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Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

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Clean Energy Council Submission to the Australian Energy Market Commission's Integrated Distribution System Planning (IDSP) - ERC0410

The Clean Energy Council (CEC) welcomes the opportunity to provide feedback to the Australian Energy Market Commission (AEMC) on its consultation paper regarding Energy Consumers Australia's (ECA) proposed rule change on distribution annual planning processes.

The CEC is the peak body for the clean energy industry in Australia. We represent and collaborate with leading renewable energy and storage companies, along with other key stakeholders in the National Electricity Market (NEM), to drive Australia's transition to a smarter, cleaner energy system.

We support efforts to improve the consistency and transparency of annual distribution network planning. As more households and businesses invest in consumer energy resources (CER), they rightly expect fair access to the grid and confidence that their participation will benefit both themselves and the broader energy system.

Clear, timely, and standardised planning processes help consumers understand how their investments are considered in network planning. They also provide visibility into hosting capacity and local network constraints, enabling networks to prepare for CER growth more proactively. Consistency across jurisdictions also reduces confusion, ensures fairer access regardless of location, and allows service providers, like aggregators, to innovate and scale with greater certainty. Ultimately, better planning builds consumer trust in the energy transition.

The CEC supports progressing the Integrated Distribution System Planning (IDSP) rule change as a "no regrets" step toward enabling broader CER integration. We acknowledge the proposed timeline, release of a Directions Paper in late 2025 and a draft rule in March 2026, is sensible. It allows alignment with related reforms underway, particularly in the DSO/DMO and data transparency workstreams (M3/P5 and M2). Aligning these reforms will help ensure the IDSP process reflects modern energy needs and enables more responsive, future-focused network planning.

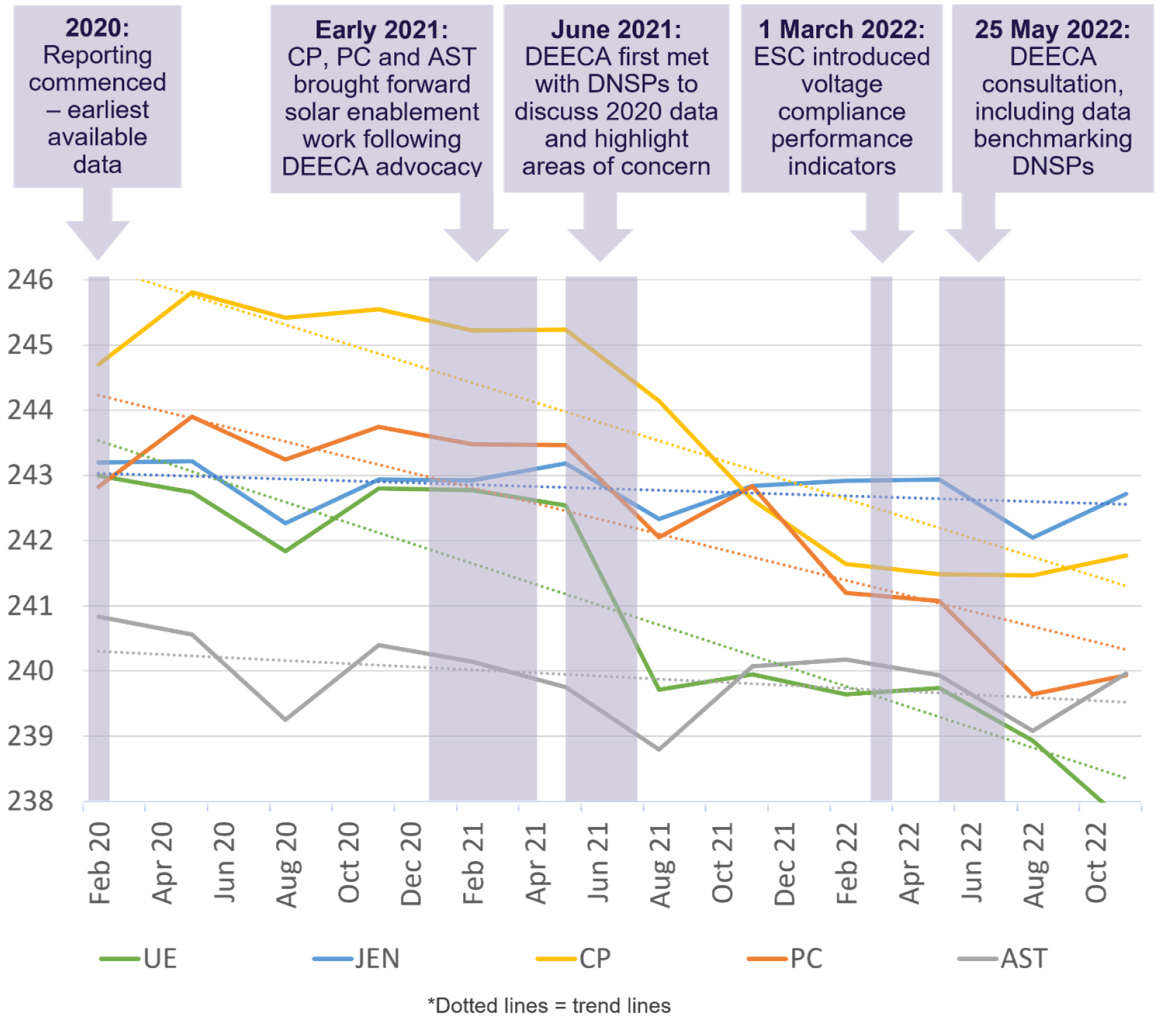
As CER uptake increases, the grid must shift from a traditional one-way delivery model to a two-way, flexible system. That shift demands more forward-thinking, data-driven planning that considers future CER growth, local hosting capacity, and evolving customer needs. Proactive planning not only supports timely network investments but also maximises the benefits of CER for all users.

