

To: ETRConsultations@sa.gov.au

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Consultation on the proposed smart meter minimum technical standards in South Australia

Solar Analytics welcome the opportunity to provide input to Department of Mining and Energy on the above consultation paper.

Solar Analytics (SolA) is an Australian company founded by solar industry veterans, scientists, developers and passionate photovoltaic (PV) experts. We design, develop and supply intelligent rooftop solar and energy management solutions for residential households and commercial businesses. With 35 staff and 40,000 customers across Australia, we are the leading independent provider of rooftop solar management in Australia. With the largest fleet of real time solar + energy consumption in Australia, we provide energy data to seven DNSPs, AEMO, ESB and other energy regulators.

SolA support the intent of the proposal to provide emergency resources to AEMO and SAPN to manage the electricity network in the event of a system emergency. We also strongly support the intent of AEMO and SAPN to transition to a high Distributed Energy Resources (DER) penetration two-way energy system.

However, the proposed PV disconnection methodology in the consultation paper has several serious drawbacks that destroy value for energy consumers. We believe there are more effective and lower cost solutions that will deliver both the needed network security and provide additional customer value.

The key drawbacks with this proposal is that it locks in a fixed technical solution that is an ongoing cost burden and is inflexible. Specifically:

- **Costly** for all energy consumers
- **Does not work** for hybrid systems where PV supplies storage directly which then supplies load circuits
- Only a **temporary solution** as it is redundant in the future dynamic two-way market
- **Locks out participants** other than the three main Metering Co-ordinators
- **Provides no value** to energy consumers

We propose two changes to provide a significantly better outcome for AEMO/SAPN and all electricity consumers:

1. Allow **market led solutions** from any technology provider that meet the technical requirements.
2. Require the solar and energy **data to be made available to the DER Owner** and to comply with the industry endorsed <https://www.dermonitoring.guide/>.

Market Led Solution

For new solar systems it has been proposed by AEMO to mandate the installation of a twin element smart meter to separately monitor and control the PV and load². If the proposed twin element smart meter is mandated this would:

- Add ~\$25 every year for the smart meter provision costs. This is a substantial increase of 20% pa on the metering cost. For a single element site this consists of ~\$30 for the hardware (\$100 for 3 phase), labour to install the additional relay and controls, increased data requirements, and ongoing maintenance, hence \$15-\$60 per annum depending on the meter type required.

- Be redundant in a few years when the SAPN dynamic or flexible export control mechanisms are implemented via third party solutions. Nevertheless, the customer will continue paying the \$25pa for decades despite it no longer being required
- Smear this cost across all energy consumers (as is currently done by energy retailers whenever a smart meter is installed)
- Lock out other potentially lower cost solutions from other technology vendors

Due to the rapid pace of change it is imperative that we do not bake in unnecessary costs into our energy system that will increase energy bills for all energy consumers.

The fastest, lowest cost and most flexible way to achieve the desired outcome is allow any accredited technology provider to meet the technical requirements. These technical requirements should be the absolute minimum required as an emergency if the hot water demand is insufficient to maintain system security to minimise the costs imposed.

These requirements for new or altered DER would be anticipated to include:

- Response times
- Response mode, presumably disconnection of solar but could be ramped or localised
- Reliable delivery of outcome across the fleet (accounts for communications uptime, actual response), ie not on a per site but on a whole fleet performance basis
- System restart requirements on a whole fleet performance basis
- Communications specifications – presumably API
- Accreditation process – needs to be as low a hurdle as possible

While there are challenges in managing multiple providers, this approach offers many advantages:

- Market driven encouraging that the most cost effective and value generating solutions are implemented
- Can be readily adapted as new technologies and solutions emerge
- No on-going cost for redundant equipment, eg when a battery is installed
- Able to be applied nationally (twin element meter would not work in Vic)
- No requirement to replace the existing smart meter for post Jan 2017 sites that upgrade
- Deliver the optimal solution for each of the many different site configurations
- Allows for solutions that provide additional value to consumers and other parties
- Solutions could include smart meter disconnect, DRM, existing controls, inverter direct, third party

Technology providers could include smart meters from the Metering Co-ordinator, PV inverters, or third party control hardware providers.

DER Visibility and Monitoring Best Practice Guide

As both AEMO and SAPN have stated, visibility of the DER is important. Over the past 12 months an industry lead best practise guide for providing visibility and monitoring of DER has been developed by industry. This guide has now been published and is supported by all of the key industry bodies – refer to

<https://www.dermonitoring.guide/>.

It is highly recommended that whichever solution is finally implemented that the requirements of this guide are adopted. The benefits of doing this are:

- Provides enhanced visibility to SAPN, AEMO and other industry bodies to ensure network security
- Harmonised data set available to energy market planners and regulators to manage the transition to a two way energy market
- Facilitates the effective transition to the SAPN proposed dynamic export market
- Provides significant value to consumers through the provision of real time granular data and insights

The most important aspect is that **consumers can easily authorise access to their energy data for 3rd parties**, ie not just their energy retailer. This will produce a range of new customer solutions and value from a variety technology providers.

Summary

In summary, while we wholeheartedly support AEMO and SAPN's leadership in the adoption of increased DER, we firmly believe that there are more effective and lower costs avenues to achieve the stated goals.

Power of Choice is all about choice for the consumer. Allowing the consumer to choose the best solution that meets their individual needs.

Regards



Stefan Jarnason
CEO