MirusWind Pty Ltd ACN 103 586 778
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8th December 2011

Ms Jillian Broadbent
Chair, Expert Review Panel
Clean Energy Finance Corporation

Dear Ms Broadbent,

Design of the CEFC

Thank you for the opportunity to provide a submission on the design and function of the CEFC.

To ensure a distributed portfolio of projects a principal for the design of the CEFC that could be adopted would be that the capacity of projects in each state should be allocated in proportion to the population of that state. This would minimise transmission costs and spread the benefits of the CEFC more equitably to locations where power is actually needed. Also it would allow a mixture of various types of generation (solar, wind, geothermal and wave projects) to be considered by the CEFC as states have different natural advantages.

Since the RET Scheme is a market based lowest cost model that covers the whole of Australia the location of renewable electricity generation becomes concentrated in certain areas eg wind in South Australia. Further wind development in SA is constrained due to the limited interstate connectors and its intermittency and will require major transmission line expenditure to connect to the eastern states. A more distributed approach to the deployment of renewables would avoid major network

upgrade costs which have been the main cause of increasing electricity prices. This could lead to alternate developments in SA of projects that feature dispatchability like a solar thermal plant with storage eg replacing the coal fired power station in Port Augusta which would not require a transmission upgrade.

Storage has a significant role to play in delivering a clean energy future as two of the main sources of renewable energy, wind and solar are not dispatchable. The cost of our electricity and infrastructure is being driven by peak loads mainly due to air conditioning units on extreme days. It is much simpler to store thermal energy (heating and cooling) than electricity. A domestic solar hot water system only works when there is a hot water storage system. Two of Australia's Universities have large chilled water storage systems where cooling is produced more efficiently at night before it is used during the day. The CEFC should recognise in its consideration of projects that all forms of storage have a significant roll to play in reducing peak demand, reducing electricity costs and assisting with the deployment of intermittent renewables.

The principal driver for the deployment of large scale renewable energy projects to date has been the RET Scheme. It functioned well for a few years however at present this market based scheme is languishing due to the oversupply of RECs that were created in 2009/2010 by the inclusion of hot water heaters and a multiplier on small PV solar installations - see enclosed summary by the Grattan Institute.

Since wind is the cheapest large scale renewable (half the cost of PV solar) it would be expected to fulfil the majority of the RET scheme requirements and also some of the CEFC funding. Very few wind projects have been constructed over the last couple of years due to the scarcity of power purchase agreements despite the development backlog of approved wind farms - see enclosed summary map for NSW. The electricity retailers have banked the additional phantom RECs that were purchased at low prices and used these to fulfil their current RET Scheme obligations rather than initiating new projects.

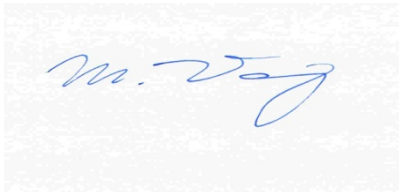
In providing assistance to marginal renewable energy generators by 'catalysing the flow of funds' the CEFC will be attempting to work against these market forces unless the RET scheme is returned to its original design or extended and some of the wind development backlog is cleared.

This could be done by the CEFC entering the REC market to absorb the phantom RECs and stabilise the REC price in line with expectations that were outlined when the RET scheme was designed - again see Grattan Institute summary. An example of a Government appointed body providing a stabilising function in a financial market is the Reserve Bank. This would provide a greater degree of certainty about the future price of RECs which is what financiers are looking for.

Ultimately this would help all renewable energy projects and make the task of the CEFC easier to initiate a diverse range of renewable energy projects.

I would welcome the opportunity to meet with you at any time to discuss these policy issues. Please feel free to call me on 0418 887 576.

