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Mr Mark Feather
General Manager, Strategic Energy Policy and Energy System Innovation
Australian Energy Regulator (AER)
GPO Box 520
MELBOURNE VIC 3001

Submitted via email: AERinquiry@aer.gov.au

Dear Mr Feather

DRAFT INTERIM GUIDANCE NOTE ON EXPORT LIMITS

Endeavour Energy appreciates the opportunity to provide feedback on the AER's draft interim guidance note on export limits (draft note), which seeks to address gaps in the regulatory framework in relation to the design, implementation and use of flexible export limits.

We welcome the AER establishing clear and consistent guidance from the outset, enabling flexible exports to evolve in a manner that balances network technical considerations with customer desire for transparency and choice in their export service whilst providing customer protections. We consider that the AER's guidance and expectations for export limits are reasonable and consistent with positions reached through our recent 2024-29 regulatory reset process.

We recognise that, as a network management tool, flexible export limits can optimise network hosting capacity by reducing the level of export curtailment that would otherwise occur where only static export limits are used to manage network congestion. Successfully implemented, flexible exports can:

- unlock significant value for customers in their customer energy resource (CER) investments;
- promote equitable participation in energy markets; and
- contribute to emissions reductions needed to achieve net zero ambitions and targets including those referenced in the National Electricity Objective (NEO).

The value of CER exports in facilitating the energy transition is recognised in the Australian Energy Market Operator's (AEMO) Draft 2024 Integrated System Plan (ISP), noting that with a projected high level of consumer participation, coordination of consumer energy assets will be necessary to help meet power system needs and reduce the need for utility-scale solutions. We consider flexible exports can help to provide the orchestration required to integrate the rapid growth in CER into the grid whilst preserving system stability and reliability performance.

Cognisant of these significant system, customer and environmental benefits, distribution network service providers (DNSPs) are taking steps to trial and offer flexible exports to CER customers. By way of illustration, Endeavour Energy is trialling dynamic operating envelopes (i.e., flexible exports) in 2024 allowing up to 10kW to be exported (an increase from our current 5kW static export limit) with a target of launching flexible exports as an optional new connection service from 2025.

We recognise that, due to various reasons (e.g., different CER penetration levels, network visibility, CER compliance rates) each DNSP is at a different phase of development regarding flexible exports, with most at either a trial or pre-trial stage. Notwithstanding this, given the transformative impact flexible exports will have in efficiently integrating CER into the grid, we agree with the need for regulatory oversight of its

implementation to enable it to achieve desired outcomes from a customer and broader energy transition perspective.

In recognising the value of regulatory oversight in the implementation of flexible exports, we consider:

- as protections will inherently be provided under the initial opt-in arrangements, we note the importance of proportionality, in relation to the AER's guidance being commensurate to the risks potentially encountered by customers transitioning to flexible exports, as well as the fact that CER integration expenditure represents a relatively small proportion of DNSPs' total investment costs and the increase in CER export output made available to customers relative to the default static limit option; and
- the outcomes-based approach adopted in the interim guidance note is helpful, as it enables DNSPs to maintain agility in exploring a range of operating models to inform the design of flexible exports beyond trial or initial implementation phase.

We also agree the successful implementation of flexible exports is contingent on increased stakeholder awareness and understanding and agree the implementation of flexible exports should be coupled with an uplift in customer and industry engagement on the issue.

Please see Attachment A for our feedback on specific issues discussed in the draft note. To discuss our submission further please contact Emma Ringland, Head of Regulation and Investments at [redacted].

Yours sincerely,

[redacted]

Colin Crisafulli
General Manager Customer Future Grid
Endeavour Energy

Attachment A – Response to key topic areas

Capacity Allocation Principles

As the allocation of a network's export hosting capacity can have implications for the way customers are able derive value from their CER investment, it is appropriate that DNSPs provide an adequate level of transparency in the way it is shared between customers.

