



19 October 2020

Dr Kerry Schott AO
Independent Chair
Energy Security Board

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Dear Kerry

AusNet Services welcomes this opportunity to respond to the Energy Security Board's *Post 2025 Market Design Consultation Paper*. The Consultation Paper represents an important step forward in the Post 2025 Market Design Review (Review), both in terms of problem identification for the current market design and in narrowing the set of options that will be refined and considered in the next phase of the Review.

AusNet Services is Victoria's largest and most diverse utility with almost \$13 billion of assets including electricity transmission, electricity and gas distribution and a commercial business.

Our regulated businesses include electricity transmission across Victoria (although noting that we are not the planner for the transmission network); and electricity distribution in the North, East and Central regions of the State.

Our commercial business provides a variety of contracted transmission and distribution services, including grid connections for new generators, battery energy storage systems and aggregation of distributed energy resources.

We have been actively engaging in the Review process through the Technical Working Group, various Market Design Initiative (MDI) working groups and through engagements on the Review run by industry groups of which we are a member. We will continue to do so, and hence this submission represents some reflections on the current state of play.

The Review is an important project for the development of the National Electricity Market (NEM). The key challenges of the energy transition are well captured in Chapter 2 of the Consultation Paper. These have tested the existing market design and regulatory settings. Recent years have seen a System Black in South Australia, the early exit of Hazelwood power station, a period of high electricity prices, issues with grid congestion causing problems for newly connecting generators, rapid uptake of solar PV by households, but relatively slow growth in demand response.

The measure of success of this review will be the degree to which confidence in the NEM is restored, including confidence in the market and non-market arrangements to deliver consumer needs. Increasing predictability and fewer ad hoc interventions should both be outcomes of a successful reform package.

Given the complexity and wide scope of this Review, the focus should now be on:

- Solutions to priority and urgent reforms – finding and agreeing to the best approach to address the most important and urgent issues;
- Roadmap to broader reform - Providing a plan that will be alert to actual developments in the NEM and put timely interventions in place.

Priority and urgent reforms

Already, some MDIs are better progressed than others, and for major reforms that are needed within a few years, it is critical that these are developed with sufficient detail and timeliness to be tested and refined with stakeholders. This is underscored by the experience of the AEMC's Coordination of Generation and Transmission Investment (COGATI) review, which has illustrated how difficult it can be to settle on major reforms.

The most pressing issues to address are:

- Ensuring the market design supports supply adequacy;
- Strengthening the security and resilience of the grid particularly during the transition; and
- Supporting the timely delivery of transmission infrastructure to meet the changing energy mix.

The work of three of the seven MDIs is likely to constitute the substantive response to these issues: Essential system services; Scheduling and ahead markets; and Transmission Access and Coordination of Generation and Transmission. The work of the Resource Adequacy Mechanisms MDI may also contribute, although effective responses to ahead markets and procurement of essential system services have the potential to address resource adequacy risks without specific further adequacy mechanisms.

While these three MDIs are relatively more progressed than the others, the review should direct its greatest focus to developing, testing and refining these reform options. In relation to the coordination of transmission and generation, this should encompass the work being undertaken by ESB to develop an Interim Renewable Energy Zone Framework, and a holistic consideration of the various initiatives either underway (such as the Integrated System Plan) or proposed (REZ framework; COGATI), to assess the combined effect.

Roadmap to broader reform

As the Review continues to refine a cohesive set of market design options, with a narrower focus on the priority reforms, other workstreams remain important to identifying the preferred approach.

It may not be possible, or desirable, to develop reforms under each MDI to the same level of completeness, but all workstreams should continue to be included in terms of high-level consideration of how reforms will interact. The final roadmap or reform package should also identify important milestones for these other workstreams, for instance metrics or events that would flag the need for further reforms or that would narrow the options that would be suitable.

For example, the move to a two-sided market design is one of the more fundamental reforms to the NEM that is being contemplated. However, there is not a refined set of options for the preferred market design. Indeed, the case has not yet been made that the current market design is the main barrier to unlocking the benefits of Demand Response.



This should not hold up the development of a broader reform package. Work can continue on the two-sided markets and DER integration MDIs – technical reforms can proceed, work can be undertaken to quantify potential benefits and identify workable market designs – while the other major reforms can be assessed for whether they are compatible with a two-sided market or could be made compatible at a future point in time, and what other complementary measures will be more effective.

The attached document provides responses to some of the detailed questions raised by the Consultation Paper.

AusNet Services looks forward to continued engagement in this review. If you have any questions regarding any part of our submission, please contact Katie Yates, Manager Energy Policy by email or on 03 9695 6622.

Sincerely,

A handwritten signature in black ink, appearing to read "A.P.", is positioned below the word "Sincerely,".

Alistair Parker
Executive General Manager Regulation and External Affairs
AusNet Services

Post 2025 Market Design – Response to consultation questions

Resource adequacy mechanisms (RAMs)

No comment

Aging thermal generator strategy

No comment

Essential system services

- 3. What are your views on the proposed structured procurement for inertia and system strength by way of NSP provision, bilateral contracts and generator access standards, or through a PSSAS mechanism? Which approach is preferable, what are the relative benefits, risks and costs? Should the ESB instead prioritise the development of spot market for or structured procurement of inertia? What are the relative benefits, risks and costs of such an approach?*

It is a high priority to ensure the system and network operates effectively and securely, and there are sufficient system services to meet system requirements. This is critical to unlocking future renewables investment and to enable a secure energy transition, we need to move from tactical to strategic procurement of these services.

