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Australian Renewable
Energy Agency

ARENA

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ARENA submission to AER's call for submissions on SA Power Networks ring-fencing waiver application

The Australian Renewable Energy Agency (ARENA) writes to provide support for a waiver to section 4.2 of the Ring-fencing guideline for SA Power Networks to undertake its Market Active Solar trial from 1 July 2024 to 31 December 2025.

ARENA supports innovation to overcome the challenges of integrating renewables

ARENA recognises the challenges distribution network service providers (DNSPs) face in integrating very high levels of rooftop PV within the physical limits of their network. One of these challenges is managing the occasional excess of generated solar energy at times of minimum system load in high-solar jurisdictions, including South Australia.

ARENA has a positive history of supporting DNSPs in addressing this issue by funding innovative trials and working groups established under the Distributed Energy Integration Program (DEIP), including:

- Supporting innovative trials and working groups exploring how dynamic operating envelopes (DOEs) / flexible export limits can act as a long-term means to manage energy inflows into the local distribution network within its technical limits.
- Funding a series of trials exploring advanced voltage management and efficient use of network hosting capacity.
- Investigating new tariffs and other incentives that encourage load shifting for flexible loads like hot water and electric vehicle (EV) charging.

It is now widely recognised that DNSPs will need to move from restrictive static export limits to DOEs to manage these network limits while enabling customers to get the most out of their investment in customer energy resources (CER). ARENA recognises that there has been

significant progress in establishing DOE offers by distribution network businesses across Australia and supports the development of these offers in conjunction with other emerging market-price responsive solar management schemes, such as those offered by energy retailers.

ARENA support for the SA Power Networks Market Active Solar trial

There is a question as to whether new retailer solar management schemes are compatible with DNSPs' DOE connection rules and, if so, how the two interact. Integrating these approaches effectively will be key to maximising future customer benefits from rooftop solar. In combination, they create the opportunity for retailers to activate rooftop solar to respond to wholesale pricing to address periods of energy oversupply in the broader market, while still enabling DNSPs to efficiently manage local network constraints.

ARENA is providing \$1.02 million in funding to SA Power Networks, alongside partner retailers AGL and Simply Energy, to undertake the Market Active Solar (MAS) Trial¹ to demonstrate two models (Models 2 and 3 illustrated below²) for how DOEs can act in conjunction with retailer-initiated schemes that actively manage the output of a customer's solar inverter in response to market price signals.

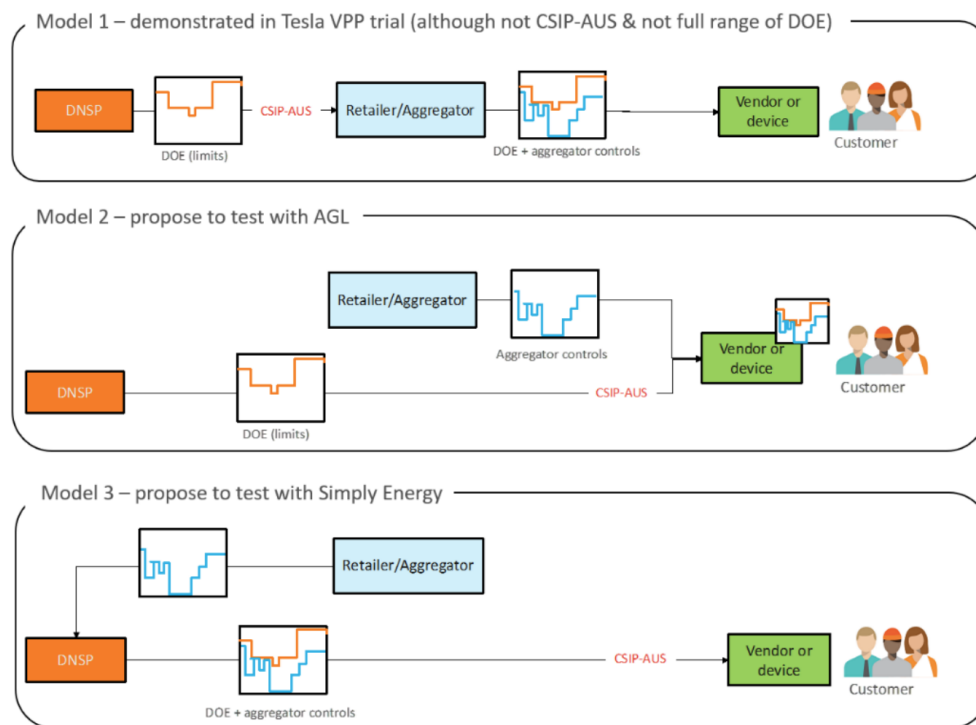


Figure 1: Integration Models 1 – 3 that test the compatibility of retailer solar management schemes with DNSPs' DOE connection rules. Note that only Models 2 and 3 will be demonstrated in the ARENA-supported MAS Trial, as Model 1 was demonstrated in the previous ARENA-supported Advanced VPP Grid Integration Trial³.

¹ [SA Power Networks Market Active Solar Trial - ARENA](#)

² [SA Power Networks' Ring-fencing Waiver Application](#)

³ [Advanced VPP Grid Integration Trial - ARENA](#)

By testing Models 2 and 3 in the MAS Trial, SA Power Networks seeks to demonstrate the following outcomes:

1. The delivery of increased value from renewable energy by understanding the customer experience of participation in retailer and DNSP solar management schemes.
2. Comparison and interaction of two technical integration approaches for combining retailer solar management with DNSP flexible connection.
3. Improved understanding of customers' economic outcomes through participation in retailer and DNSP solar management programs.
4. Improved understanding of the correlation between drivers for retailer curtailment and local network constraints represented in the DNSP DOE.
5. Recommendations for how the approaches developed in this trial can be extended to more complex distributed energy resources management, including solar, batteries, electric vehicle chargers and virtual power plants (VPPs).
6. Recommendations for any future developments in Common Smart Inverter Profile – Australia (CSIP-AUS) technical standard to support these use-cases.