Yours faithfully,



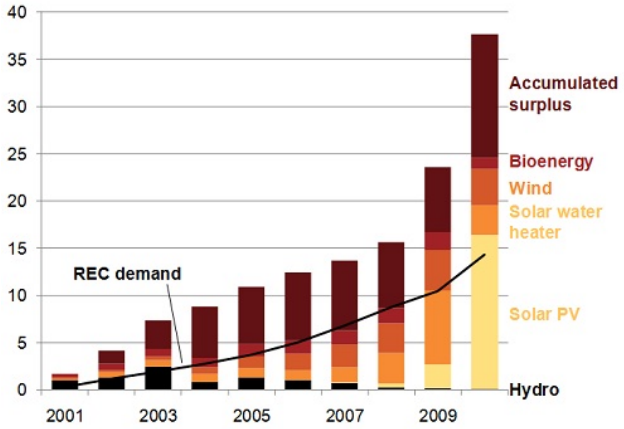
MARK WARING
Director
MirusWind Pty Ltd

Australian Mandatory Renewable Energy Target

Under Australia's Renewable Energy Target prices collapsed on two separate occasions because government and forecasters underestimated how market participants would respond.

Government expected that bioenergy (particularly burning sugar cane waste) would dominate the first phase of the scheme. However, forecasters failed to anticipate that wind, solar water heaters and hydro would turn out to be much cheaper than bioenergy. These technologies led to a large surplus of certificates by 2006. In the second phase of the scheme, government expected that wind would contribute much of the increased renewable energy supply. But in practice, solar water heaters and solar photovoltaics boomed over 2009 and 2010 due to a variety of reasons, including a halving in the price of solar PV systems. Even though government substantially increased the renewable energy target, the market continues to have many excess certificates.

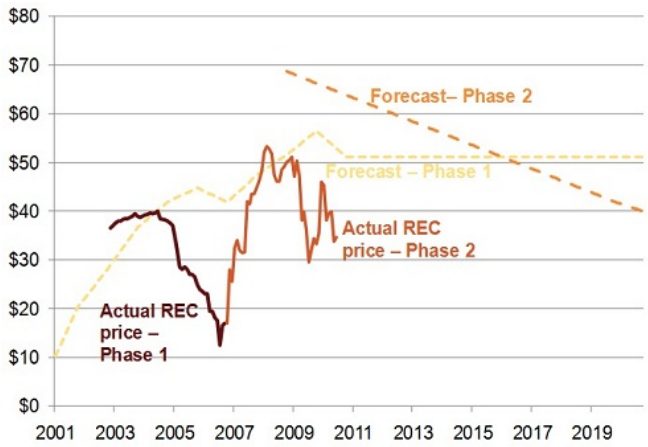
Figure 3 – REC demand and sources of supply, 2001-2010 (millions of RECs)



