Ashwin Raj

Australian Energy Market Commission

Submission made online at www.aemc.gov.au

7 November 2024

Dear Mr Raj,

Subject: ERC0396 Draft Determination - Improving consideration of demand-side factors in the Integrated System Plan (Electricity) Rule

SA Power Networks welcomes the opportunity to provide feedback on the AEMC's Draft Determination on the *Improving consideration of demand-side factors in the Integrated System Plan (Electricity)* rule change (the Rule Change).

We support the more preferable Rule as outlined in the Draft Determination and consider that it represents material progress towards a 'whole-of-system' view within the Integrated System Plan (ISP). However, we strongly believe that further reform to the ISP is still required to deliver a truly optimal outcome for customers throughout the energy transition.

Our key points of feedback are set out below and detailed throughout the submission:

1. We support the requirement for AEMO to develop information guidelines, recognising the flexibility this provides when considering the evolving modelling capabilities of both DNSPs and AEMO.

2. We support the expanded set of demand-side factors required for AEMO to consider and include in the demand-side factors statement, noting the inclusion of energy efficiency, demand-flexibility and electrification. In doing so, we recommend that AEMO engage with DNSPs, retailers and energy service providers to best understand current and future demand-flexibility programs, ensuring that any assumptions drawn by AEMO are consistent with those made by DNSPs in developing their own constraint forecasts for provision to AEMO.

3. We support the decision to require AEMO to include assumed distribution network capacity investments within the demand-side factors statement, where those investments are deemed to be more efficient than a transmission alternative. However, we view this as only a partial step to proper consideration of CER and the distribution network within the ISP. We strongly recommend that further reforms are undertaken to expand the scope of the Optimal Development Path (ODP) with the aim of realising full co-optimisation of:

    a. distributed generation with centralised generation; and
    b. the associated distribution or transmission network capacity to host that generation.

4. We recommend that the AEMC engage with the AER to proactively consider the regulatory expenditure framework's treatment of potential distribution network capacity investments that are assumed to have been made as part of the ODP. We consider that the

implementation of the Rule Change may require updates to several AER guidelines, particularly:

a. the DER Integration Guideline; and
b. the Customer Export Curtailment Value (CECV) Methodology.

5. We recognise that there is an increasing need for connections proponents to have visibility over distribution network capacity, allowing for a more efficient connections process. However, the requirement for DNSPs to publish network constraint data in the Distribution Annual Planning Report (DAPR), which would be aggregated to the transmission node identifier (TNI) will increase the reporting overheads on DNSPs whilst not providing meaningful insights to any party but AEMO. We recommend that the requirement for DNSPs to publish this data in the DAPR be removed, and separate reforms pursued with a focus on establishing an appropriate and consistent level of public visibility into distribution network capacity.

We look forward to continuing to engage constructively with the AEMC, AEMO and other stakeholders to support enablement of the lowest cost whole-of-system approach to enabling the energy transition. Should you have questions on any aspect of our submission, please contact Liam Mallamo, Future Networks Engineer, at liam.mallamo@sapowernetworks.com.au.

Jessica Morris

Chief Customer & Strategy Officer

Treatment of distribution network capacity investments within the ISP

The Draft Determination requires that AEMO *"identify the ISP development opportunities relating to distributed assets that AEMO has assumed will occur for the purposes of the ISP,"* and include these assumptions within the demand-side factors statement. We view this as an appropriate compromise in striving for more fulsome consideration of the distribution network within the ISP, given the timing constraints of the Rule Change.

We strongly believe that providing equal consideration to distributed generation and distribution network capacity along with utility-scale generation and transmission network capacity within the ISP is in the long-term interest of customers. This should be achieved by way of including actionable investments in distribution network capacity at the TNI within the ODP, and DNSPs then determining how to optimise those investments across lower levels of their network.

Achieving this co-optimisation could realise up to $7B of annual customer benefits by 2030, as outlined in *The time is now: Getting smarter with the grid* report published by Energy Networks Australia and LEK Consulting.[1] We recognise that doing so, however, would require additional reforms over a longer period than the Rule Change allows for, and hence support the assumption-based approach as a step towards this future.

