Rheem Australia Pty Ltd ABN 21 098 823 511

18 January 2024

Mr Mark Feather
General Manager, Strategic Energy Policy and Energy System Innovation
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

By email: AERinquiry@aer.gov.au

Re: Rheem CET submission on the AER's draft interim export limit guidance note

Thank you for the opportunity to provide feedback to the AER's draft interim export limit guidance note.

This is a joint response on behalf of both Rheem Australia Pty Ltd (Rheem) and Combined Energy Technologies Pty Ltd (CET). As founding members of the ARENA ANU working group developing the CSIP-AUS Implementation Guide, we have extensive experience in this area, and a complementary interest in the Consultation Paper due to the significant number of Inverter Energy System (IES) installations we carry out every year nationally.

As the largest Australian manufacturer of water heaters with products in over 4 million Australian homes, Rheem offers a wide range of traditional and renewable energy water heater models to the domestic water heating market under the Rheem, Solahart, Vulcan, Aquamax & Everhot brands. Under our Solahart brand, we are the third largest supplier of photovoltaic (PV) systems in the country. Over the last five years we have also commenced the manufacture and installation of smart electric water heaters, controlled remotely by our technology partner, Combined Energy Technologies.

Combined Energy Technologies is an Australian technology company specialising in energy management for residential, commercial, and micro grid systems. CET provides site energy management systems and has extensive experience in the integration and orchestration of systems with multiple Distributed Energy Resources (DER) including the integration of solar PV, batteries, water heating, electric vehicle chargers, pool pumps and A/C for the benefit of the homeowner, retailer and the grid. Our references to DER should be read to include both generation and flexible load assets.

Behind The Meter (BTM) orchestration of DER relies on local site level coordination of DER assets. This coordination requires DER to have local standards-based communications ports, along with open control protocols such as SunSpec Modbus. The empirical evidence from our deployed base of over 4,500 mixed, orchestrated DER sites across the NEM and the WEM, also confirmed in our role as an aggregator in the AEMO Victorian based project EDGE, working with Ausnet Services, highlights the importance of DER interoperability for delivery of wholesale market services and grid services such as flexible/Dynamic Export Limits (DELs) and Dynamic Operating Envelopes (DOEs).

Our response:

1. We support AER's initiative in developing this draft dynamic export limit guidance. We support the implementation of dynamic export limits because they will play a crucial role in facilitating the integration of distributed (consumer) energy resources. This will increase the renewables hosting capacity, delivering superior outcomes for the customers while ensuring that the electricity network remains secure, flexible and resilient.
2. We continue to advocate for real-time smart meter data access in order fully unlock the potential of smart technologies like our water heaters. Real time access to the smart meter data would be extremely beneficial for homes to optimise PV self-consumption and reduce the requirement for complimentary data acquisition devices. This would reduce the capital cost and time of installation of our smart water heaters that can adjust loads in real time, maintaining compliance with all export limits without curtailing renewable energy generation.
3. The guidance note currently lacks clarity on the interaction between dynamic export limits and Frequency Control Ancillary Services (FCAS). Whilst it is unlikely that a FCAS raise event would occur when a dynamic export limit has been imposed, it is plausible that the speed of response demanded by the FCAS event, and the dynamic export limitation may inadvertently limit the potential FCAS response. Guidance is required on the role of dynamic export limits in such network events to ensure that grid stability is prioritised. A practical approach would be to pause all dynamic export limitations during an FCAS raise event, until network frequency is restored.
4. We would advocate for recognition of the emerging benefits of Peer to Peer (P2P) energy trading that has shown to increase renewable hosting capacity. Our smart water heaters can provide the dynamic load control that consumes the exported renewable energy. We would advocate that dynamic export limitations be removed where the exported energy is allocated for consumption within the low voltage network.

Thank you for considering our submission.

Yours Sincerely

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Scott Ostini
General Manager Energy Solutions & Transformation
Rheem Australia Pty Ltd

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