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Ms Alisa Toomey
Director
Australian Energy Market Commission

Submission to the Australian Energy Market Commission on Enhancing the Integrated System Plan to Support the Energy Transition

Dear Alisa:

Energy Consumers Australia appreciates the opportunity to provide feedback on 'Enhancing the Integrated System Plan to Support the Energy Transition,' particularly improving consideration of demand-side factors in the Integrated System Plan (ISP). We welcome this rule change, as we see value in the Australian Energy Market Operator (AEMO) giving greater consideration to the network and non-network factors needed to enable the levels of consumer energy resources (CER) and their coordination forecast by the ISP.

The reality is that today, Australia's energy system is not effectively planned. The ISP is among global best practice in the world for the development of a transmission system plan conducted by an independent system or market operator. But the transmission system only accounts for a fraction of Australia's energy infrastructure. The distribution system, on the other hand, is roughly 3.5 times the size (in terms of invested capital) as the transmission system – and yet it is not comprehensively planned. Distribution Annual Planning Reviews do not provide insight into the most important factors – the growth in CER and electrification of transport and gas appliances – that are impacting the future of the distribution network. The distribution businesses do investigate these issues, but only every five years – which is simply not frequently enough given the scale and speed of change occurring within the system.

In short, we are pleased that the Commonwealth has lodged this rule change and that the ISP will start to more fully investigate the opportunities and challenges surrounding CER and electrification. But this rule change should only mark the beginning of a more fulsome review of the regulations governing the planning of the distribution system.

Our submission is divided into two main parts. In part one, we focus on the consultation presented by the Commission on the rule change. In part two, we summarize three key drivers for broader reform of distribution system planning.

Our feedback on the consultation focuses on the proposed development of *guidelines setting out a process for gathering relevant data from distribution network service providers (DNSPs) to inform [AEMO] analysis of demand-side factors in the ISP, supplemented by a mandatory requirement on DNSPs to disclose the information set out in AEMO's guideline.*[1]

This requirement raises the fundamental question of what the appropriate role is for DNSPs in the development of the ISP. As we detail below, DNSPs are the entities best placed to forecast CER and load along with distribution network constraints within their system. While such a role implies a relatively large change for DNSPs in the context of the ISP, we think it is warranted and indeed required over time, simply because of the relationship between forecasting load, CER and low-voltage

[1] AEMC, *Consultation paper: enhancing the integrated system plan to support the energy transition* (June 2024) p iii.

network constraints. Given the scale of the change, it is advisable to build DNSPs capacity and increase their role incrementally.

In our view, for the ISP to accurately represent future scenarios for CER, it must appropriately identify distribution system constraints that will impact the ability of CER to effectively serve load “in front of the meter.” Today the ISP assumes this happens without constraint, despite AEMO, DNSPs, and the broader energy sector knowing that this assumption is wrong.

DNSPs are in the best position to determine what constraints exist within their systems today and where they are likely to emerge in the future, simply because they have – or are best placed to gather – the data and information needed to identify these constraints. While the ISP currently models CER at the zone substation level, DNSP constraints are likely to bind at much lower levels of the system – at the feeder level or low-voltage transformer level. (We will refer to these lower levels of the system as the “low-voltage level”.)

To understand constraints at the low-voltage level, one needs to understand low-voltage network topology and model CER and load forecasts at the low-voltage level. DNSPs have the fundamental understanding of network topology necessary to calculate such constraints. Today, no one has or regularly conducts the required low-voltage level CER and load forecasting that are also necessary for constraints identification. Given the DNSP’s primary role in understanding low-voltage network topology, it makes sense for them to also develop (over time) CER and load forecasts. Not only could they then combine those forecasts with network topology data to forecast constraints for the ISP, they could also leverage that understanding to improve their overall understanding of and management of their networks.

In short, DNSPs have the greatest insight today of the data required for developing constraint and would receive the most long-term value from understanding changes in CER and load over time. As such, DNSPs are the appropriate entity for determining low-level CER and load projections.

However, in the short-term (i.e., for the 2026 ISP), delegating all CER and load forecasting to the DNSPs may be impracticable, if not inadvisable. As such, there should be effective collaboration between AEMO and the DNSPs, and perhaps the use of heuristics to gauge the long-term constraints, calculated only at the zone substation level for the next ISP. In the future (ideally by 2028), there is value in the ISP (and the sector more broadly) using accurate low-voltage CER, load, and constraints forecasts. While DNSPs should take a much greater role in these forecasts, we recognise that there would still be a need for oversight by AEMO and collaboration between AEMO and the DNSPs.

At first glance, we suggest that the most appropriate collaboration would involve:

- AEMO developing scenarios that inform CER and load forecasts across all parts of the NEM (and ensuring consistency between them).
- AEMO developing common inputs and assumptions about technology costs and drivers.
- AEMO and DNSPs collaboratively developing shared methodologies for understanding bottom-up load, CER and constraints forecasts.
- DNSPs developing bottom-up forecasts starting either at the meter/consumer point or at the low-voltage transformer, focused on CER, load, and constraints and building those up to the zone substation. AEMO should then use these forecasts to inform the energy required at the zone substation at a given time.

The remainder of our submission focuses on the broader need for reforms to distribution system planning. Ultimately, there should be a more consultative, comprehensive distribution planning process than what currently exists under the national electricity and gas rules.

A better distribution planning process would be the most logical way to gather relevant DNSP data for demand side factors and incorporate these into the ISP. Certainly, in response to question 8 which asks for views on any issues or costs for DNSPs in complying with new informational guidelines, we anticipate that there will be challenges. This is one reason why we think that at the appropriate time, a more comprehensive distribution planning process is needed to ensure better outcomes for consumers.

Additionally, current transmission and distribution planning processes occur at different frequencies, consider different time horizons, and are developed with different inputs, assumptions and scenarios. This should change, as integrated and aligned processes can better ensure that system costs are efficient and justified, and ultimately result in consumers paying less on their bills than they otherwise would. As such, we consider that a broader review or rule change is required to address these issues.

At a high level, we see at least three primary drivers for a more fulsome, transparent, and consultative distribution planning process:

1. There is an asymmetry of information between DNSPs on the one hand and the broader sector (including consumers) on the other concerning the hosting capacity and constraints for CER and load across the network. This lack of visibility at the local level makes it difficult for non-network participants—like communities keen to host a shared battery or electric vehicle charging companies – to know which parts of the network likely enable access at least-cost. Given changes in ring-fencing guidelines that have enabled networks to play more active roles in the development of some of these technologies, regulation needs to insure that all potential participants in developing batteries, EV charging and other emerging technologies have access to the same information about the distribution network.

2. There is little or no transparency into how DNSPs assess the fitness of their networks to host CER and facilitate least-cost measures to improve their network's ability to integrate consumers' excess power. DNSPs should be required to undertake sufficiently robust technical modelling on this issue and share their methodology, data and calculations with regulators and the broader sector. At present, DNSPs have a clear incentive to conservatively assess their network's capacity, and yet there is no transparency or regulation over the development of those assessments. Greater oversight is needed.

3. Many local communities want to play a larger role in the design and development of their energy system. At present, they lack a way to engage with networks outside of the five-yearly network reset process. A mechanism is needed to require DNSPs to conduct outreach and engagement with local communities in a consistent way to ensure that their interests in and suggestions for the future of the distribution system are considered.

We thank the AEMC for the opportunity to provide feedback. For any queries, please contact Isabella Darin at isabella.darin@energyconsumersaustralia.com.au.

Yours sincerely,

Brian Spak
Director Policy, Energy Systems Transition