



15 July 2020

Regulatory Changes for Smarter Homes Project Team
Energy and Technical Regulation
Department for Energy and Mining

Submitted by email: ETRConsultations@sa.gov.au

Dear Sir/Madam,

Consultation on Regulatory Changes for Smarter Homes in South Australia

Origin Energy Limited (Origin) welcomes the opportunity to provide comments on the Consultation on Regulatory Changes for Smarter Homes in South Australia.

Origin is one of the largest installers of residential and commercial solar systems in Australia. We recognise the need for South Australia to manage the impact of an increasing amount of distributed solar PV generation and to maintain a reliable and secure electricity supply for all consumers. The consultation papers raise a series of complex and inter-related issues that are part of the long-term reform of the market.

We are concerned with the proposed speed, complexity and cost of some of the proposed measures. We believe these changes could lead to confusion and resentment among customers and we suggest a measured approach to these reforms with clear communication to electricity consumers of the reasons why the South Australian Government is making these changes. We also believe additional costs of any reforms should be socialised across the market as they are providing a benefit to all electricity consumers in the state.

Origin is a member of the Clean Energy Council (CEC) and we generally support their submissions on Papers 1-4 of this process.

Our key points are as follows:

- We suggest that the South Australian Government focus on one or two of the proposed reforms to start with – in our view priority should be given to voltage ride through requirements (Paper 3) and simple disconnection/reconnection of solar export (Papers 1 and 4).
- Voltage ride through requirements - we believe working through the existing Australian Standards process is the optimal approach. If South Australia does implement additional requirements, then a list of inverters which meet the test should be published and only once a certain proportion of the inverter markets meets the test would the new requirements

commence. This will provide a degree of confidence for the solar industry to continue operating.

- Remote disconnection/reconnection of distributed solar – this proposal is technically feasible but will require more time to implement. We suggest that installers be given some flexibility as to which technology solution is provided.
- Other issues of a more long-term nature should receive further consideration at a later stage. For example, dynamic limits on solar export (Paper 2) is a theoretical ‘end-game’ scenario which will require far more time to successfully implement.
- Additional costs imposed on new distributed solar generation because of new regulations should be socialised across the SA market, as these benefits are being provided to the SA market as a whole.
- New requirements should not extend to inverters replaced under warranty as this will impose additional costs on customers who may have invested in solar systems many years ago. If the South Australian Government does pursue this reform then additional costs should be socialised across all South Australian electricity consumers.
- Proposed tariffs to incentivise energy use in low demand periods (Paper 5) – whilst we generally support cost reflective tariffs in market offers, we do not support the proposed complex tariff structure being included in retail standing offers. When combined with the requirements of the DMO such an approach will likely lead to confusion amongst customers for little or no benefit.

More detailed comments on the 5 consultation papers are provided below.

If you wish to discuss any aspect of this submission further, please contact Matthew Kaspura at matthew.kaspura@originenergy.com.au or on 02 9503 5178.

Yours sincerely,



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Comments on specific consultation papers

Paper 1 – proposed remote disconnection and reconnection of distributed solar generation

We understand that AEMO and the South Australian Government are concerned about managing minimum low demand periods but we believe that alternatives to curtailing distributed solar generation should be preferred. This could include managing excess renewable energy generation through batteries placed at strategic locations in the distribution network.

Our understanding is that remote control of distributed solar generation is technically feasible but will depend on the type of inverter as well as specific metering and wiring arrangements. If a requirement to curtail distributed solar generation is mandated then we believe customers/installers should be given flexibility as to which technology solution is used. For example, this could involve using remote control through a smart meter, the inverter or another communication device that controls the inverter. We do not believe the Government picking a particular technology is a prudent long-term solution.

We note that the paper describes the role of a potential ‘agent’ who would act on the customers behalf. The retailer is one logical participant who could fulfil this role and Origin has given consideration as to how it could perform this role and has relevant experience through managing a virtual power plant (VPP) trial in Victoria. We would prefer an arrangement where market signals are used to value the remote disconnections and only in extreme situations would the market operator have powers to override this. We seek further details as to how this proposal may operate, including:

- on what criteria any overriding control may be given to the market operator to curtail generation;
- how the market operator would choose which systems to turn off;
- what data reporting obligations would be required; and
- any further ongoing costs associated with being an agent.

We would be pleased to discuss this issue with the South Australian Government in further detail.

The proposed new regulations are intended to cover not only new installations but also the replacement of existing inverters. This will lead to difficult issues when inverters are replaced under warranty as normally there is a like for like replacement. Such a change will most likely raise additional costs for customers, which will likely lead to confusion and resentment from such customers who have bought their solar systems in good faith. We suggest that this reform not be applied to replacement under warranty but only apply to inverters which fail outside their warranty period. If the South Australian Government does choose to pursue this reform then additional costs of under warranty inverter replacement should be socialised across all South Australian electricity consumers as the benefit of improved reliability and security accrues to the market as a whole.

Finally, the implementation date of September 2020 is not reasonable. It will take time to not only decide on and procure the technical solutions that meet the Government’s intended purpose but also to implement the roles of the ‘agent’ and their responsibilities. We suggest at least 6 months will be required, at an absolute minimum.

Paper 2 - proposed dynamic limits on distributed solar generation

We view the proposals in Paper 2 (dynamic controls) as an extension of the proposal in Paper 1 (remote disconnection). Whilst we support the general policy of aiming for dynamic export limits, these are a longer-term reform that will require significantly more time to implement effectively. The proposed commencement in January 2021 is not realistic. Instead, we suggest that the Government focus on other reforms in this package as a priority.