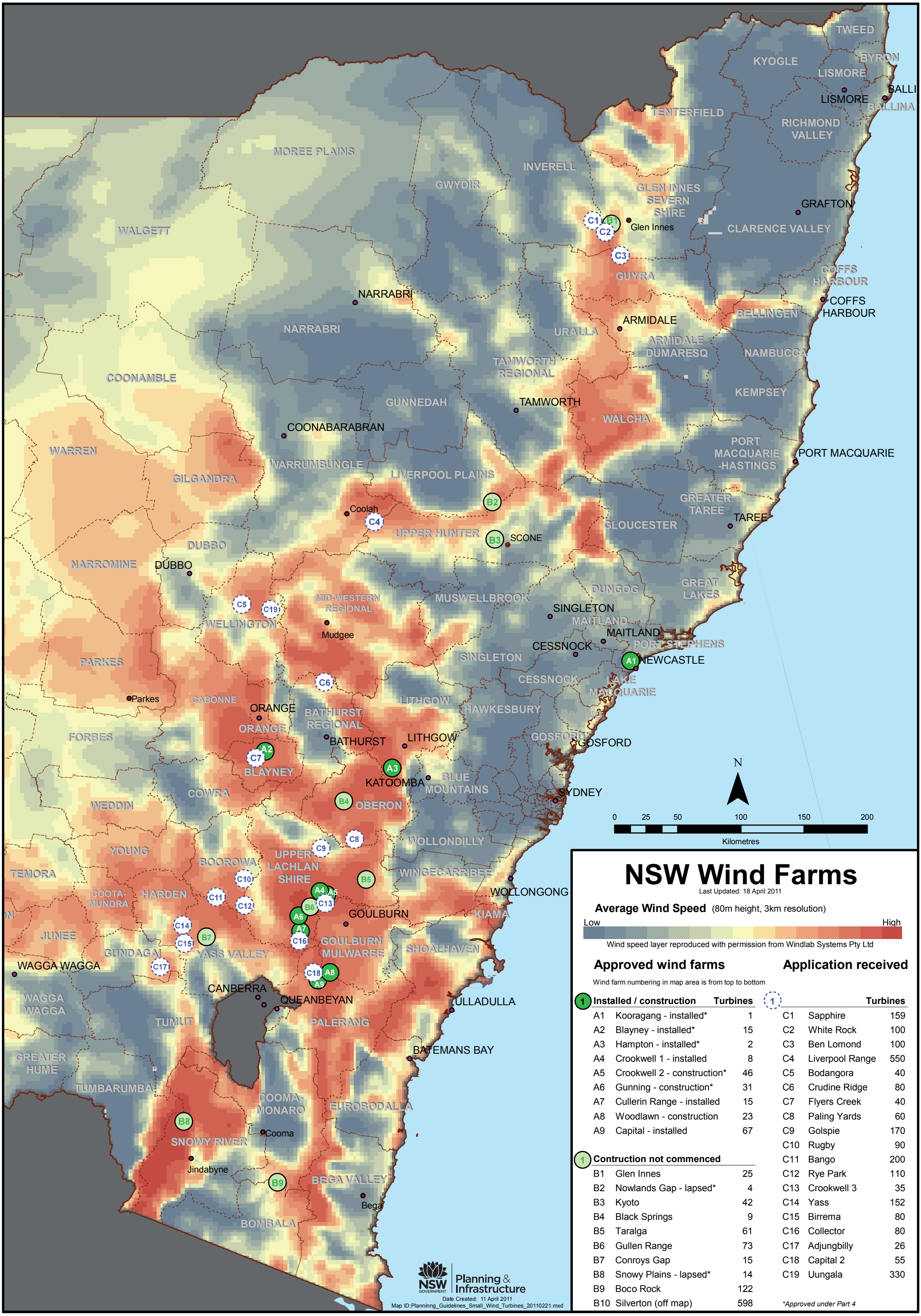
Sources: www.rec-registry.gov.au; Green Energy Markets

In the first phase, prices plummeted from $40 per certificate to less than $20, when the government-commissioned forecast was for them to steadily rise to above $50. In the second phase certificates were expected to reach $70, but plummeted after reaching a nadir at around $50.

Figure 4 – Actual REC prices versus forecasts ($/REC)



Sources: McLennan Magasanik & Associates for forecasts; Green Energy Markets for actual REC prices



NSW Wind Farms

Last Updated: 18 April 2011

Average Wind Speed (80m height, 3km resolution)

Low — High

Wind speed layer reproduced with permission from Windlab Systems Pty Ltd

Approved wind farms

Wind farm numbering in map area is from top to bottom

	Installed / construction		Turbines
A1	Kooragang - installed*		1
A2	Blayney - installed*		15
A3	Hampton - installed*		2
A4	Crookwell 1 - installed		8
A5	Crookwell 2 - construction*		46
A6	Gunning - construction*		31
A7	Cullerin Range - installed		15
A8	Woodlawn - construction		23
A9	Capital - installed		67

	Contruction not commenced		Turbines
B1	Glen Innes		25
B2	Nowlands Gap - lapsed*		4
B3	Kyoto		42
B4	Black Springs		9
B5	Taralga		61
B6	Gullen Range		73
B7	Conroys Gap		15
B8	Snowy Plains - lapsed*		14
B9	Boco Rock		122
B10	Silverton (off map)		598

Application received

		Turbines
C1	Sapphire	159
C2	White Rock	100
C3	Ben Lomond	100
C4	Liverpool Range	550
C5	Bodangora	40
C6	Crudine Ridge	80
C7	Flyers Creek	40
C8	Paling Yards	60
C9	Golspie	170
C10	Rugby	90
C11	Bango	200
C12	Rye Park	110
C13	Crookwell 3	35
C14	Yass	152
C15	Birrema	80
C16	Collector	80
C17	Adjungbilly	26
C18	Capital 2	55
C19	Uungala	330

*Approved under Part 4

NSW GOVERNMENT Planning & Infrastructure

Date Created: 11 April 2011

Map ID:Planninng_Guidelines_Small_Wind_Turbines_20110221.mxd