If successful, the approaches demonstrated in the MAS Trial could be adopted across the NEM. This would give customers access to a range of retail offers that help them achieve the most value from their own CER while keeping within the safe limits of the network.

ARENA supports a waiver for SA Power Networks' Market Active Solar trial

ARENA supports SA Power Networks' ring-fencing waiver application for the MAS Trial, and for the waiver to apply from 1 July 2024 to 31 December 2025 to allow adequate time to test Model 3 and achieve the trial outcomes.

Compliance with the AER's Ring-fencing Guideline

The National Electricity Rules (NER) define 'distribution services' as "*services provided by means of, or in connection with, a distribution system*"⁴. The Australian Energy Regulator (AER) Electricity Distribution Ring-fencing Guideline Explanatory Statement (2016) further defines 'unregulated distribution services' as those the AER "*has not classified as direct control nor negotiated services*"⁵.

As illustrated below, and in accordance with the NER and AER's Explanatory Statement, Model 3 of the MAS Trial can be considered an unregulated distributed service as Simply Energy's control signal is sent to SA Power Networks, blended with the DNSP DOE signal and published to the customers' inverters using SA Power Networks' existing infrastructure (i.e. CSIP-Aus interface).

⁴ [NER Part 6. Part B: Classification of Distribution Services and Distribution Determinations - AEMC Energy Rules](#)

⁵ [AER Ring-fencing Guideline - Explanatory statement - 30 November 2016.pdf](#)

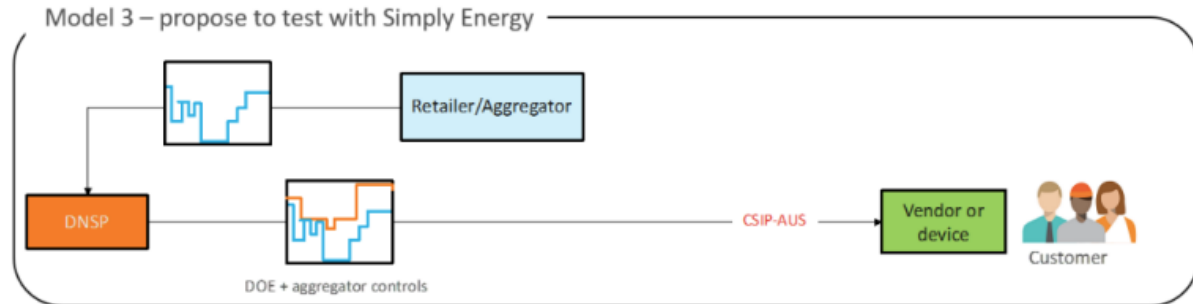


Figure 2: Model 3 blends Simply Energy’s control signal with SA Power Networks’ DOE signal and communicated to the customers’ site via SA Power Networks’ existing infrastructure.

Clause 3.1(b) of the AER Ring-fencing Guideline prohibits a DNSP from providing services other than distribution and transmission services⁶. This includes unregulated distribution services such as those proposed in Model 3 of the MAS Trial. Note that Models 1 and 2 are considered direct control services and therefore permitted under the AER Ring-fencing Guideline.

Necessity of the ring-fencing waiver for the MAS Trial

ARENA acknowledges the important role of ring-fencing in separating the regulated and contestable services provided by DNSPs. It is a fundamental mechanism that promotes market competition in the provision of energy services to customers⁷. ARENA supports the opportunity for third-party providers to enter new and existing markets for contestable services and thereby lower costs for customers.

However, the success for the MAS Trial is contingent on the ability of SA Power Networks to demonstrate Model 3 and ARENA believes the success of the MAS Trial will contribute to addressing market inefficiencies, reducing costs to customers, and supporting rooftop solar to be responsive to both price and network limits and thereby facilitate continued growth in the solar market.

ARENA accepts SA Power Networks’ application that the waiver will only apply for the period of the MAS Trial, services limited to 50 installations across one retailer (Simply Energy), and that all other obligations of the AER Ring-fencing Guideline outside of the waiver will be complied with. ARENA agrees with SA Power Networks’ application that the benefits of the MAS Trial and demonstrating Model 3 outweigh any potential risks.

Summary statement

ARENA supports SA Power Network’s application for the waiver from 1 July 2024 to 31 December 2025 to demonstrate the integration Model 3 of the MAS Trial.

⁶ [AER - Ring-fencing Guideline Version 3 - \(electricity distribution\) - 3 November 2021.pdf](#)

⁷ *Ibid.*

About ARENA

The Australian Renewable Energy Agency (ARENA) was established in 2012 by the Australian Government. ARENA's function and objectives are set out in the *Australian Renewable Energy Agency Act 2011*.

ARENA provides financial assistance to support innovation and the commercialisation of renewable energy and enabling technologies by helping to overcome technical and commercial barriers. A key part of ARENA's role is to collect, store and disseminate knowledge gained from the projects and activities it supports for use by the wider industry and Australia's energy market institutions.

Please contact Caitlin Sears, Senior Policy Advisor, at caitlin.sears@arena.gov.au if you would like to discuss any aspect of ARENA's submission.

Yours sincerely,



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