Christian Dunk

Australian Energy Market Commission

Submission made online at www.aemc.gov.au

3 September 2026

Dear Mr Dunk

Subject: EPR0092 Discussion Paper – Review of the Integrated System Plan framework

SA Power Networks welcomes the opportunity to provide feedback on the AEMC's Consultation Paper for the *Review of the Integrated System Plan framework* (the Review).

Our key points of feedback are detailed below, and are further expanded throughout this submission:

1. We strongly support the AEMCs approach proposed under strawperson 4 (SP4) and consider that this will best align the Integrated System Plan (ISP) framework with the National Electricity Objectives (NEO). To guide a least-cost energy transition, the ISP must fully co-optimise generation, storage and network developments across both the transmission and distribution systems. Any network developments identified as part of the Optimal Development Path (ODP) must have a clear path to investment via inclusion in the actionability framework.
2. The uplift in modelling capability required to achieve a co-optimised ISP should be largely borne by distribution network service providers (DNSP), and not AEMO. DNSPs are best placed to model their network and the interaction with any resources connected to it. The cost of additional effort required by DNSPs and AEMO would be outweighed by the savings of a co-optimised ODP.
3. The ISP model should treat the distribution network and all resources connected to it as a series of transmission-level resources. AEMO should not seek to extend their modelling into the distribution network. Within the actionability framework, distribution-level developments should be made actionable as an aggregate capacity connected to the transmission network.
4. AEMO should seek to enhance the granularity of the ISP model over time, shifting from a sub-regional approach to one based on transmission node identifiers (TNI). Both the plan and the actionability framework should be similarly enhanced in granularity over time.
5. The Justice and Equity Centre's (JEC) *Co-optimisation of all energy resources in the ISP* rule change should be initiated as a priority whilst other elements of the Review progress.

We look forward to continuing to engage constructively with the AEMC and other stakeholders to realise the lowest cost whole-of-system approach to enabling the energy transition. Should you wish to discuss this submission, please contact Liam Mallamo, Industry Development Lead, at liam.mallamo@sapowernetworks.com.au.

Yours sincerely

Jessica Morris
Chief Customer and Strategy Officer

A whole-of-system plan requires whole-of-system planning

The ISP is the map for Australia's energy transition – laying out a clear, least-cost pathway to decarbonising the energy system whilst maintaining reliability for consumers. It directly and indirectly informs more than $100 billion of investment through to 2050, directly actioning large-scale transmission projects and indirectly informing policy to incentivise the development of new generation and storage resources.

Today, AEMO is tasked with guiding the energy transition with an incomplete map. The ISP framework does not fully account for the potential of a genuinely least-cost pathway that accelerates deployment of:

- Consumer Energy Resources (CER)
- Mid-scale resources
- Distribution-connected utility scale resources[1]; and
- The distribution network infrastructure needed to accommodate them.

Because these resources are not adequately reflected in the Optimal Development Path (ODP), the current ODP cannot be considered truly optimal. The ISP framework must evolve to enable full co-optimisation of all energy resources to best realise the NEO.

Material progress has already been made to date

Developing the biennial ISP is a significant undertaking, requiring teams of dedicated resources within AEMO and ongoing input from thousands of stakeholders. Expanding the ISP framework further to include co-optimisation across the transmission and distribution systems will necessarily increase the complexity of the ISP development process – but importantly, doing so would not require starting from scratch. Material progress towards co-optimisation in the ISP has already been made, specifically through the implementation of the *Enhancing consideration of demand-side factors in the ISP* rule change in the 2026 ISP.

We consider there to be four key steps to realising a co-optimised ISP:

1. Accounting for the impacts of distribution constraints on existing and forecast natural uptake of:
    a. CER; and
    b. mid-scale resources.
2. Identifying the need for investments in distribution network capacity to relieve those constraints, trading off against transmission-level alternatives.
3. Allowing the ISP model to actively build additional distribution-connected resources as part of its least cost generation mix, including:
    a. CER;
    b. mid-scale resources; and
    c. distribution-connected utility-scale resources.

[1] In line with the terminology used in the 2026 ISP, we use the term CER to refer to both solar and batteries between 0-100 kW, mid-scale resources to refer to solar between 100 kW and 30 MW and batteries between 100 kW and 5 MW, and utility-scale resources to refer to solar greater than 30 MW and batteries greater than 5MW.