The following case study highlights how better data, and transparency can support smarter planning and help accelerate CER uptake across the grid.

Case Study on improving network planning and operations through improved data transparency: DEECA Voltage Management Review[1]

In mid-2022, the Victorian Department of Energy, Environment and Climate Action (DEECA) launched a *Voltage Management in Distribution Networks* consultation, aiming to harness the state's growing distributed energy resources (DER) effectively. The core objective: scrutinise voltage levels across Victorian networks and identify root causes of over-voltage concerns, commonly attributed to rooftop solar PV.

DEECA collaborated with Victorian Distribution Network Service Providers (DNSP) to access granular voltage data from smart meters, enabling unprecedented visibility across feeder-level and quarter-hourly intervals. Early reporting showed average voltages trending downward from around 242 V toward nominal target levels as soon as distributors began regular disclosures.



The data unequivocally showed that solar PV exports were not the primary driver of high voltage episodes. Instead, voltage spikes stemmed from network asset configurations and outdated regulation settings. Higher visibility allowed DNSPs to recalibrate transformer taps, manage regulator schedules, and improve on-load tap changer operations, reducing over-voltage incidents without curtailing solar exports.

Victorian DNSPs subsequently adopted several improved voltage management practices and combined with improved reporting through Essential Services Commission's Electricity Distribution Code performance standards, overall voltages were reduced, and greater rooftop solar hosting capacity was enabled.

The remainder of the submission provides responses to some of the specific questions raised in the Consultation Paper.

If you have any queries or would like to discuss the submission in more detail, please contact Con Hristodoulidis (christodoulidis@cleanenergycouncil.org.au)

Kind regards,

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Response to Consultation Questions

What are the shortcomings of the current distribution annual planning process?

We support the ECA view that the current Distribution Annual Planning process is no longer appropriate given the rapid adoption of CER and the accelerating pace of electrification. The process, as it stands, lacks the structure, consistency, and foresight required to facilitate the effective integration of CER into distribution networks and to unlock broader market innovation and consumer value.

A key weakness is the five-year planning horizon, which is too short to support strategic infrastructure decisions for long-term CER growth. Networks require the ability to plan well beyond five years, particularly when investments in digital infrastructure, storage, and flexible export capacity are needed to future proof the grid.

Additionally, DNSPs are not using existing data as effectively as they could. Much of the data already collected through smart meters or low-voltage monitoring is underutilised in planning exercises. Where data is used, there is a lack of consistency in data formats, modelling approaches, and assumptions across DNSPs, leading to fragmented and non-comparable outcomes that limit innovation and third-party involvement.

