

James King

Australian Energy Market Commission

Submission made online at www.aemc.gov.au

16 November 2025

Dear Mr King,

Subject: ERC0406 Consultation Paper – Clarifying the treatment of jurisdictional policies and system costs in the ISP Rule

SA Power Networks welcomes the opportunity to comment on the AEMC’s Consultation Paper on the *Clarifying the treatment of jurisdictional policies and system costs in the ISP rule change* (the Rule Change) proposed by the Centre for Independent Studies (CIS).

Our key points of feedback, further expanded throughout this submission, are as follows:

1. The issues raised by the CIS are not the most pressing issues to address within the ISP framework. Reform efforts relating to the ISP, including both in this rule change and the ISP Review, should be focused on enabling the ISP to identify a more efficient Optimal Development Path (ODP) through the co-optimisation of distributed and consumer energy resources (DER and CER) with large-scale resources, as well as the associated distribution and transmission network capacity. Doing so will allow the ISP to function as a truly whole-of-system plan and best align with both the NEO and the intended purpose of the ISP in the rules.
2. The costs of distribution network augmentation to host the ‘natural’, consumer-driven uptake of CER are already included within the ISP following the *Improving consideration of demand side factors* rule and will be evidenced in the 2026 ISP. Should co-optimisation of DER and CER with large-scale resources be achieved in the ODP, the marginal costs to accelerate CER uptake and host these additional resources on the distribution network should then be considered.
3. Only the marginal costs of CER acceleration should be considered in a co-optimised ODP. The costs of CER as an ‘input’ should not be considered, with these costs borne only by consumers investing in CER for private benefit. The ‘output’ costs for the ODP to include *additional* CER in a least-cost generation mix, beyond the level which consumers would otherwise adopt, should be included only to the extent that publicly funded incentives are required. The marginal cost of acceleration, not the full cost of adoption, is the cost borne by all consumers.

We look forward to continuing to engage with the AEMC to deliver the lowest cost whole-of-system approach to enabling the energy transition. Should you have questions on any aspect of our submission, please contact me at liam.mallamo@sapowernetworks.com.au.



Liam Mallamo

Industry Development Lead

The role of the ISP in the energy transition

The ISP lies at the centre of Australia’s energy transition – it is the plan on which hundreds of billions of dollars of investment in new generation, storage and transmission network infrastructure are based, and as such is the plan that in large part determines the trajectory of electricity prices for consumers in future. It directly informs the design and ongoing operations of both the Capacity Investment Scheme and the Rewiring the Nation program, the primary mechanisms through which new generation and transmission infrastructure are supported to enter the market. At the distribution level, costs are also driven in part by the ISP – the demand and CER uptake forecasts applied by a distribution network service provider (DNSP) are based on those developed by AEMO in the Inputs, Assumptions and Scenarios Report (IASR).

Despite the criticality of the ISP, we do not consider that it is currently leading to Australia’s energy transition being planned in the most efficient way possible. The ISP serves largely as a plan for Australia’s transmission network, and not for Australia’s entire energy system. This is in large part due to the limited scope of the ODP, specifically that the ODP does not co-optimize between investments in large-scale generation and storage with investments in smaller resources, namely DER and CER¹. Recent advancements through the *Improving consideration of demand side factors in the ISP* rule have made some headway towards addressing this gap, but we consider that further reform is required to ensure that the ISP can truly present a lowest whole-of-system cost path to delivering the energy transition.

Our identification of this gap is not to discredit AEMO’s efforts today in preparing the ISP nor in adopting an enhanced view of the demand side - the ISP is widely regarded as the most sophisticated modelling exercise of its kind globally, and we consider AEMO’s implementation of enhanced demand-side factors consideration for the 2026 ISP to be commendable. Rather, we believe that the ISP regulatory framework does not provide sufficient impetus for AEMO to prioritise the development of a true co-optimisation process between large- and small-scale resources at this time, despite this co-optimisation potentially realising up to \$7B of annual consumer benefits² and having been identified as a priority reform through several rule change and reviews to date³.

We note, however, that the full impacts of work done to date under the *Improving consideration of demand side factors in the ISP* rule remain to be seen, until the release of the Draft 2026 ISP. Our subsequent commentary and recommendations in this should be viewed in light of this and are largely based on the outputs of the 2024 ISP and our current understanding of how DER, CER and distribution network capacity will be treated in the 2026 ISP.

DER and CER must be an output of the ISP, not just an input

The ISP today takes a forecast of DER and CER uptake as an input to its model, with AEMO forecasting the ‘natural’ uptake of these resources by consumers. The ability of these resources to meet forecast

¹ The terms DER and CER are largely used interchangeably by industry – for the purposes of this submission, DER refers to a resource below traditional scheduling thresholds connected to the distribution network and used solely for participation in the energy market, whilst CER refers to a behind-the-meter resource installed primarily for the purpose of meeting a consumers local energy needs.