4. Identifying the need for investments in distribution network capacity to support those additional resources.

The 2026 ISP already includes steps (1a), (2), (3b) and (3c) – that is, it accounted for the impact of distribution constraints on CER generation, recommended investments to resolve those constraints, and actively built additional mid-scale resources and distribution-connected utility-scale resources. Importantly, these inclusions did not treat distribution and transmission solutions as mutually exclusive – rather, explicit co-optimisation occurred. For example, in determining the need for distribution investments as part of step (2), the ISP considered and traded off two options:

(i) relieve a distribution constraint on CER; or

(ii) build new transmission-connected resources and associated transmission network capacity.

Other options would in theory have been available to meet step (2), which were not included in the 2026 ISP but could likely be considered by AEMO in future ISPs under the existing framework, such as:

(iii) building new distribution-connected resources where network capacity exists; or

(iv) relieving transmission constraints on existing and forecast transmission-connected resources.

The relatively narrow-scope reforms implemented through the *Demand-side factors* rule change have already led to significant progress towards co-optimisation. Any further reforms to the framework would be building on this foundation, with both AEMO and DNSPs already having proven their willingness and capability to develop a co-optimised ISP.

DNSPs should be responsible for distribution-level modelling and planning

A co-optimised ISP brings with it a significant increase in the number and types of resources available to the ISP model – but should not necessitate a significant increase in the complexity of the model itself. A practical implementation of co-optimisation within the ISP would not see AEMO responsible for any modelling of the distribution network. Instead, AEMO would continue to model the transmission network and associated utility-scale resources, and DNSPs would be tasked with modelling all aspects of their networks, from low-voltage circuits through to sub-transmission lines.

DNSPs would provide timeseries datasets representing the net capability of their network to host generation and storage resources, as well as unit costs for various network expansion options. These datasets would be aggregated to a level matching that used for AEMO's transmission-level modelling. AEMO would additionally have access to unit costs for additional CER, mid-scale resources and distribution-connected utility scale resources, as well as the associated development timeframes and operational profiles. In this way – AEMO would simply have additional tools added to their existing toolkit, allowing for the aggregate capacity of distribution-connected resources and associated network capacity to be optimised at the transmission level.

This pathway is already well underway, with DNSPs having worked with AEMO to develop a foundational set of shared modelling capabilities for the 2026 ISP and continuing to enhance their own in-house capabilities. These developments are supported by parallel reforms requiring uplifts to DNSPs modelling capabilities, such as the *Enhancing distribution planning and reporting* rule change.

For further detail on the practical implementation of a co-optimised ISP, we refer the AEMC to our submission on the *Clarifying the treatment of jurisdictional policies and system costs in the ISP*.[2]

Any network investment on the ODP must be made actionable

The 2026 ISP, with its first steps towards a co-optimised plan, 'recommends' more than 2 GW of investment in distribution network capacity across DNSPs. These recommendations were made as an output of step (2) of our previously outlined co-optimisation process. Importantly, the ISP model assumes that these investments will be made, and as such does not action a transmission substitute. This means that to deliver the ODP, DNSPs *must* make these investments and enhance their network capacity, lest the system be 'missing' several GWs of required resources.

Transmission projects identified as part of the ODP are made actionable, leading directly to a RIT-T and a contingent project. The recommendations given to distribution projects today, however, are not formal drivers for investment. The level of distribution investment identified in the 2026 ISP would likely increase significantly under a fully co-optimised ODP, meaning that certainty in DNSPs ability to deliver these investments will only become even more critical in future. Without an equivalent actionability framework in place, DNSPs have no clear path to investment, materially increasing the deliverability risk of the ODP.

Distribution and transmission boundaries should be maintained in actionability

Extending the actionability framework to the distribution level would not see AEMO identifying and actioning individual distribution projects. Instead, per our proposed approach to modelling a co-optimised system, the ISP would identify the net additional distribution network capacity required at a sub-regional level, or in future at the TNI level. This identification of efficient capacity would be based on unit costs for network expansion provided by DNSPs to host additional CER, mid-scale resources or distribution-connected utility-scale resources. These unit costs could represent a mix of network and non-network solutions across several layers of the network.

The ISP would action this aggregate level of efficient distribution network capacity at the sub-region or TNI, and DNSPs would optimise the exact set of projects required to most efficiently meet that aggregate target. Much as with transmission-level ISP projects, market guidance would be required to guide investment in generation and storage to these areas of the network. We view this as simply a distribution-level equivalent of today's transmission-level renewable energy zones (REZ) – that is, identification of an area suitable to host a significant amount of generation and storage, enabled through some level of investment in additional network capacity, with the market guided towards targeted investment in these areas.

