



ERM Power Limited
Level 3, 90 Collins Street
Melbourne VIC 3000
ABN 28 122 259 223

+61 3 9214 9333
ermpower.com.au

Friday, 25 September 2020

Australian Energy Market Operator
Level 22
530 Collins Street
Melbourne VIC 3000

Lodged via: DERProgram@aemo.com.au

RE: Distributed Energy Resources – Initial Standard

ERM Power Retail Pty Ltd (ERM Power) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) consultation on initial minimum standards for distributed energy resources (DER).

About ERM Power

ERM Power (ERM) is a subsidiary of Shell Energy Australia Pty Ltd (Shell Energy). ERM is one of Australia's leading commercial and industrial electricity retailers, providing large businesses with end to end energy management, from electricity retailing to integrated solutions that improve energy productivity. Market-leading customer satisfaction has fuelled ERM Power's growth, and today the Company is the second largest electricity provider to commercial businesses and industrials in Australia by load¹. ERM also operates 662 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland, supporting the industry's transition to renewables.

<http://www.ermpower.com.au>

<https://www.shell.com.au/business-customers/shell-energy-australia.html>

General comments

ERM supports the development and implementation of minimum standards for DER to ensure a well-functioning energy system. However, we are keen to avoid heavy-handed requirements that will add unnecessary cost and complexity to projects, thereby inhibiting the uptake of DER among commercial energy users, to the detriment of energy productivity, decarbonisation, and the cost-effective management of local network areas. While we agree that technical standards for DER have the scope to produce a smoother supply-demand balance across the NEM, which could ultimately lower energy costs for consumers, these standards should be adopted via a proportionate approach, and should be measured by reference to the capability and information required to effectively operate the network.

Setting minimum technical standards is not a costless exercise; there may be costs associated with upgrading technology on physical assets, improving infrastructure necessary to implement the standard, and compliance and monitoring costs. AEMO and industry participants will also incur some costs in creating the initial DER minimum standard as well as in maintaining and amending those standards into the future.

In terms of benefits, visibility and control of DER has scope to address some of the challenges emerging within the operation of distribution networks. However, it is important to acknowledge that daytime duck-curve generation profiles are not exclusively caused by DER; utility scale solar plays a significant role in this generation profile. Equally, challenges associated with network operation are in many cases attributable to high voltages overnight

¹ Based on ERM Power analysis of latest published information.



that are entirely independent of DERs that result from setting network voltage to levels capable of meeting evening load peaks.

In this context, we urge restraint in the imposition of overreaching DER technical standards that may inhibit DER uptake, to the detriment of network efficiency and decarbonisation, while failing to address the ongoing challenges of utility scale solar and evening load peaks. Optimum distribution network operation is a worthy goal, but it will not be achieved through technical standards that only impact DER.

Value of interoperability

AEMO considers that, through DNSP's active management capabilities can enable AEMO to manage the merging power system complexity and challenges presented by high DER in certain extreme conditions, and that these functions are necessary to securely manage the supply-demand balance and prevent widespread and prolonged supply disruption under such circumstances. AEMO has noted that active management of DER can bring significant opportunities for a range of market participants including, but not limited to, AEMO, network service providers (NSPs), retailers, aggregators, and end-use customers, as well as improved power system and market outcomes.

We agree that information yielded through DER interoperability may improve network operation and offer broad stakeholder benefits. However, noting in the interests of end-use customers and efficiency of the system via market mechanisms, we caution against the imposition of unduly onerous requirements that may undermine DER uptake and therefore the scope for DER to benefit end-use customers and the system. We consider that the interests of end-use customers should be central to considerations around initial minimum standards, and an approach that is likely to significantly limit customers' options in relation to adopting DER should be avoided.

Scope of reform options

AEMO has made the following recommendations in response to the initial brief of the COAG Energy Council and Energy Security Board (ESB):

1. Incorporate the inverter undervoltage disturbance ride-through conformance test procedure developed for South Australia into the initial DER Standards as soon as practical.
2. Consider setting AS/NZS 4777.2 in its entirety as an initial DER Standard.
3. Develop a coordinated industry consultation / implementation plan regarding DER data, communications and interoperability requirements and standards as soon as practicable.
4. Do not incorporate DER data, communications and interoperability provisions into the initial DER Standard at this point in time as they are not sufficiently well prepared.

We agree with the first and second of AEMO's recommendations in relation to the inverter undervoltage disturbance ride-through conformance test procedure and AS/NZS 4777.2 and consider that these recommendations are appropriate and ought to be prioritised.²

We do not consider that embarking upon a protracted planning process regarding the Initial DER Standard would be productive at this stage, and we are concerned that AEMO may not have adequately considered potential future load growth, as well as options to incentivise load at times of high generation and low demand through negative demand response markets (which may be characterised negative DR or virtual demand) to support the network and supply-demand balance across the system.

ERM is actively working with commercial and industrial energy users on efficient solutions to both reduce load at times of high demand and increase load at times of low demand. We consider these sorts of solutions offer significant scope for energy users to optimise energy management to reduce energy costs and achieve

² It should be noted that inverter ride-through mechanisms are only needed when a node is islanded.



sustainability goals, and in doing so, achieve more efficient and cost-effective solutions for an energy system that will otherwise face significant challenges associated with negative prices and generation curtailment.

In our view curtailment of generation should be a last resort option for the system operator because such physical solutions are less efficient and cost effective for the system, as compared to market solutions that can be readily available via the flexible load of commercial customers. AEMO has an opportunity to incentivise these relatively efficient solutions by developing appropriate market mechanisms for negative DR, which could be provided by increased load, battery storage, or curtailed solar, as well as encouraging DER to provide network support services.³ We would be keen to work with AEMO to develop and participate in trials for such market mechanisms.

If you would like to discuss this submission further, please contact me on 03 9214 9324 or LHawker@ermpower.com.au.

Yours sincerely,

[signed]

Libby Hawker
Senior Manager – Regulatory Affairs
03 9214 9324 - LHawker@ermpower.com.au

³ This could be achieved by changing the MASS requirement for DER to provide fast contingency FCAS to 60 second polling rather than 50 milliseconds, as the current requirement adds significant cost such that DER participation is not viable.