21 May 2014

Dr Peter Boxall
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Office NSW 1230

A Response to the Draft Report on a Solar Feed-In Tariff from July 2014

Dear Dr Boxall

I am a solar panel owner and a member (but not a representative) of Solar Citizens, an alliance of solar panel owners and related parties. From my experience and my discussion with other solar panel owners I can state that solar panel owners, and particularly those on unregulated feed-in tariffs, are angry. Not because they feel they are owed something. But angry because they see a system stacked against them. It is not just Big Energy that is fighting back with all the corporate resources it has to hand. As I shall document below:

- This inquiry's terms of reference do not treat solar panel owners fairly
- The National Electricity Market's rules do not treat them fairly
- And this inquiry's draft report does not provide them any redress

With over 100,000 NSW households on unregulated feed-in tariffs today, another 150,000 being forced onto unregulated tariffs at the end of 2016, and possibly a further 100,000 households switching to solar by then, this State faces the prospect of having one in every seven households angry with their government on this issue alone.

Terms of Reference

A reasonable person might expect an inquiry entitled "Solar feed-in tariffs: The subsidy-free value of electricity from small-scale solar PV units" to consider a broad range of issues arising from solar power. But no, this inquiry has not been asked by the Minister to consider a fair price for electricity provided by small-scale solar. It has not been asked to consider the value of solar, for example, in reducing the need for expensive network upgrades (though Mr Bruce Robertson seems to have conclusively demonstrated this link[1]). Instead it has been directed by the Minister to limit its consideration to "the price that PV exports would receive if they could be sold on the National

[1] The Northern Star, *Energy Myth Busted, Then Busted Again*, 23 Oct 2012.

Electricity Market". Moreover, he has explicitly required that "there should be no resulting increase in retail electricity prices", even if this could be justified. No wonder people think the system is stacked against solar.

Transmission Charges

The National Electricity Market (NEM) operates a pricing mechanism intended to provide competitive neutrality between all large-scale electricity generators regardless of where in the state they connect to the high-voltage transmission network. While serving its aim for large-scale generators, this mechanism discriminates heavily against micro-generators, such as solar households, who do not contribute to the high-voltage transmission network at all. The power that we provide does not travel tens or hundreds of kilometres over high-voltage lines and through various substations and transformers before it reaches the local 240 volt network. Our power is supplied, ready to use at 240 volts, and rarely travels more than 100 metres before it is consumed by our neighbours or near neighbours.

Since our power does not travel over the billions of dollars of high-voltage transmission network infrastructure that criss-crosses the State for the benefit of the large generators, it is only fair that we should not be charged for using it. According to the Australian Energy Market Commission[2], in NSW in 2012-13 these costs comprised 3.6 cents per kWh. This cost should be rebated to solar households for all power they supply to the distribution network, in addition to the cost saved by retailers not having to buy power from the wholesale market.

Who owns those high-voltage transmission lines and would lose as a result of this proposal? The government. Who set the terms of reference of the inquiry? The government. No wonder people think the system is stacked against solar.

Recommendations within the Remit of this Inquiry

The Minister has asked the Tribunal to determine "the voluntary benchmark range for solar feed-in tariffs paid by retailers for electricity produced by complying generators and supplied to the distribution network". He has also indicated that "the benchmark range should operate in such a way as to support a competitive electricity market in NSW". I contend that the Tribunal has interpreted these requests too narrowly and thereby to the detriment of solar households.

The Productivity Commission[3] has highlighted the effectiveness of time-varying electricity prices in changing household electricity usage patterns and recommended the greater adoption of these techniques to improve resource allocation by discouraging usage during what would otherwise be times of critical peak demand. The same logic would argue that solar households could be encouraged to vary their net supply to the network by offering them time-varying feed-in prices.

The Tribunal has envisaged a simple time-varying feed-in tariff, with higher rates offered between 3pm and 5pm. This structure, however, would set up a perverse incentive for one section of the community when compared with another. Households on time-of-use pricing face shoulder prices from 7am to 2pm and peak prices from 2pm to 8pm, encouraging consumers to bring their

[2] Australian Electricity Market Commission, *Electricity Price Trends Report*, 22 March 2013
[3] Productivity Commission, *Electricity Network Regulatory Frameworks*, 9 April 2013

consumption forward to earlier in the day. In contrast, solar households typically face their lowest electricity price during the middle of the day when their marginal electricity price is the opportunity cost of not exporting. This encourages solar households to shift "voluntary" usage – dishwashers, pool pumps, etc – to this period. In a connected market, it makes no sense for one part of the community to be strongly discouraged from using power from 2pm onwards, while another, growing, part of the community is being encouraged to concentrate their usage during this same time. It would be more appropriate therefore, for the Tribunal to recommend a higher feed-in tariff from 2pm onwards rather than from 3 to 5pm so as to help align the incentives applying to all households. While the higher feed-in tariff would still be much lower than usage fees at the same time, at least the direction of movement would align and there would be less likelihood of confusion about the time.

The Tribunal could go further. It has asked Frontier Economics to calculate the likely value of solar electricity exports based on a range of assumptions and then in effect applied a discount so as to ensure that retailers aren't likely to lose based on forecasting errors. In stark contrast, wholesale generators are not offered a price based on some forecast but paid according to conditions in the spot market. Why cannot, indeed should not, solar households be given the same opportunity if the Tribunal is indeed "to support a competitive electricity market"? Why are large-scale generators allowed the opportunity to supply to the market at up to $12.50 per kWh during critical peak periods but small-scale generators (with collective capacity in excess of 500MW) not? Why indeed when these are usually the same times when the network is at peak capacity and when provision of electricity near the point of consumption offers the greatest savings in avoided infrastructure requirements?

Such an arrangement can be quite easily provided. In many areas of NSW, solar households' meters already record net exports in half-hourly intervals. Retailers could apply, on a look-back basis, the average half-hourly price that was achieved in the spot market to each customer's net exports for that half hour. With such an arrangement in place and electricity market condition forecasts made public, solar households could arrange their affairs so as to maximise their net exports whenever prices were likely to be high. It would also encourage the development of household electricity storage arrangements which could be used to minimise imports and/or maximise exports during peak periods.

Yours sincerely

Ian Russell