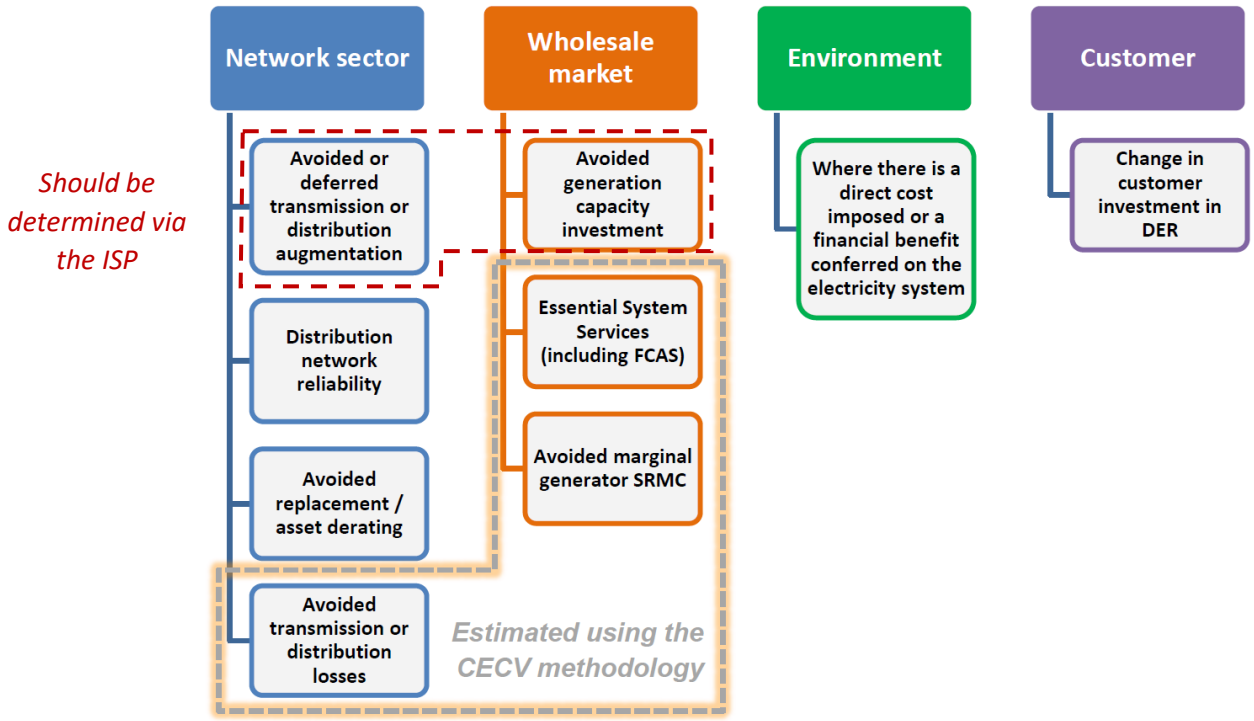
Input	Transmission REZ	Distribution REZ
Generation and storage factors	Land availability and weather	Land availability, weather, roof space (CER & mid-scale resources), building ownership
Network factors	Network capacity expansion costs	Network capacity expansion costs

The ISP should produce regulatory benefit streams for DNSPs

[2] See SA Power Network's submission to the *Clarifying the treatment of jurisdictional policies and system costs in the ISP* Consultation Paper.

With an efficient level of additional network capacity identified, DNSPs would conduct RIT-Ds through which the Australian Energy Regulator (AER) could assess the set of individual projects making up the aggregate additional capacity identified as part of the ODP. In developing a RIT-D, DNSPs will need to perform cost-benefit analyses. The benefits of the projects forming part of that RIT-D, however, are largely the avoided costs that would otherwise be required to build new utility-scale resources and transmission infrastructure. These are the costs explicitly traded off within a co-optimised ISP, and costs which will need to be exposed to allow DNSPs to develop RIT-Ds for projects on the ODP.

The AER today produces the *Customer Export Curtailment Value*, a regulatory benefits stream seeking to quantify the system-wide value of additional exports from the distribution network. However, the AER is currently only able to produce the short-run elements of this benefit stream – specifically, the reductions in costs for marginal generation, system services and losses enabled through additional distribution-level exports.



The CECV framework recognises the potential benefits of avoiding large-scale generation and transmission costs through increased distribution-level exports, but the AER does not have the capability to model these benefits. Doing so requires an understanding of what future generation, and transmission investments would be required under the current power system development pathway, and 'with-without' analysis performed to determine the impacts of additional distribution-level exports on that pathway. This is exactly what the ISP model does today and would do to an even greater extent under a co-optimised framework. To enable a clear pathway for investment in actionable distribution projects, we strongly recommend that AEMO be tasked with producing the values of avoided generation and transmission as input to the AER's CECV, which DNSPs would use as the primary benefits stream within an ISP-driven RIT-D.