² See [The time is now: Getting smarter with the grid](#) report published by Energy Networks Australia.

³ Co-optimisation of small- and large-scale resources was identified as a priority in the Energy and Climate Change Ministerial Council’s *Review of the Integrated System Plan*, as well as through many stakeholder submissions to the *2026 ISP Methodology Consultation* and the *Improving Consideration of Demand Side Factors* rule change.

demand, along with existing and committed large-scale generation, is then determined, with residual unserved energy provided by a least-cost resource mix of utility-scale generation and storage. Additional DER and CER are not included in the suite of resources available to create that least-cost mix – despite the fact that rooftop PV remains as the lowest-cost source of generation identified in CSIRO’s *GenCost 2024 – 2025* report⁴, and residential batteries are rapidly dropping in price, exclusive of subsidies. This leads to the identified resource mix within the ODP, and in-turn the actionable transmission investments to host those resources, not being a truly optimal path.

The scope of the ODP must be expanded to include investments in additional DER and CER, as well as the additional distribution network capacity to host those resources. The ISP could then truly function as a whole-of-system optimisation model, determining the most efficient way in which to meet future demand by balancing the costs of large-scale generation and associated transmission network capacity against investments in additional DER and CER and the associated distribution network capacity. We consider that this would increase the ISP’s alignment with the NEO by best promoting an efficient investment path in the long-term interest of consumers.

Treatment of additional and existing DER and CER uptake costs within the ISP

With CER being the lowest cost source of generation on a levelised cost of energy basis (LCOE)⁵, it immediately represents an opportunity to determine a lower-cost future resource mix. The full cost of CER deployment, however, should not be considered within the ISP, should it become part of the additional resource mix available in the ODP.

Consumers today purchase CER for their own private benefit, and the volume of CER predicted to be installed for this private benefit is currently included in the input CER forecasts to the ISP. For additional CER to enter the system, after having been identified as part the ODP, consumer incentives will likely be required. These incentives will not need to cover the total cost of CER adoption – rather, only the marginal cost reduction needed to drive consumers to install CER. The costs of these incentives would be borne by all consumers, and hence are what should be included as the resource cost for additional CER in the ISP, not the total cost of deployment. This will lead to the costs of additional CER being even lower than those identified within the GenCost report, bolstering the case for CER driving greater efficiencies to the ODP.

We note that the Rule Change focuses on the treatment of costs for the input, or natural uptake of CER. We do not consider that these costs should be included within the ISP, as these costs are fully borne by the consumer installing CER for their own private benefit. There have been significant CER subsidies in past funded by all consumers, such as small-scale technology certificates, and we acknowledge that the costs of these are in-theory appropriate for inclusion within the ISP. However, these schemes are largely ending by 2030 and hence would not be of material value for consideration in future ISPs.

Actioning an ODP with increased DER and CER

With the costs of DER and the marginal costs of accelerating CER uptake having been included in the ISP model, and the scope of the ODP expanded to consider full co-optimisation of these resources with large-scale resources, the resultant ODP is likely to include some level of additional DER and CER, beyond the natural uptake included as input to the ISP today. This would serve as a signal for an

⁴ Figure 5-12, [GenCost-2024-25-Final_20250728.pdf](#)

⁵ Ibid.

efficient level of incentives to deploy in order to drive greater CER uptake. The ISP would signal where these incentives should be targeted, through inclusion of DER and CER in the ISP's generation and storage outlook. This outlook is currently focused on the deployment of new large-scale resources within transmission-level renewable energy zones (REZ), but an equivalent framework could be adopted for DER and CER using a distribution-level equivalent REZ – with a simple implementation being a net volume of additional DER and CER under a given transmission node identifier (TNI) or sub-regional reference node. Much like the current approach to transmission REZ planning, AEMO would understand the distribution network costs associated with that area and could hence efficiently allocate new DER and CER within the system. Importantly, AEMO's recommendations would end at a level no lower than the TNI – maintaining their role as a transmission system planner only.

The identification of an efficient level of additional CER to be installed below a given TNI would be actioned in two ways:

- DNSPs would determine the least-cost deployment of that CER within their network downstream of the TNI, further refining the TNI-level allocation already performed by AEMO
- State or federal governments, or energy retailers or developers, could seek funding through the Capacity Investment Scheme or the upcoming Electricity Services Entry Mechanism (ESEM) to target incentives for CER uptake in those areas across all consumer types.

