windlab

Australian Government Climate Change Authority

Via Email

Dear Sir/Madam

Renewable Energy Target Review Submission

Please find attached a submission to the review from Windlab Systems Pty Limited. Thank you for the opportunity to provide a submission, and please contact me if you require further information or clarification.

Yours Faithfully,

Luke Osborne

Regional Director, Australia

windlab

Submission to the Renewable Energy Target Review

September 2012

About Windlab

Windlab is an Australian renewable energy business spun out the CSIRO in 2003. It has subsidiary businesses in Africa, USA and Canada. The company is a leader in wind resource assessment and uses this skill in the development of wind energy projects.

The company thanks the Australian Government's Climate Change Authority for this opportunity to comment on its Review of the Renewable Energy Target.

Summary Position

Windlab's position on the questions posed in the Issues Paper is set out below. In summary Windlab does not believe that the Australian Government should alter the scheme to adjust the volume based on demand as this will undermine certainty and effectiveness of the scheme. Nor should the Government attempt to distort the target to deliver a particular energy mix. There are drivers within the scheme that will adjust the mix over time. Finally we present data that shows the target is easily achievable and in this context the extension of the target to include an upward trajectory to 2030 would encourage continued development of renewable resources beyond the immediate future.

Are the existing 41,000 GWh LRET 2020 target and the interim annual targets appropriate? What are the implications of changing the target in terms of economic efficiency, environmental effectiveness and equity?

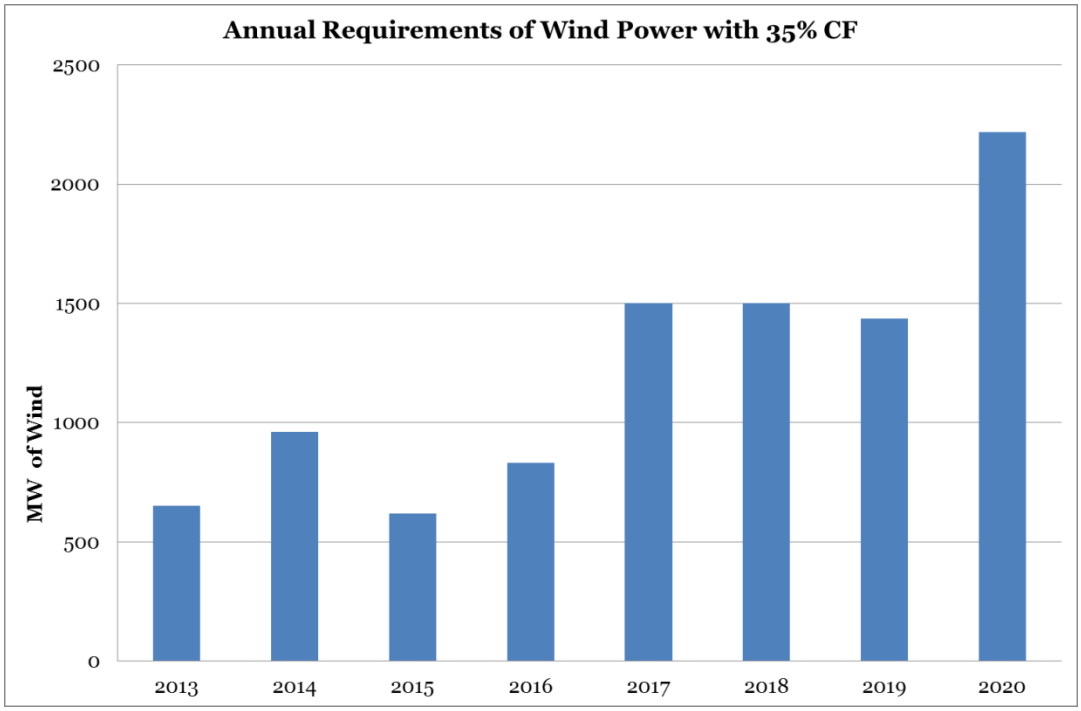
We believe the market will relatively easily meet the target absent any further distortion to the market as set out below. Clearly a reduction will undermine faith in the market, driving up risk premiums, reducing investment and therefore reduce both the environmental and economic effectiveness of the scheme.