We agree that establishing a set of principles to guide capacity allocation methodologies is appropriate as it affords DNSPs the flexibility to develop approaches that are reflective of their operating circumstances and customer preferences. This flexibility is particularly valuable at this early stage of development to foster innovative ways to support the introduction of flexible exports.

Given the formative stage of flexible exports for several DNSPs might extend beyond the life of the interim guidance note, we consider that this flexibility should be maintained in the future Export Limits Guideline. It may also be appropriate for the allocation principles to be non-binding during this formative stage, using the AER's proposed Export Service Review in 2027 as an opportunity to assess whether the principles need to be amended or made binding to deliver improved outcomes.

The amended Distribution Energy Integration Program (DEIP) capacity allocation principles are clear and unambiguous, provide a sound basis to guide capacity allocation approaches and, in our view, promote the transparency and consistency objectives set by the AER. These principles were developed and tested by a variety of industry and stakeholder groups, providing confidence that they promote positive network and customer outcomes.

DNSPs should have the flexibility to prioritise specific principles to align with network-specific considerations and the feedback and preference of its customers and stakeholders. This would require DNSPs to apply different weights or levels of regard to each of the principles.

Opt-in arrangements

In relation to the principle requiring flexible exports to be offered on an opt-in basis in the near-term, we accept this is appropriate in circumstances where customer awareness is limited. DNSPs must work on establishing a social licence for the orchestration of CER and the broader energy transition. However, once customer understanding and buy-in of flexible exports is more widespread and CER becomes more ubiquitous and hastens the need to manage increasingly complex two-way flows, DNSPs may look to offer them as a standard service.

The absence of alternative transition pathways could result in the prolonged use of opt-in arrangements, potentially inhibiting flexible export services from maturing and delivering the critical mass of participants required for flexible exports to be used an effective system management tool. This risk is more pronounced given heightened expectations for DNSPs to have a greater role keeping the power system operating within safe technical limits through the orchestration of CER. For instance, AEMO's Draft 2024 ISP projects an increase in coordinated CER storage from 0.2 GW today to 3.7 GW in 2029-30 and then 37 GW in 2049-50[1].

We consider that the AER should provide guidance for DNSPs considering transitional arrangements for flexible exports beyond the near term. That is, there should be flexibility regarding the pace of the energy transition and the potential for flexible exports to facilitate it, and flexibility regarding DNSPs having a pathway to transition customers to flexible exports in ways other than through opt-in agreements.

For instance, customers of commercial scale CER are typically well resourced and informed about flexible exports and would not require the same 'guard rail' protections offered to residential customers through opt-in arrangements. Given the size and scale of these CER installations and the whole-of-system benefits from flexibly optimising their output, it would be appropriate to allow DNSPs to require large CER to enter into flexible export agreements.

[1] AEMO, Draft 2024 ISP: A roadmap for the energy transition, 15 December 2023, p. 63

Additionally, we consider providing this flexibility would both complement and be consistent with DNSPs' ability to introduce and allocate export tariffs via transitional arrangements that satisfy the requirements of the AER's Export Tariff Guideline[2].

