

Committee Secretary  
Select Committee into the Resilience of Electricity Infrastructure in a Warming World  
Department of the Senate  
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Please accept this public submission for the Senate Inquiry into the Resilience of Electricity Infrastructure in a Warming World.

The South Australian massive blackouts in late 2016 demonstrated the major problems that can occur when the current electricity grid distribution network is incapacitated by factors including the destruction of distribution towers. When a small number of electricity power plants are distributing energy via a massive distribution network, then it is inevitable if that distribution network is suddenly incapacitated, that large parts of the state will be left without electricity. Sadly, Scientists report that increasing severity and frequency of wild storms in already happening, and will continue to increase, as a result of progressing climate change.

We must look at new and improved strategies to increase the reliability of both producing, and also distributing, the electricity we all rely on every day.

A solution is becoming available - localised solar photo-voltaic panels with local battery storage of the renewable energy produced. Due to rapidly decreasing prices, increasing numbers of households are using this technology. In addition, homes that installed solar panels some years ago, are now installing a lot more solar panels, plus adding battery storage. Most homes and businesses with solar panels - and many without - are aware they can install battery storage products including the Tesla Powerwall. These products are being discussed at the evening dinner tables and in the staff rooms across Australia.

Indications are that within the next handful of years there will be a massive boom in numbers of households adopting this technology. Many people will decide to adopt this technology as it will be far cheaper in the long run than using grid electricity, however and importantly, in the event of a storm interrupting grid distribution and causing a blackout, these homes and businesses will have uninterrupted electricity supply using their own batteries to power their homes.

It makes great sense that the government should lead the way (as private households are currently doing) by creating a network of many solar energy plants with battery storage distributed across the country. In addition to being cheaper in the long term, these solar plants would distribute power to local communities, and importantly, in the event of a storm disrupting power supply, it would not cause the massive loss of power to most of the state as occurred in South Australia when the current distribution grid was destroyed in a super storm.

Government should also:

- Create schemes to further encourage the uptake of solar and battery storage systems by households and business, resulting in increased demand and an even more rapid reduction in the cost of these systems due to economies of scale.
- Boost investment and create jobs in researching, making and installing storage and localised distributed technologies.

- make it easier for households and businesses to shift to storage technologies, and
- become a global leader in these solar, storage and distributed generation technologies by recognising the abundance of Australia's natural energy resources and the popularity of rooftop solar.

I note that AGL Energy commented on the massive South Australian blackout, rejecting the federal government's suggestion that coal-fired power plants could have avoided the blackout, and said the best way to create energy security is to have a system of distributed renewable energy. The government would do very well by us citizens, if they adhere to this advice from AGL Energy.

Sincerely

Phil Browne