WIND NEWS - NOVEMBER 2015

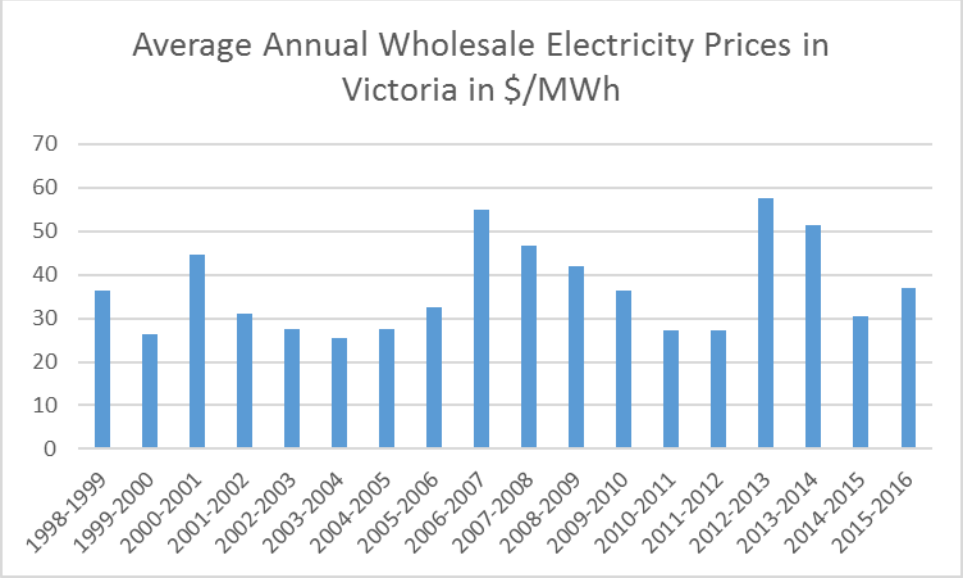
FROM THE MD'S DESK

The major political parties finally reached an agreement on the Renewable Energy Target (RET) in the middle of this year, with a compromise at 33,000 GWh per year by 2020 from large scale renewable energy generation. That is a reduction of 8,000 GWh from the original target of 41,000 GWh, or around 20%. That, combined with a new Prime Minister, who is not ideologically opposed to renewable energy, has set the scene for a more prosperous future for renewable energy in the short to medium term.

Now let's have a look at how the markets have responded. The two key markets for selling electricity from large scale renewable energy projects, such as wind farms, are the wholesale electricity market and the market for large scale generation certificates, so called LGCs. Liable parties, such as the big utilities, have to demonstrate that they source the legislated amount of renewable energy by purchasing these certificates. A wind farm produces and can sell electricity and LGCs, whereby for every MWh of generated electricity one LGC is created.

WHOLESALE ELECTRICITY MARKET

The wholesale electricity market has not responded in any material way to the announcements regarding the RET as can be seen from the chart below. The two financial years 2012/13 and 2013/14 have a carbon tax priced into the wholesale electricity price, hence they stand out from the years prior and after. However, drought and market games by some generators in the 2006-2008 period did the same to electricity prices as the carbon tax. Drought conditions in Victoria and Tasmania will likely have a price impact on the Victorian electricity prices going forward, as will the shutdown of coal fired generation in South Australia early next year.