We expect that rooftop PV coupled with batteries would be the likely inclusion in a revised least-cost resource mix. Importantly, any additional resources deployed under this approach would be required to be orchestrated and could be treated by AEMO in the same manner as any firmed variable renewable generator. Efforts currently underway through the National CER Roadmap are key enablers of this model, seeking to build consumer trust in orchestration and deliver key technical reforms to enable CER to participate in the energy market with the same level of certainty as a large-scale resource.

Handling distribution costs in the ISP – a two-stage process

With an efficient level of additional DER and CER having been identified and incentivised, DNSPs will need to ensure that their networks are able to host those resources, noting that the costs of doing so would have already been included in the ISP co-optimisation process. We consider that distribution-level investments must become actionable within the ISP – specifically investments in net distribution network hosting capacity at the TNI level. This would ensure that both DER and CER as well as the associated distribution network capacity can truly be compared and actioned on a like-for-like basis with large-scale resources and transmission network capacity.

This resolves the treatment of distribution network costs to host additional CER – but we note that the Rule Change largely seeks to address the treatment of costs to host existing CER and the natural level of additional CER uptake. Our understanding is that the 2026 ISP will largely address the concerns outlined in the Rule Change, with all DNSPs having provided AEMO with data relating to the current volumes of curtailed energy from distribution-connected resources today, as well as the associated costs to resolve this curtailment. This will allow the ISP to account for the reduction in available generation caused by distribution network constraints, and potentially to recommend that DNSPs invest in resolving these constraints. Whilst the outcomes of this process are yet to be seen, pending the release of the Draft 2026 ISP, we expect that it will materially address the concerns outlined in the Rule Change regarding inclusion of distribution network costs.

Managing the practical implementation of co-optimisation

The ISP is a complex exercise in multi-objective optimisation – one with many constraints, many objectives and many stakeholders. With a two-year program to synthesise inputs, perform network and market modelling and develop many highly-scrutinised reports, along with a significant stakeholder engagement program in parallel, AEMO’s efforts to prepare the biennial ISP should be held in high regard. We do not think it prudent to add to AEMO’s existing requirements for the development of the ISP unless those additions will genuinely enhance its outcomes in line with the NEO, and even then, care must be taken to ensure that the ISP remains a manageable, understandable and deliverable exercise for all involved. We consider that our proposed inclusion of a co-optimisation process meets both of these criteria.

AEMO acts as a market operator and a transmission planner and should remain as such. The capabilities of DNSPs should be leveraged to the fullest extent possible to deliver a co-optimised ISP, allowing for DNSPs and AEMO to play to their respective strengths, as opposed to requiring AEMO to engage in the distribution planning process. We consider that both DER and CER should largely be treated as any other generation or storage resource in the ISP – with capital and operating costs, build times and associated network expansion costs. We see this as a shift in thinking and methodology, but not a material uplift in effort or complexity. CSIRO’s GenCost can be further leveraged to enhance the CER and DER cost and build time inputs to the ISP, and DNSP inputs relating to available and constrained network capacity, as well as network expansion costs, can be further enhanced from the process currently underway for the 2026 ISP.

We note that the current process has been a significant effort for both DNSPs and AEMO, with disparate data availability and modelling capabilities across DNSPs, as well as an in-development methodology from AEMO. SA Power Networks has been the only DNSP to perform its own network modelling, with other DNSPs electing to provide asset data templates for AEMO and their consultants to ingest into separate models. The outcomes of the 2026 ISP, however, will provide drivers for all DNSPs to uplift their modelling capabilities – having seen the potential volumes of additional efficient investment to be made in the capacity of their networks.

With clear input costs for DER and accelerated CER, as well as granular costs for distribution network expansion at the TNI, AEMO should be well-equipped to include these resources within both the generation and storage outlook and capacity expansion models of the ISP. Aggregated resources at the distribution level can be viewed in much the same way as a single resource at the transmission level – enabling a more efficient and more NEO-aligned ODP whilst maintaining deliverability of the ISP process.

The outcome - a more efficient energy system for all consumers

Ensuring that AEMO has every tool available in its ISP toolkit will allow for a truly whole-of-system view to be taken. Prioritising co-optimisation of distribution-scale resources with transmission-scale resources will drive the ODP towards better realisation of the NEO and should be considered as the most critical reform to the ISP.

A co-optimised ISP would not favour a single technology type over another, nor would it favour a single network type over another. DER, CER, utility-scale resources, transmission and distribution are all complementary, and must all be accelerated in parallel to deliver the energy transition. Ensuring that AEMO has every option at their disposal will help to de-risk the transition, with additional smaller-scale resources providing an efficient means to utilise existing network capacity, maintain social license and leverage the significant existing residential workforce and industry.