

9 October 2020

Submission by email to DEM.REES@sa.gov.au

Subject: Consultation paper on proposed retailer energy productivity scheme (REPS) activities, credits and targets

SA Power Networks welcomes the opportunity to provide feedback in response to the above consultation paper regarding the proposed REPS scheme.

SA Power Networks supports the expansion of the existing REES scheme with new activities that encourage the adoption of smart appliances, the shifting of large, flexible loads like water heating to off-peak periods, and the enrolment of customer resources into aggregation schemes such as Virtual Power Plants. The capability to shift discretionary loads will give customers more opportunity to take advantage of new time-of-use pricing based on SA Power Networks' 'solar sponge' tariffs, enabling them to save money by moving loads into times of peak solar production and minimum demand. This increased demand-side flexibility will benefit customers, the network and the overall energy system as we continue with South Australia's world-leading transition to distributed renewable energy.

We offer the following brief feedback on those elements in the proposed new REPS scheme that are of particular relevance to us as a distribution network:

- **WH1 (page 39) – Replace or Upgrade Water Heater.** We understand that a 'solar electric' hot water system in this case would refer to one in which the water is heated primarily by direct sunlight using a dedicated rooftop solar collector, with electricity only used for boosting. We recommend that the eligibility criteria for this activity should also include replacement or upgrade with a 'smart' element hot water system that is combined with rooftop solar PV and designed to maximise the use of excess solar electricity for water heating. As DEM is aware, the SA Government and ARENA are currently funding a trial in South Australia of this technology, which SA Power Networks is also supporting. We consider that this kind of system presents a valid and cost-effective option for customers to achieve low-carbon water heating, especially for customers with limited roof space who have installed, or want to install, solar PV and do not have room to install a separate solar collector for hot water.
- **WH3 (page 77) – Switching Electric (Heat Pump or Resistance) Storage Hot Water Heater to Off-Peak Controlled Load (OPCL) Tariff (Solar Sponge).** We support this addition. We note that OPCL is only one means to ensure hot water is operated in off-peak times; even for a non-OPCL customer, new ToU 'solar sponge' tariffs mean that any kind of solution that makes a non-controlled water system controllable would be beneficial and result in shifting to the daytime solar period. The activation of a non-OPCL hot water system with controls that enable it to respond to a regular ToU tariff could be included in this activity, if it is not covered by WH1.

- **WH4 (page 92) – Connecting a New or Existing Electric Heat Pump Water Heater to an Approved DR Aggregator.** We support this addition, but consider that the eligibility criteria are too restrictive. We think the benefit of this measure will be increased significantly if:
 - The activity is not restricted to just heat pump systems. There is a material opportunity to activate element hot water systems with smart controls that enable them to be enrolled in aggregation schemes and operated in ways that benefit the system and reduce costs, by shifting to times of minimum demand due to high solar output, when wholesale prices are low or negative, or even providing services like FCAS. The abovementioned smart hot water trial that the government is funding is testing these kinds of products in SA, including a retro-fit option for existing systems. We think adding smart controls to existing systems could have material benefits if there were widespread uptake.
 - The activity is not restricted to the use of the AS4755 interface for control. Current-generation products support more sophisticated controls and protocols that can deliver the same or better outcomes (including two-way communications), and these should not be excluded, as this will restrict customer choice, and potentially skew the market against more sophisticated products that may be more suited to active participation in the future energy market.

We would also suggest that the government consider extending the scope of this activity to the aggregation of other loads such as pool pumps, air-conditioners or EV charging stations.

In summary, we strongly support measures to encourage loads such as hot water to be activated with smart controls so that they can be shifted to off-peak times and aggregated into VPP schemes, and we recommend that the government review the scope of WH1, WH3 and WH4 as above to make sure these do not inadvertently exclude valid technologies and products, in particular the kinds of advanced smart hot water systems currently being trialled in SA with SA Government and ARENA support.

If the SA Government would like to discuss any aspect of our response, please contact Bryn Williams, Future Network Strategy Manager at bryn.williams@sapowernetworks.com.au or on 0416 152 553.



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