Paper 3 – proposed new low voltage ride-through requirements for smart inverters

Without knowing the proposed new test for voltage ride-through it is difficult to make comment on what inverters may meet this new standard. Our general view is that it would be better to work through the current revision of the relevant Australian Standard (AS/NZS 4777.2), rather than South Australia rushing in a temporary additional requirement. We note that a new consultation version of the revised standard has recently been released.

If South Australia does decide to bring in additional requirements in the interim, then we suggest this must be carefully managed so as not to cause the solar industry to stall. This is especially important in the current economic conditions when job security is a key issue. The solar industry is one part of the economy that has performed well during the COVID-19 pandemic. It would be undesirable for South Australia if state Government regulation put the industry and its jobs on hold.

Further, South Australia is a relatively small market and some manufacturers may not want to make modifications. It is likely only those products that already have the capability to meet the test will be made available.

We suggest that the Government provide a publicly available list of which inverters meet the new test. This list could then be relied on by those businesses which sell and install solar systems. Further, only once a certain proportion of inverters in the South Australian market meets this test would the new requirements formally commence. This would give the industry some degree of confidence to continue to operate and would avoid the Government from setting an arbitrary deadline.

Paper 4 – proposed smart meter minimum technical standards

This paper covers similar issues to Paper 1, above. As stated in our response to Paper 1, we suggest that if the desired outcome is curtailment of solar generation a range of technologies should be allowed to achieve this. Smart meters may be one technology solution but remote control of the inverter may also be feasible.

The Government has indicated that the incremental cost of moving to a two element, two contactor meter is relatively modest. However, there are a range of related metering and wiring issues that may significantly increase this cost – we estimate this could total \$1000 or more depending on changes required.

There could be further additional costs at the switchboard for larger or more complex properties. Complicated legacy switchboard and meter configurations has been a cause of some of the delays in the roll out of smart meters in South Australia.

Finally, premises with three phase power will require a separate solution. We are not aware of a metering solution for three phase power that could meet the requirements set out in this paper.

Paper 5 – proposed tariffs to incentivise energy use in low demand periods

South Australia has proposed a new requirement that retailers pass on to customers on a standing offer with a smart meter either the SA Power Networks (SAPN) time of use tariff or the SAPN residential prosumer demand tariff. In general, we do not support the proposed complex tariff structure being included in retail standing offers. Such an approach will likely lead to confusion amongst customers for

little or no likely benefit. We do support time of use signals but would prefer an incentive based approach and one that allows for more simplified tariff design that is more easily explained to customers.

Origin seeks clarity regarding several implementation aspects of the proposal including:

- compatibility of the proposed time of use intervals with the AER's DMO profile;
- the application of a prosumer demand tariff and how this relates to the DMO;
- how these changes will be communicated to customers; and
- expected outcomes of the tariff changes.

The Competition and Consumer (Industry Code—Electricity Retail) Regulations 2019 (the DMO Code) prescribes a mandatory industry code for supplying electricity to small customers. Specifically, the DMO Code requires that standing offer prices must be set so that for a model annual usage the total amount the customer would pay for supply would not exceed the price determined by the AER.

Under part 3 of the DMO Code, the AER is required to determine 'broadly representative' annual supply amounts for residential and small business customers in each distribution region, from which a DMO price and reference price can be calculated. In response the AER has set a daily usage profile specifying the amount of energy a residential customer would use during each hour of the day over a 24-hour period, for each distribution region. The AER has determined the profiles by converting the DMO 1 annual usage allocations into daily and hourly blocks.

The Proposed Tariff Paper states that retailers will be required to pass on either the time of use tariff structure of the SAPN residential time of use tariff or the demand structure of the SAPN residential prosumer tariff. We do not believe that the SAPN time of use charging rates (i.e. 125% at peak; 50% at off-peak, and 25% at solar sponge) are compatible with the AER usage intervals. What this means is that retailers will not be able to set tariffs using SAPN's percentages that equate to the DMO. Instead, we propose that SAPN's percentages are used as indicative parameter values and that retailers have discretion to apply their own percentages to enable them to send both a price signal that meets the policy intent and fulfils their DMO price obligations. This flexibility needs to be made clear in the regulatory instrument that gives effect to this change.

Relevantly, under the DMO Code a consumer is not a small customer of any type if the prices for the supply include a demand tariff. On that basis, it is not clear how the prosumer tariff and the DMO co-exist as standing offers.

Consumers have a clear preference for simplicity and predictability with respect to electricity pricing; the more complex the signal the increased likelihood it will not achieve a customer response. Therefore, any move to more cost reflective tariffs must avoid unnecessary complexity to ensure they are embraced by customers and deliver their intended outcomes. We believe that a necessary action to underpin this tariff change in South Australia is for a Government led communications campaign. The benefit of a Government led campaign is that customers are more likely to listen and believe what the Government is saying around these changes.

Key to any campaign is to explain how and why a change in behaviour is needed, the impacts on customers (there will be winners and losers), the actions a customer needs to undertake to avoid being worse off, and why a customer will no longer be able to access a flat DMO - that is if they do not like the new TOU tariff they will need to obtain a market offer.

We believe it would be beneficial if there was a clear understanding of the expected benefits of this policy. This could be achieved by identifying how customers have been put onto the new tariff and what movement in demand was achieved. This will allow stakeholders a clear understanding of the effectiveness of the tariffs in terms of customer behavioural responses to price as well as an understating of the cost benefit trade-off of the policy.

Finally, for retailers that do not already offer time of use tariffs in South Australia, billing system changes will be necessary. This will take retailers time and will be at an additional cost. To assist retailers to make these changes in the most efficient manner possible we request that the Government provide a reasonable implementation period between when the final decision is made and the commencement date; especially if tariff structures are being prescribed.