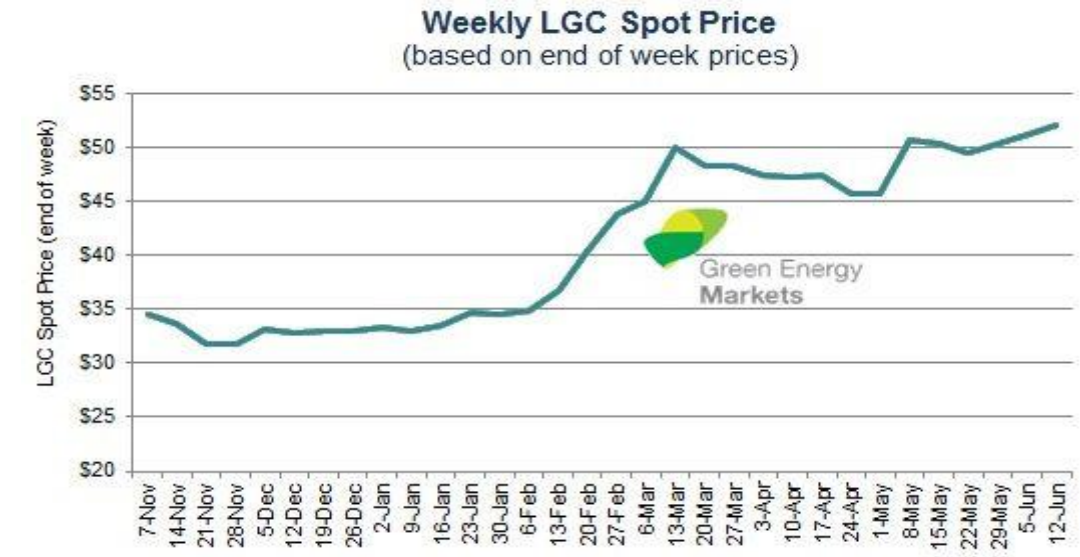


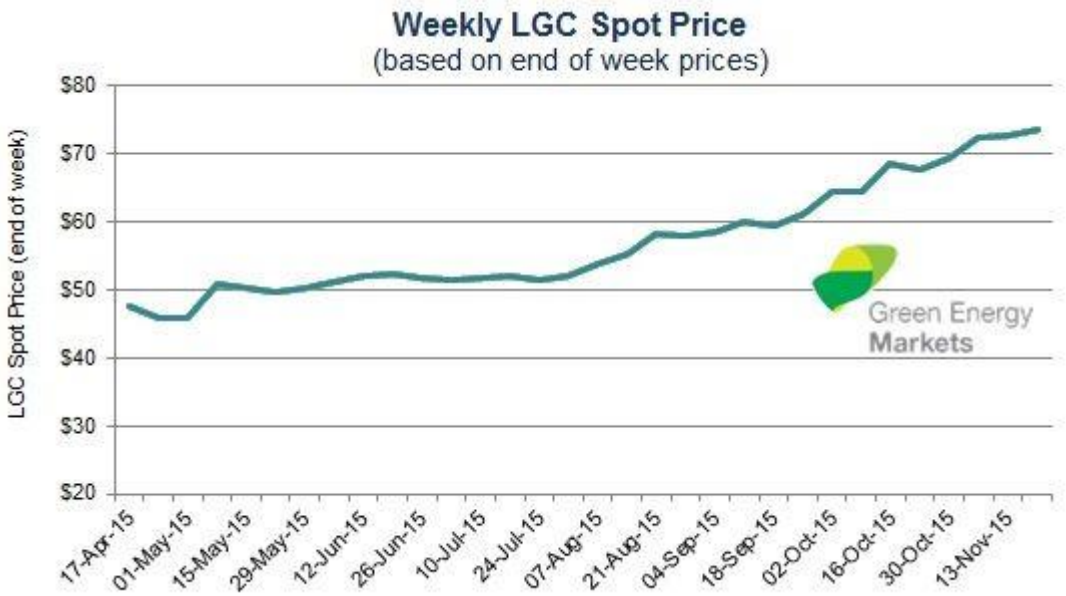
What is interesting to note is that five years ago electricity prices tended to be much higher over the summer months and lower over winter. In essence, 5 years ago the generators made their profits predominantly in summer and a significant portion of expensive gas peaking plant was used to service demand. Since then approximately 4,000 MW of new solar photovoltaic generation capacity (mainly rooftop solar) and 1,700 MW of wind generation capacity have been added to Australia's fleet of electricity generators and they have pushed a lot of gas and coal generation out of the market. Particularly expensive generation during the summer months. It is not surprising then where a lot of resistance to renewable energy comes from.

The forward electricity markets show fairly flat forward prices for all states with by far the lowest price of electricity offered in Victoria. Here the base futures prices hover around $34 to $43/MWh for the next three years.

LGC MARKET

The LGC market has started to respond to the prospect of a political agreement as early as February. It appears that the market has been pretty well informed about what was likely to happen, whereas this certainly hasn't been reflected in the mainstream media. The graph below shows the weekly LGC spot prices, which now have exceeded the $70/LGC mark and are traded already at close to $80/LGC on the forward market out to 2019





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WHAT DO THESE NUMBERS MEAN FOR WIND FARMERS?

Well, most operating wind farms have long-term power purchase agreements in place with a large utility. Hence they are not affected by the fluctuations in either electricity or the LGC markets. But for those wind farms waiting for investment and construction these numbers are very promising.

