSW Planning Guidelines: Wind Farms' (2012) 40(1) *Acoustics Australia* 72.

⁵¹ NSW Department of Planning & Infrastructure, Outline of the Wind Farm Guidelines, available at <http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=GHPKWTJh0r4%3D&tabid=205&mid=1081&language=en-AU>>.

“For other types of development, project-specific noise levels may be set in the consent and licence conditions. Indeed, significantly higher noise limits are often allowed for coal mines in NSW...The perceived need for strict noise criteria under the guidelines is attributed to the particular characteristics of wind turbines and a ‘precautionary approach’ to health issues. However, [as noted above] reviews of the scientific literature to date have not identified any positive link between wind turbines and adverse health effects. It thus appears there is no justification for applying more stringent noise criteria to wind farms than those which apply to other development...By contrast, considerable health impacts of coal mining and power generation continue to be identified, which would warrant such a precautionary or preventative approach...”.⁵²

In contrast to the approaches adopted in Victoria and NSW, South Australia has adopted far less onerous regulation of noise in relation to wind farm developments. Section 25 of the *Environment Protection Act 1993 (SA)* provides that a “person must not undertake an activity that pollutes, or might pollute, the environment unless the person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm”. In 2009 the South Australian Environment Protection Authority issued detailed guidelines that indicate the standard of care that is likely to be required to secure compliance with the general environmental duty under section 25.⁵³ These guidelines set a maximum noise level for wind farms of 40 decibels, except in localities zoned rural living where the lower limit of 35 decibels applies.⁵⁴ In South Australia land zoned rural living is a rural-residential ‘lifestyle’ area intended to have a relatively quite amenity where the only primary production permissible is the production of food, crops or the keeping of farm animals for the occupiers own use, consumption and/or enjoyment.⁵⁵ The majority of rural or agricultural land typically of interest for wind farms would not be subject to such zoning and would therefore not be subject to the more stringent 35 decibel requirement.

It should also be noted that South Australia’s less stringent noise requirements are imposed in the context of a planning regime that only requires wind farm developments to maintain a 1

⁵² Environmental Defenders Office NSW, Submission on draft NSW Planning Guidelines, 14 March 2012, accessed at < http://www.edonsw.org.au/planning_development_heritage_policy>

⁵³ See Environment Protection Authority South Australia, *Wind farms environmental noise guidelines*, available at < http://www.epa.sa.gov.au/xstd_files/Noise/Guideline/windfarms.pdf>

⁵⁴ See Environment Protection Authority South Australia, *Wind farms environmental noise guidelines*, available at < http://www.epa.sa.gov.au/xstd_files/Noise/Guideline/windfarms.pdf>, 3.

⁵⁵ Ibid.

kilometre separation from dwellings and turbines and a 2 kilometre separation between townships and turbines.⁵⁶

Conclusion

In essence the key challenge Australia faces for the future in regulating renewable energy is separating the ‘real’ environmental issues from the ‘perceived’ or spurious environmental issues. Policy makers need to make tough decisions and remove some of these issues from the mix. For example, if the science is telling us perceived human health impacts caused by infrasound has basis in fact, then planning laws need to reflect that. We should only regulate the real issue and legislate to accept the science.

In its current incarnation planning law across much of Australia, but especially in the east coast is acting to undermine the push to a low carbon future for Australia. This is particularly evident in the way various Australian jurisdictions have dealt with wind energy. By far, the most regressive planning regimes in relation to wind energy have been Victoria and more recently, NSW. In contrast, the very progressive attitude that South Australia has taken to the development of wind farms has led to the rapid growth of renewable energy in that state. Clearly, the planning issues associated with wind farms are complex. However, the way in which these have been dealt with across the various jurisdictions has to a large extent depended upon the legislative frameworks that have been put in place and the ability of climate change sceptics in particular to mobilise popular opposition to some wind farms on, at times, questionable scientific grounds. These changes to planning law have occurred in a national electricity market already subject to very complex regulation which is not favourable to renewable energy.

Renewable energy law is very much in an embryonic form in Australia, as it is in many other jurisdictions across the world. However, while traditionally renewable energy and the laws associated with renewable energy have been regarded as a quaint niche area in energy law, it is clear that in future, the significance of law and policy dealing with renewable energy will continue to grow and the growth of the significance of this body of law will be matched by an

⁵⁶ These requirements are implemented under the provisions of the *Statewide Wind Farms development Plan Amendment* under section 26(9) of the *Development Act 1993 (SA)* gazetted 18 October 2012.

ever increasing volume of law and policy initiatives in the future. The law dealing with renewable energy has come a long way in the last decade and a half. However there are many areas where reform is still required. This is not unusual for the law, as it is always a constantly evolving phenomena. The question remains, however, whether Australia legislators and policy makers will respond rapidly enough to the needs for law reform to keep pace with the ever increasing need for urgent action to tackle climate change and move towards a low carbon economy. The rest of the world is rapidly developing its low carbon economic base. Australia runs the risk of being left behind if its laws and policies are not rapidly reformed to better facilitate a renewable energy future for Australia.