Many millions or billions have been invested in the project pipeline and related capacity building by Australian and international companies on the expectation of a 41,000 GWh target. A decision by the Government to lower the target will imperil these investments and drive out further investments.

Is the target trajectory driving sufficient investment in renewable energy capacity to meet the 2020 target? How much capacity is needed to meet the target? How much is currently committed?

Windlab maintains a database of wind energy projects. The following outputs show that wind alone has more than enough projects in the pipeline to supply the target.

If we make a simplistic (but conservative) assumption that 100% of the target was borne by wind energy alone we can easily calculate the requirements. In this case we have removed the 'bump' for clearing the oversupply of domestic scale credits in the market. We can see that at 35% capacity factor (again conservative with modern turbines) a total of 9,700MW of wind would need to be installed, with a trajectory as shown below.



The project pipeline for wind is shown below as of May 2012.

Stage	NSW	QLD	SA	TAS	VIC	WA	Grand Total
Prefeasibility	1679	670	2215	600	1200	551	**6915**
Permitting	5305	1376	1262		869	150	**8962**
Approved	1505		1152	168	2301	1276	**6401**
In construction	92		5		20	55	**172**
Operational	282	12	1409	159	915	437	**3214**
Grand Total	**8863**	**2058**	**6042**	**927**	**5304**	**2468**	**25664**

This shows 'Approved' wind is not far off being able to supply the whole target and projects actively seeking approval (Permitting) well exceed the target. Even allowing for huge attrition, wind alone can supply the target. If we include large-scale solar as supported by Solar Flagships and hydro, the target becomes even easier to meet. In the context of this and the cheap price of project delivery (as evidenced by cheap and stable LGC prices) the Government should not be swayed by arguments that the target should be adjusted downward. Actively considering target extension to X% by 2030 would allow the market to pursue the rich pipeline with greater certainty.

We refer to answers below addressing the diversity of the RET and have reduced the calculations to 'wind-only' for illustrative purposes only.

Has the LRET driven investment in skills that will assist Australia in the future?

Windlab has trained more than a dozen young wind engineers in the complexities of wind energy resource assessment, project development and grid integration. These skills are quite transferrable to other forms of energy projects and these skilled professionals will stand the country in good stead for the next 50 years of energy development.

In the context of other climate and renewable policies, is there a case for the target to continue to rise after 2020?

Yes there is strong case for extension. Energy projects have expected lifecycles of 20 years or more. Renewables typically need long term off-takes to be financeable and the policy driver therefore needs to have similarly long term effect. As we approach 2020, the target's end of 2030 will become increasing relevant in off-take discussions and begin to impede investment due to the uncertainty created after 2030.

Should the target be a fixed gigawatt hour target, for the reasons outlined by the Tambling Review, with the percentage being an outcome? Should the target be revised to reflect changes in energy forecasts? If so, how can this best be achieved – as a change in the fixed gigawatt hour target, or the creation of a moving target that automatically adjusts to annual energy forecasts? How should changes in pre-existing renewable generation be taken into account? What are the implications in terms of economic efficiency, environmental effectiveness and equity?

The Renewable Energy Target has been a very successful market mechanism with a fixed volume and floating price. The alternative means of creating a market is to fix the price and let the volume float (a so called Feed-in Tariff). Those promoting **both** a floating price **and** floating volume are advocating an unworkable system. The Government's desire to create a market in renewable energy requires it to fix the volume and to provide long term certainty so the market can find an efficient price. Changing the volume based on short term factors (such as cool La-Nina weather of late or fluctuations in the economic cycle) will create uncertainty in the market such that it would undoubtedly fail as a policy measure. The Government should not be influenced by liable entities with large investments in high-emission generators making such suggestions.

What are the costs and benefits of increasing, or not increasing, the LRET target for Clean Energy Finance Corporation-funded activities? What are the implications in terms of economic efficiency, environmental effectiveness and equity?