Allocation level and fairness

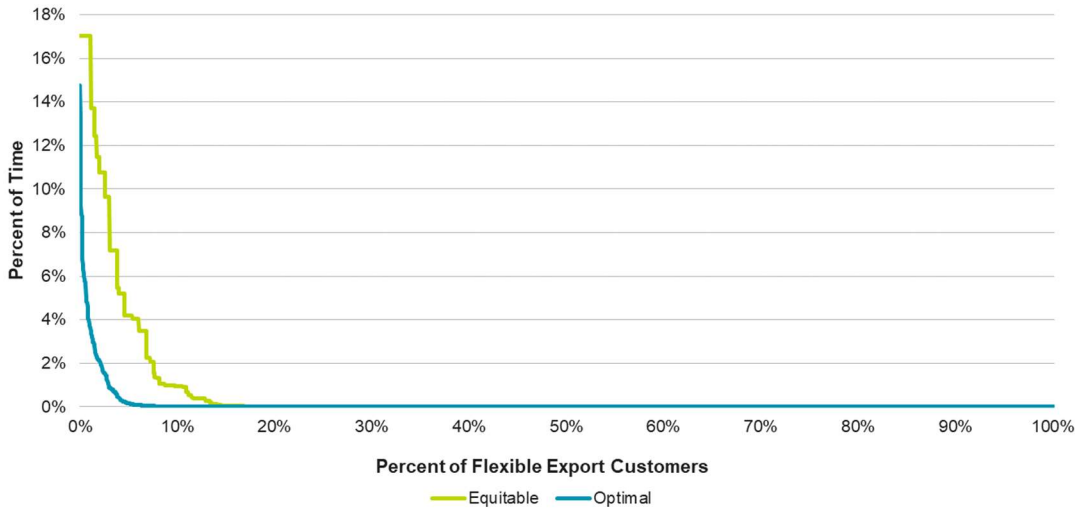
The allocation principles include a requirement for network hosting capacity to be maximised and balanced against customer expectations of transparency, cost and fairness. To satisfy this requirement, DNSPs will need to understand customer preferences around the various trade-offs between maximising exports, cost and providing customers with fair or equitable opportunities to access network hosting capacity across a range of scenarios and models.

There are several models capable of promoting fair or equitable outcomes ranging from equal allocation (i.e. providing all customers the same export capacity) through to optimal allocation (i.e. prioritising allocation to maximise total export). However, we recognise that "fairness" is a subjective concept which can be interpreted differently and as such stakeholders are likely to hold divergent views on the relative fairness of each prospective allocation approach. This complexity underscores the importance of DNSPs consulting with stakeholders on the relative benefits of different allocation approaches to identify a preferred approach.

A related consideration is the network level at which flexible exports limits should apply. From a technical perspective, establishing different export envelopes at the customer level would enable the total export volume to be maximised. However, this may not satisfy stakeholder perspectives of fairness or be feasible due to capability limitations and/or insufficient visibility of the low voltage (LV) network needed to dynamically monitor and alter CER output at individual connection points. Conversely, consistent output envelopes set at the network or zone substation level will deliver equal access opportunities but inefficiently curtail exports.

Our preliminary analysis suggests that allocating capacity at the feeder level would be the most technically feasible and practical approach to balance fairness and network utilisation objectives. The figure below demonstrates the relatively small degree to which an equitable allocation of capacity to customers increases the proportion of time their exports would be curtailed relative to an optimal allocation. In this simulation, "equitable" means providing the same dynamic operating envelope to all CER customers on a given feeder and "optimal" means constraining customer exports based on their relative impact on voltage rise which are typically influenced by their size and location on the feeder.

Figure 1: Availability of maximum export limit under flexible arrangements



[2] An example of such an arrangement is our proposal to transition new and upgrading residential and small business customers who export energy onto our proposed export reward tariff from 1 July 2025 with the opportunity to opt-out. This was accepted in the AER's 2024-29 draft determination. Our ambition is to progress tariff reform by transitioning all export customers to this tariff with no opt-out clause from FY2030.

Furthermore, the analysis also indicates that a significant majority of CER would continue to be unconstrained at any time by the introduction of flexible exports limits, with the proportion of customers impacted by the allocation representing a small subset of the broader CER customer base. The limited customer impact supports our recommendation that the guidance note should provide high-level guidance and proportionate expectations, rather than prescriptive, mandatory requirements.

With respect to the expectation for DNSPs to consult with consumers and industry on the allocation level at which export limits will be set, while we recognise the value of appropriate stakeholder consultation (for example, as undertaken on a regular basis through Endeavour Energy's Peak Customer and Stakeholder Committee (PCSC) and discussed in more detail in the following section), we also recognise the relevance of network conditions and analysis in informing this decision.

Customer and Industry Engagement

We share the AER's view that DNSPs have a key role in increasing consumer and industry awareness and understanding to achieve greater acceptance, trust and buy-in of flexible exports. In this respect, we are committed to building on our 2024-29 regulatory reset process and embedding high quality customer and stakeholder engagement more broadly, including as part of executing CER integration plans.