A new wind farmer could forward sell electricity and LGCs for the years 2017 and 2018 for example at a combined price for electricity and LGCs of around $110/MWh in Victoria and approximately $10/MWh more in NSW and QLD and $20/MWh more in SA. On paper, with its outstanding wind resource, SA sounds like the most promising place for wind farming. But with over 30% of SA's electricity already coming from wind farms there is an issue with times of high wind generation leading to low market prices. So electricity from wind farms drives down the market price and is worth less on average than the average market price. When the wind doesn't blow and the "fossils" very much dominate the market, electricity prices in SA go up above the average. The wind resource in NSW and QLD is typically not as good as in SA and VIC and hence generation costs are somewhat higher.

Overall there are pros and cons for wind farming in each state and I would expect that wind farms in all states are likely to be built in the coming years. In Victoria we have to have the most cost competitive wind farms to produce an adequate return for wind farmers but the market prices seem now high enough for the coming years to ensure that. And with the new Prime Minister, clear messaging by the government that the target will not be watered down any further and expectations on a stronger global commitment on measures to curb climate change, investors and utilities alike have started to re-engage with the renewable energy sector. I would expect that real activity will start to transpire next year with a lot of evaluating, strategy adjusting and positioning by all players already happening.

The times are certainly more exciting now for wind farmers than they were 12 months ago and we are hopeful here at WestWind that our projects will be moving again soon.

LAL LAL WIND FARM PLANNING PERMIT AMENDMENT

As some of you may know, WestWind has been in discussions with the Minister for Planning and the Moorabool Shire Council about an amendment to the Lal Wind Farm planning permit.

WestWind is seeking an amendment to our planning permit, and we are up to our fifth variation of the same request in four and a half years. Four of these were lost to the previous state government's anti-wind farm laws, so we are pleased the current government wants Victoria to become a "world leader in wind energy".

We are requesting an increase to the height, but not an increase to the numbers. The numbers will actually be reduced if the height is increased. The longer blades mean that more space is required between turbines, therefore some will be removed as the distance between dwellings and the nearest turbine location will not be reduced.

We are also requesting that the newer, more stringent noise standard be applied to the wind farm, which will provide a greater safeguard for neighbouring properties. I should add that greater size does not mean more noise. A Senvion turbine with a 114 metre rotor diameter is quieter than the Enercon turbine that was modelled for the original planning permit, and this had an 82 metre rotor.

Each wind farm construction project will provide over 200 direct jobs and if the Yendon, Elaine and Moorabool sites are built in succession, there will be around five years of continuous work. The larger turbines will provide Victoria with more renewable energy from fewer turbines as well as increase the council rates by up to 50%.

Specifically the changes requested in the latest amendment submission are:

- increase in wind turbine maximum tip-height from 130 metres to 161 metres;
- increase in maximum hub height from 85 metres to 105 metres;
- increase maximum rotor diameter from 95 metres to 122 metres;
- enable wind turbine transformers to be located next to the towers;
- apply the up-to-date 2010 noise standard;
- allow an option to relocate the substation approved for the Elaine Section; and
- reduce permitted wind turbines from 64 to 60.

These changes will produce a significantly improved output from fewer turbines as detailed below.

Parameter	Existing approval	Proposed approval
Proposed wind turbine numbers	64	60
Overall height	130m	161m
Generation capacity MW	128	192
Gwh per year	336	504
Payments to Moorabool Shire	$228,000	$299,200
Average Households Powered	63,111	94,666

The public consultation period will commence in the coming weeks. Nearby residents will receive an information pack and given the opportunity to respond to the state planning department. These responses will be taken into account by a planning panel as part of their assessment of the amendment. The panel will then make a decision recommendation in their report to the Minister for Planning, who will then decide the amendment outcome. It is important to note that the assessment will only relate to the amendment, not the overall project, as this is already approved.

WIND MONITORING

WestWind's wind monitoring campaign continues, with freshly calibrated instruments installed on our two Tasmanian 60m masts in April, and the return of our Triton SODAR wind profiler from its two-year mission to Tropical North Queensland.

The Triton has now been refurbished and was re-deployed to Barunah Park in early September.

The Fulcrum SODAR continues to measure at the Ballark section of the Moorabool Wind Project site, and has also been recently refurbished.

In the coming weeks the anemometers on the 80m mast systems at Elaine, Yendon, and Ballark will be replaced.

The 60m Barunah Park mast is also due for instrument replacement in the next few months.

Newsletter Distribution

Please send your email address to **reception@w-wind.com.au** so that we may facilitate further communications

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