We believe that it would be possible to estimate the effect of the CEFC on renewables given their investment volume in the sector and a once off upward correction to the target would be managed by the market. However for the reasons stated above we would not advocate anything resembling a moving-volume-target. For the record, we believe that the CEFC should be cognisant of its impact on the efficiency and certainty within the LGC market and should not seek to alter the 'most-efficient-solution wins' principle in the RET.

Is the shortfall charge set at an appropriate level to ensure the 2020 target is met?

We believe that the shortfall price will not be binding as there are more than enough projects that can deliver projects well under the $92 cap (the Issues Paper notes that the price is currently less than half of this level). We believe that the shortfall price may have some merit in liability calculations within liable entities and should be retained at the current level.

Is a list approach to 'eligible renewable sources' appropriate? Are there additional renewable sources which should be eligible under the REE Act?

Should waste coal mine gas be included in the RET? Should new capacity of waste coal mine gas be included in the RET? What would be the costs and benefits of any recommended changes to eligible renewable sources?

We believe the current list-approach is appropriate and that the market is best placed to make the complex decisions about how the mix evolves to meet the electricity needs of the consumer. We agree that waste gas from coal mines should not be allowed to pollute the atmosphere and some form of regulation should be in place to require or encourage capture of these emissions. We do not believe that that the RET is the appropriate place for this regulation however; gas from coal mines is certainly not a 'renewable' energy.

What are the lessons learned from the use of multipliers in the RET? Is there a role for multipliers in the future?

The RET has been an effective means of driving investment and lowering the emissions intensity of the Australian electricity sector in a lowest-cost manner. This is largely due to the power of the market in seeking out such low-cost solutions. However on a number of occasions, as frankly detailed in the Issues Paper, Government interventions have interfered with this efficient operation. Electricity itself is a complex market, and when this is combined with the complexities of renewables resources themselves and, State planning policies and technology innovation, it becomes almost impossible to predict. The lesson with the multipliers is that the Government should seek to create the market with the least number of distortions possible to achieve the policy objective. There are a number of other Government initiatives aimed at promoting emerging technologies (venture funding under ARENA for example) and these should be left to do their job of bringing these technologies to market. Multipliers and its close cousin 'banding' of the target by technology as practiced in other nations is a distortion that undermines the efficiency of the target.

Should the RET design be changed to promote greater diversity, or do you think that, to the extent that there are barriers to the uptake of other types of renewable energy, these are more cost-effectively addressed through other means? What would be the costs and benefits of driving more diversity through changes to the RET design?

As stated above, 'banding' of the RET into different technologies is a distortion of the market not unlike the multipliers which proved disastrous to the effectiveness of the market.

We would argue the market-itself will promote diversity in time for two reasons. Firstly, the price paid to a renewable is a combination of the LGC price and the value of electricity produced. If wind power for instance is forming a large proportion of the mix, the value of the electricity drops as it is typically somewhat correlated with other wind in the region and bidding low prices (the so-called merit-order effect). In this case it becomes less-and-less economic to install wind. Other (uncorrelated) renewable sources such as solar become relatively more economic. Secondly system security requirements will also form a natural regional cap on generation from any particular source. System security studies are a lengthy and intensive part of any connection application and the dynamic interactions of generations and loads are modelled. Again too much of any one source will drive up the cost of connection to new players with the same source as the system operator and network providers require more expensive voltage or fault-ride-through capability.

To distort the market will risk the Government driving up the price and/or stalling the market once again. The Government (or any other player) is poorly positioned to make predictions about the consumption patterns of consumers, the cost trajectory of any particular technology or the complexities of the electricity pricing and dispatch system. The market itself will promote diversity when it is least-cost in the context of providing a reliable supply.

What is the appropriate frequency for reviews of the RET? What should future reviews focus on?

Although well intentioned, this review into the RET has once again stalled the market as many players are taking a 'wait and see' approach to the outcome. The effect of any review that includes the potential for the reduction in the volume of the market in its terms of reference will be similar. We believe the reviews should be much less frequent and rule out reductions in obligations on liable entities (and therefore focus exclusively on increases in the target which are much less disruptive).