Quality and extensive stakeholder engagement played a key role in shaping our CER Integration Strategy, which outlines our multi-faceted approach to facilitate the efficient and effective integration of CER. Engagement revealed our customers were keen to be involved in the transition to a low carbon economy and wanted us to take steps to prepare for an accelerated transition[3]. This feedback informed the range and scope of solutions to improve export opportunities including flexible exports which we estimate will enable approximately 500MW of additional solar generation to be exported by 2029.

Our strategy and associated analysis was well received by our stakeholders who indicated it was comprehensive, well considered and aligned to their expectations. While noting some minor modelling issues, the AER considered the case for investment had been broadly met and acknowledged that we had considered a reasonable range of investment options to integrate CER[4]. This endorsement of our strategy by stakeholders and broad acceptance by the AER suggests it would satisfy the AER's expectations, as set out in the draft note.

We have continued to engage closely with stakeholders via the PCSC throughout our Flexible Connections Project, which will develop the processes and systems required to offer flexible exports to our customers, commencing with a trial in 2024. Recognising the need to collaborate with participants more broadly across the sector to promote the uptake of flexible exports, we have committed to work with the solar industry to develop the processes and capabilities needed to expand participation of CER technologies.

Beyond the trial phase, flexible export arrangements will be formalised in Model Standing Offers (MSO). We agree these should be updated to detail the differences between static and flexible export offerings so that export customers can make an informed decision and receive appropriate protection. While the information identified by the AER for inclusion in MSO terms and conditions appears reasonable, we note that DNSPs are currently motivated to proactively notify customers of non-compliance once they become aware; accordingly, introducing an obligation on DNSPs to do so would not improve compliance or customer outcomes. (See further the discussion in the following section regarding compliance with technical standards and, in particular, the work being done by the working group to increase CER compliance and improve the quality of data that is reported to AEMO's DER Register.)

Connection agreements alone cannot be relied upon to convey all the information required by prospective flexible export customers. We therefore consider it would be good practice for DNSPs to supplement the formally worded information in MSOs with the type of information identified in the draft note in a manner that is easily digestible and accessible to a diverse range of customers.

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[3] Endeavour Energy, 2024-29 Regulatory Engagement Summary, October 2022, p.18

[4] AER, Draft Decision: Endeavour Energy Distribution Determination - Attachment 5: Capital Expenditure, September 2023, p.20

We also support an uplift in DNSP engagement with CER manufacturers, retailers and installers, as these are the parties most commonly approached by customers for initial advice about CER and, accordingly, well-placed to inform customers about the benefits of flexible exports and incentive uptake. Industry engagement is also critical to ensure that information provided to customers is accurate and consistent, noting that jurisdictions served by multiple DNSPs may require collaboration among DNSPs to avoid contradictory messaging.

Compliance with Technical Standards

Compliance with technical standards is critical for ensuring CER devices can be safely and reliably integrated in the NEM. In December 2023, AEMO published its most recent analysis showing improving, but still sub-optimal levels of compliance compared to the target of at least 90% of inverters installed from December 2023 compliant to the 2020 standard[5].

Figure 2: Estimates of quarterly compliance to the AS/NZS4777.2:2020 grid code

The report also identifies a range of actions that can be taken by several parties to improve compliance[6]. Relatedly, the AER's draft note suggests that DNSPs should take practical steps to improve compliance, including adopting the AEMC's recommendation to introduce commissioning sheets to verify CER devices have been properly installed and configured. The draft note also suggests DNSPs should engage with participants on CER installation procedures and potentially provide mandatory training or information sessions for CER installers.

We recognise that networks have an important role to play to address gaps in the compliance framework and agree that DNSPs should work collaboratively with other industry participants to identify and pursue opportunities to improve compliance. That said, while it is informative to consider initiatives undertaken across the NEM, their effectiveness may vary between network and jurisdictions. For instance, in relation to commissioning sheets, we understand that some Victorian DNSPs have had limited success in obtaining valid commissioning documents[7]. Furthermore, as installers are already obligated to collect and input CER device information into AEMO's CER Register, and the administrative burden of duplicating an existing process may contribute to this poor outcome.