We also agree that DNSPs often lack robust data strategies to improve data quality and sufficiency over time. Without such strategies, network planning remains reactive, rather than forward-looking. Furthermore, current planning processes are too infrequent and coarse-grained to reflect fast-changing CER uptake or localised network constraints.

Critically, there is insufficient transparency around hosting capacity and constraints, and limited industry/other market participant engagement. Inconsistent network capacity across the NEM distribution businesses affects how CER can connect to and interact with the grid. These inconsistencies stem from differences in infrastructure, planning practices, data availability, and technical standards.

Here are several key examples:

Variability in Solar Export Limits

- Ausgrid allows up to 10 kW export per phase for most residential solar systems.
- CitiPower/Powercor offers static or flexible export limits, with some areas limited to 0–1.5 kW export per household, particularly in rural feeders.
- SA Power Networks pioneered flexible export limits (e.g. 1.5–10 kW per system) using dynamic operating envelopes, but this is not yet widely replicated in other states.

Hosting Capacity Mapping and Transparency

- Energex publishes detailed hosting capacity maps and postcode-level constraints, updated regularly.
- Jemena and TasNetworks have less frequent or lower resolution mapping, often requiring individual customer enquiries for hosting availability.

Network Data Granularity and Availability

- SA Power Networks and AusNet Services have invested in low-voltage monitoring, enabling better planning and more accurate constraint modelling.
- Essential Energy (NSW) and Evoenergy have more limited low-voltage visibility, making it harder to optimise CER exports or manage constraints proactively.

Networks with lower visibility often impose conservative export limits or delay connections to manage risk, disadvantaging consumers.

Better network planning that integrates clear hosting capacity assessments, robust data sharing, and uniform connection standards builds consumer trust, reduces risk, and improves market certainty.

Further, the current network planning process, combined with the use of ringfencing waivers, risks distorting incentives by encouraging distribution businesses to prioritise build, own, and operate solutions over more efficient, market-based alternatives. This approach can lead to underutilisation of existing network infrastructure and reduced consideration of CER or third-party non-network options. Ringfencing waivers weaken competitive neutrality, allowing distribution businesses to bypass procurement obligations and internalise benefits. Recent examples include:

- **AusNet – Pole-Top Battery Energy Storage Systems**: AusNet secured a waiver (Nov 2024–date ongoing) to install pole-top batteries on its network. The waiver application and decision focus on value-stacking potential and efficiency, with no mention of AusNet conducting a competitive market tender for third-party battery providers prior to seeking the waiver.
- **Community Batteries for Household Solar (Class Waiver, Feb 2023)**: This class waiver allows distribution businesses to lease spare community battery capacity funded under government programs. The provisions describe criteria and controls but do not reference a requirement or evidence that distribution businesses ran competitive tenders to source those batteries before obtaining the waiver.

Better network planning can significantly improve the transparency, accessibility, and quality of data on where network service opportunities exist. This includes clearer signals on congestion, hosting capacity, and the timing and location of potential non-network needs. With improved visibility, third-party providers of CER can identify where they can compete to deliver services cost-effectively.

By integrating non-network options earlier in the planning cycle and publishing this data through clear network planning processes, distribution businesses will have less justification to pursue ring-fencing waivers. Instead of developing and owning infrastructure themselves, often under claims of urgency or lack of market readiness, distribution businesses would be required to engage in transparent, contestable procurement processes. This would reduce the reliance on waivers, foster market participation, and support more efficient investment outcomes for consumers.

Does distribution network planning need to be further integrated with the ISP?

The CEC supports the principle that distribution network planning should be further integrated with the Integrated System Plan (ISP). ECA's concerns are valid that distribution forecasts often differ from those used in the ISP, particularly in CER uptake, electrification and demand profiles. These inconsistencies can lead to misaligned investment signals and missed opportunities for efficient, coordinated planning. Greater alignment is needed through shared forecasting assumptions, coordinated scenario planning and more frequent information exchange. This would improve whole-of-system planning, reduce duplication, and enhance investment efficiency.

Is a new distribution planning process required?

