



SolarCitizens

4 July 2017

To the AEMC,

Submissions to the Draft Distribution Market Model Report

Solar Citizens has recently collected our supporters' submissions to the Draft Distribution Market Model Report.

2494 submissions were collected and are attached to this email in an excel file. The columns in the spreadsheet file reflect the required fields on your on-line submission site.

It is important to note that this attachment is not a Solar Citizens submission. Rather Solar Citizens is forwarding these 2494 submissions to you *on behalf of each* of the individuals listed in the file. We trust personal information contained will not be published.

Solar Citizens' also does not support the Commission's proposal to explore the deletion of clause 6.1.4 of the NER.¹

Over 5 million Australians live under solar roofs and the removal of this rule would leave them open to being charged for exporting their clean solar power to the grid. Large power stations do not have to pay for exporting power to the grid and solar owners shouldn't have to either.

Costs to the grid

The draft report states that benefits flow to the individual consumer of rooftop solar while costs are borne by the network.² The report does not detail the nature of these costs, when they occur or why and provides no information to back up this claim. There is very little evidence to suggest that there are significant costs to the network when there is less than 40% penetration of rooftop solar. It is important to note that the draft report also fails to give consideration to other loads that can require network investment and involve considerable cross-subsidies from other consumers, such as air conditioners.

¹ AEMC, Draft Distribution Model Report, Question 4, p 60.

² As above, p 58.

If high bidirectional energy flows caused by high penetrations of rooftop solar necessitates additional investment in grid infrastructure, this can already be dealt with through the existing connection charge mechanism. This is a more equitable approach than changing the rule as that would have a much larger impact on the 5 million solar owners who have already made an investment without the ability to foresee such additional charges.

Further, there is no relationship between the alleged problem and the proposed solution. If solar causes additional network costs they are foreseeable at the time of connection; no additional network costs are incurred every time a solar owner exports energy to the grid, so there is no rational basis for a c/kWh charge.

Finally the AEMC report does not acknowledge other recent and potential solutions for any additional solar-related network costs, such as changes to inverter standards that help to overcome frequency and voltage fluctuations.

Benefits rooftop solar provides to the grid

Rooftop solar places less strain on the distribution network and reduces costs in at least two ways.

Firstly, exported energy from solar PV is used close to where it is generated and exported, making significantly less use of the poles and wires than other power sources. Secondly, a significant proportion of the cost of the distribution network is the transformers which convert higher voltages down to 230V. Solar inverters have this capability built in and export power at 230V.

Local solar also avoids using the high voltage and subtransmission parts of the distribution network, which account for over 50% of network costs.

The report also ignores widespread evidence of the other benefits of rooftop solar to networks - for instance, in reducing and delaying peak demand periods, thereby reducing the need for new network infrastructure to meet peak demand.

There are additional network benefits of distributed battery energy, including dispatchability during network peaks and synthetic inertia to ensure security of supply, which would be unavailable to networks if solar and battery owners are incentivised to go off-grid by being charged for their exports.

Contrary to the National Electricity Objective

Discrimination against solar owners who use less of the grid than other consumers and any increase in their costs could trigger a death spiral of a grid. This risk is enhanced by the falling costs of battery storage. This would be a perverse outcome leaving legacy non-solar grid-connected customers and grid companies worse off as guaranteed returns will have to be collected from fewer customers. Such outcomes are not in the long-term interests of consumers of electricity with regards to price and thus counter to the intention of the National Electricity Objective.³

Recommendation

³ National Electricity Objective, <http://www.aemc.gov.au/Energy-Rules/National-electricity-rules>

Clause 6.1.4 should remain in the NER and its deletion should not be explored further. There is no justification for the cost claims made and the benefits that rooftop solar provides to the grid can be better accounted for through the mechanism of a fair feed-in tariff.