We acknowledge that, in certain circumstances, DNSPs may not be best placed to lead initiatives that are more appropriately administered by other organisations or bodies. This was recognised by the AEMC in relation to installer training and information, where the AEMC recommended[8]:

[5] AEMO, Compliance of Distributed Energy Resources with Technical Settings: Update, December 2023, pp. 3-4

[6] AEMO, Compliance of Distributed Energy Resources with Technical Settings: Update, December 2023, p. 8

[7] CitiPower, Powercor, United Energy, Response to the AEMC's Review into CER Technical Standards - Consultation Paper, November 2022, p.2

[8] AEMC, Review into CER Technical Standards - Final Report, September 2023, p.31

- mandatory CER standards training for Small-scale Renewable Energy Scheme (SRES) accreditation which is to be undertaken by entities administering SRES accreditation (Recommendation 5);
- jurisdictions to provide funded training for installers on CER technical compliance (Recommendation 6); and
- the Clean Energy Council to publish and make freely available guidance material for installers on the correct configuration of CER devices (Recommendation 7).

Similarly, AEMO recommend[9]:

- Original Equipment Manufacturers (OEMs) better support installers in selecting the correct inverter standard by removing or hiding legacy grid codes, applying location-based default settings, more clearly labelling legacy grid codes and performing regular remote updates.
- the Clean Energy Regulatory investigate opportunities to incentivise and enforce compliance through the product listing process and explore training programs for installers.
- Jurisdictional regulators seek pathways to more explicitly recognise parties central to CER compliance, clarify which organisations are responsible for monitoring and enforcement at each stage of the life cycle of CER devices.

Given that compliance gaps predominantly arise during installation, installer accreditation and representative bodies are best placed to provide the requisite training and support to CER installers, rather than DNSPs. Although DNSPs may have a role in providing input to ensure compliance with network-specific requirements and processes, it is important the AER's training expectations in its draft note do not inadvertently conflict with the broader recommendations of the AEMC and AEMO to improve compliance.

It is also helpful to recognise jurisdiction-specific challenges which could hinder the implementation of initiatives that may have been successful elsewhere. For instance, relative to other states, CER compliance levels in NSW are particularly poor. This is illustrated in our estimate of only 22% of installations in our network area being compliant to our static export limit. Furthermore, the fragmented nature of jurisdictional arrangements in NSW[10] limits DNSP compliance monitoring and enforcement powers and makes it more challenging for NSW DNSPs to improve compliance through independent and bespoke programs.

Consequently, the NSW DNSPs have been having regular discussions with AEMO on this matter and have established a working group of key industry stakeholders including the Office of Energy and Climate Change (OECC) to discuss ways to best increase CER compliance and data quality.

Workshops to date have identified a range of near-term actions related to improving historical CER data and installer awareness which collectively can improve compliance. Significantly, agreement has been reached on the development of an NSW installer engagement action plan which involves DNSPs and other stakeholders undertaking discrete measures to reinforce the importance of DER register completion and DER technical standards compliance training. The working group will reconvene at regular intervals to discuss options for medium to longer-term interventions.

This work is an example of the NSW DNSPs working proactively with government agencies and solar installers to investigate and implement practical solutions tailored to overcome CER compliance challenges unique to NSW. It also reflects our commitment to unlock the value from smart capabilities within CER devices to improve the utilisation of our network for the long-term benefit of our customers.

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[9] AEMO, Compliance of Distributed Energy Resources with Technical Settings: Update, December 2023, pp. 8-9

[10] Fragmentation is reflected by NSW having contestable connections and metering frameworks; distribution networks managed by three separate DNSPs; and CER licencing, compliance, enforcement and accreditation split between the Clean Energy Council and NSW Fair Trading.