System strength:

- A structured approach to procurement of system strength, led by the Transmission Network Service Provider (TNSP) is a necessary development.
- TNSPs should be responsible for forward planning and providing system strength services to an N-2 base level. This recognises the various factors that can contribute to deteriorating system strength beyond the connection of new transmission-connected generators (which do-no-harm provisions are limited to), and the lead-in time factor (it is not desirable to wait until there is a system strength shortfall before taking mitigating actions).
- Centralised provision by the TNSP is preferable to the current approach, as scale system strength solutions are generally more cost effective and efficient than incremental solutions.
- Market-led solutions or procurement should be required for anything above base level.

Other system services:

- Operating reserves should be open to regulated and unregulated provision and should not preclude the possibility of participation from aggregated distribution services.

Scheduling and ahead markets

No comment.

Two-sided markets

- 1. What do you consider are the risks and opportunities of moving to a market with a significantly more active demand side over time? How can these risks be best managed?*

There is growing economic significance (although this would benefit from some quantification) in the potential value of demand response to shape demand profiles to meet supply (e.g. shift demand to take advantage of cheap surplus solar and wind).

Development of a “light on the hill” for a two-sided market design to achieve elasticity in demand and more efficient levers to balance supply and demand than just supply-side solutions is a sensible step.

However, where proposed reforms would impact household energy users and DER owners, a range of additional considerations need to be made that may make reform more difficult. Simplicity is

important, both in terms of participation and behavioural response. Equity concerns and social objectives around providing essential levels of energy services to all will continue to be a priority.

Equity objectives, particularly efforts to equalise prices and network access regardless of a household's location or access to DER and efforts to shield households from dramatic swings in energy bills, may be at odds with the thrust of reforms to support a two-sided market that seek to increase exposure of customers to true system costs.

Opportunities exist to take incremental steps in the development of a two-sided market. This includes an initial focus on larger scale demand response, where reform implementation costs are likely to be lower, and policies to encourage greater household capability for demand response given most DER currently installed is passive. This also allows an opportunity to see where true regulatory barriers exist, and where the current framework is flexible enough to allow new services to develop.

- 2. What are the barriers preventing more active demand response and participation in a two-sided market? What are the barriers to participating in the wholesale central dispatch processes?*

There are barriers to material demand response in the short term. This includes the high penetration of passive solar PV, which is increasingly defining daytime load profiles. If households with these passive solar PV systems have limited ability to change their energy usage patterns at low cost, this group could be resistant to reforms.

It would be useful to quantify how much elastic household energy demand currently exists, costs of different measures to increase demand response, and forecasts of future demand response capability so that these can be compared to the modelled benefits from more active DER.

The physical network provides a constraint to whether demand response can balance supply issues, particularly where there is a locational imbalance. While the constraints of the Transmission network are well understood and accounted for in dispatch of the NEM, there is a limited (albeit rapidly growing) current understanding of the capacity of the distribution network to support delivery of demand response from aggregated DER.

Because distribution networks are more complex than transmission and have not historically been understood for their ability to deliver two-way energy flows, it is unlikely that development of models that fully describe the low voltage network in real time will be an economic approach. Efforts are underway to determine operating envelopes that define a simplified view of the constraints of distribution networks.

AusNet Services and SAPN are currently undertaking an ARENA-funded trial of Flexible Exports, which is applying simplified time-based view of constraints and allowing DER owners to increase their exports relative to the traditional approach where fixed export limits are applied.

Integration of DER

There is a significant work program underway across the sector that includes development of technical standards, development of new Rules for DER access, pricing and planning, and a series of trials and innovation projects aimed at smoother integration of DER and driving enhanced value from customer investment in DER.

It is expected that the most significant economic value from DER is in terms of wholesale electricity prices, although there will also be some network value, and network tariffs can significantly contribute to the incentives to DER owners.

The role of the Distribution System Operator and establishment of operating envelopes is a critical area for development and will facilitate both demand response and DER access. The EDGE pilot, an AusNet Services/Mondo/AEMO project with ARENA funding will test a potential model for how the

distribution market can develop and is expected to reveal barriers and opportunities associated with more active DER management.

Community batteries, located in strategic areas of distribution networks also have significant potential to improve utilisation of DER, support wider DER take-up and limit network investment. We support further consideration of how reforms could allow greater deployment of community batteries.

Coordination of Generation and Transmission

COGATI

- We recognise the merit of the concepts, and the theoretical efficiency, but in this transitional period where we are facing step-changes in generation replacement, it is critical that reform does not present a barrier to generation investment.
- Any implementation must assist generators to manage risks and must not impose costs that are so high as to outweigh the benefits.

Renewable Energy Zones

Details of the second phase of the ESB's Interim REZ framework are not yet available, but there is increasing focus on the role for REZs to support alignment of transmission and generation investment.

We see the following features as being important for a workable REZ model:

- Needs to actually lower the hurdle for transmission investment in the REZ. The actionable ISP reforms, which allow for the use of ISP generation forecasts (MW) in transmission investment tests, rather than only committed generation, is key to this.
- Needs to be able to be used by third parties to bring forward shared transmission investment;
- Needs to be useful in brownfield REZ development;
- Needs to allow future 'conversion' from shared connection assets into shared transmission if efficient; and
- An access protection regime for REZ Generators will need to be effective to incentivise Generators to locate there.

The 'hub' at the shared network could be developed as shared network subject to RIT-T, (or in Victoria, this could be in conjunction with a Ministerial decision under an AEMO tender process).