We encourage the AEMC to explore further reforms in this area as part of their consideration of distribution network roles and responsibilities and the interface between DNSPs and AEMOs respective planning roles via the parallel *Electricity pricing for a consumer driven future* market review.

Regulatory treatment of AEMO's assumed distribution network capacity investments

To deliver the ODP, DNSPs must action the assumptions regarding investments in distribution network capacity as outlined by AEMO in the demand-side factors statement. Doing so, however, will require regulated funding approved by the AER. Confidence in the deliverability of the ODP in turn requires confidence in a DNSPs ability to receive funding for AEMO's assumed distribution network capacity investments. We strongly recommend that the AEMC engage with the AER to consider the treatment of these investment assumptions within the regulatory expenditure framework.

We consider that the implementation of the Rule Change may require updates to several AER guidelines, particularly:

a. the DER integration expenditure guidance note[2]; and
b. the Customer Export Curtailment Value (CECV) Methodology[3].

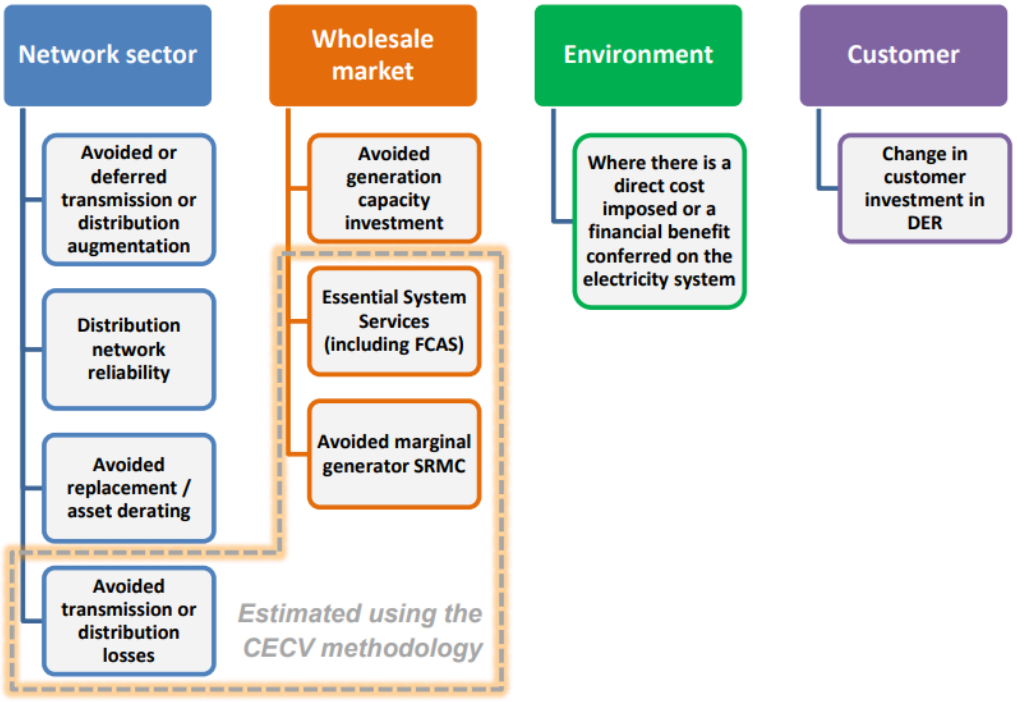
Existing DNSP proposals to resolve distribution network constraints and unlock more exports from CER are based on the CECV, the current version of which primarily considers the value of avoided short-run marginal costs to the system. The CECV framework, however, recognises *avoided or*

[1] https://www.energynetworks.com.au/assets/uploads/The-Time-is-Now-Report-ENA-LEK-August-2024.pdf

[2] https://www.aer.gov.au/industry/registers/resources/reviews/distributed-energy-resources-integration-expenditure-guidance-note

[3] https://www.aer.gov.au/industry/registers/resources/guidelines/customer-export-curtailment-value-methodology

deferred transmission or distribution augmentation as an additional value stream for DNSPs to consider. Currently, there is no way for a DNSP to model how their investments could theoretically avoid the need for transmission network augmentation, nor to have any certainty that those augmentation costs would actually be avoided in practice.