The CEC supports exploring a new approach to distribution planning, but we consider a range of options should be scoped beyond the proposed IDSP model.

For example, an alternative could involve DNSPs submitting network needs and constraints via a standardised template to an independent body (eg. AEMO Services or NSW EnergyCo), which then conducts a competitive process to identify least-cost, technology-neutral solutions, like the Capacity Investment Scheme.

This would promote transparency, attract non-network and market-based solutions, and reduce bias toward traditional infrastructure. While the IDSP could improve coordination and visibility, a hybrid model may better balance efficiency and innovation. Costs would include system upgrades and administrative reform, but benefits include improved investment decisions, stronger consumer outcomes, and better alignment with transmission planning and RIT-D processes. Enhanced visibility of distribution constraints could also strengthen Transmission Network Service Provider (TNSP) planning and support more integrated system development. Ultimately, any new process must be based on the following principles: flexible, transparent, and focused on unlocking value from CER and demand-side solutions.

Is a new consultation process needed for the distribution annual planning review?

The CEC supports a revised consultation process for the distribution annual planning review. Current processes are often limited to traditional stakeholders and lacking meaningful engagement with industry and market participants who act as agents on behalf of consumers, such as aggregators, retailers, community energy groups and technology providers. These stakeholders play a vital intermediary role between DNSPs and consumers, offering market-based, innovative solutions that can unlock both consumer and system-wide value.

Engaging these parties would enable DNSPs to better understand emerging technologies, localised constraints, and service-based alternatives to capital investment. This broader consultation could uncover non-network options, support more dynamic grid operation, and improve hosting capacity outcomes.

Consultation should be ongoing, structured, and tailored, including but not limited to activities such as public workshops, calls for proposals, and bilateral meetings. The CEC also supports minimum requirements embedded in the National Electricity Rules (NER) to ensure consistency and accountability.

Are the proposed benchmarking requirements suitable?

The Australian Energy Regulator (AER) should be required to regularly publish comparative reports on planning methodologies, ideally aligned with an updated planning cycle. These reports would highlight best practices, report on inefficiencies and support greater consistency in how DNSPs assess hosting capacity, forecast demand, and plan for CER integration.

Are the existing performance metrics for distribution networks no longer useful with the increasing adoption of CER?

The CEC believes the existing performance metrics for distribution networks are becoming outdated with the increasing adoption of CER. Traditional metrics, such as System Average Interruption Duration Index (SAIDI) and System Average Interruption Index (SAIFI), focus on outage frequency and duration but fail to capture how well networks are enabling CER integration, managing voltage, or supporting flexible exports. For example, the Victorian Electricity Distribution Code still uses voltage thresholds based on outdated standards, while real-world data shows many consumers regularly experience voltages above optimal levels, particularly in areas with high solar penetration[1].

New metrics are needed to assess hosting capacity utilisation, dynamic export enablement, low-voltage network performance and consumer satisfaction with connection outcomes. Some DNSPs, like SA Power Networks, are trialling flexible export performance indicators, but these are not yet standardised across the NEM.

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[1] Voltage performance data | Essential Services Commission & Could Australia's outdated voltage standards be taking years off the life of your toaster? | Energy | The Guardian

Adopting consistent alternative metrics would support meaningful comparisons between DNSPs, improve regulatory oversight, and drive innovation. These metrics are feasible to implement, especially given the growing availability of smart meter and network monitoring data.

Assessment framework

The proposed assessment criteria are broadly appropriate, especially the focus on promoting efficient investment, enhancing consumer outcomes, and supporting CER integration. However, additional emphasis could be placed on enabling innovation and market-based solutions, particularly through greater data transparency and consistent planning processes. The framework should also explicitly consider whether reforms promote competition and third-party participation, critical for unlocking value from flexible demand, VPPs, and DER aggregators.

One area that could be strengthened is the evaluation of distribution planning reforms against whole-of-system outcomes, including alignment with the ISP and transmission planning. A criterion focused on consumer trust and fairness, especially across different regions and customer types, could also ensure equity in access to CER opportunities.

Overall, the criteria are relevant but should more clearly prioritise a forward-looking, consumer-centred distribution system that enables dynamic, interoperable, and technology-neutral solutions to emerge and scale effectively across the NEM.