Source: Figure 2.3 of the AER's Customer Export Curtailment Methodology [3]

We thus recommend that AEMO and the AER give consideration to quantifying avoided transmission costs based on AEMO's assumed distribution investments in the ODP, resulting in a unique value per TNI provided by AEMO for inclusion in the CECV. This would provide DNSPs with a value stream to include in their funding proposals to the AER, ensuring that such proposals can be made based on the full-suite of benefits unlocked by that investment and providing the AER with confidence that the investment is economic on a whole-of-system basis.

Publishing distribution network constraints in the DAPR

Suitability of TNI constraint data for connections

Increasing volumes of CER and other distribution connected resources are being connected to the distribution network, many of which are connected under the negotiated connections framework and requiring an engineering assessment from a DNSPs. This is largely a manual process today, with connections proponents having limited visibility over suitable connection locations.

We recognise the increasing need for these parties to have greater visibility over the capacity of the distribution network prior to formally entering a DNSPs connections process. However, we do not feel that the publishing of distribution network constraints in the DAPR, aggregated to the TNI, will provide any material progress in addressing this need, instead purely driving additional reporting overheads for DNSPs.

Connections to the distribution network typically fall into one of three categories:

1. Connecting to an existing shared low-voltage network;
2. Connecting to the medium-voltage network via a new low-voltage transformer;
3. Connecting to the high-voltage sub-transmission network via a new medium-voltage substation and/or feeder.

Visibility of network constraints at the TNI level will only be of use to the small number of proponents seeking a major connection under category 3, providing them with a high-level indication of the suitability of a given TNI to host their connection. However, the connection process at this level typically extends over more than 12 months and is reliant on several advanced engineering studies beyond just total network capacity. The annual nature of the DAPR, coupled with the rapid growth of CER and hence change in constraint below a given TNI, means that published constraint data is likely to quickly come unreliable for connections purposes.

Connections seeking to connect under categories 1 or 2 will have little to no use for constraint data aggregated to the TNI, as they will be seeking to connect to distribution network assets below this level, across which available capacity may vary significantly.

Alternative arrangements for public visibility of network capacity

We fully support increasing public visibility of distribution network capacity, recognising that it will significantly improve the connections experience for all proponents and allow for faster, cheaper connections to the distribution network. This will become increasingly important in a potential co-optimised future, where some volume of generation that would traditionally be transmission connected could be more economically hosted on the distribution network, leading to an increase in distribution connections and hence a need to ensure the connections process is as efficient as possible.

However, achieving this visibility should not be done via a piecemeal approach, but rather through a consistent, nationally aligned process. We recommend that the requirement for DNSPs to publish constraint data shared with AEMO in the DAPR be removed, and that the AEMC instead seeks to accelerate the delivery of programs under Priority P.2 of the National CER Roadmap, *Faster, harmonised CER connection processes, including EV chargers*[4], and that existing work in this space is leveraged wherever possible, including:

- The Department of Climate Change, Energy, the Environment and Water's *Streamlining network connection processes for CER and electric vehicle supply equipment* Options Paper[5];
- Energy Networks Australia's *Harmonising Electric Vehicle Supply Equipment Connections and Service and Installation Rules* report[6].

[4] https://www.energy.gov.au/sites/default/files/2024-07/national-consumer-energy-resources-roadmap.pdf

[5] https://consult.dcceew.gov.au/streamlining-network-connection-processes-for-cer-and-evse

[6] https://www.energynetworks.com.au/resources/reports/harmonising-electric-vehicle-supply-equipment-connections-and-service-and-installation-rules/