

10 September 2020

Mr David Feeney  
Australian Energy Market Commission (AEMC)  
GPO Box 2603  
Sydney NSW 2000

Dear Mr Feeney

**AEMC CONSULTATION PAPER: DISTRIBUTED ENERGY RESOURCES INTEGRATION –  
UPDATING REGULATORY ARRANGEMENTS (ERC0309, ERC0310, ERC0311, RRC0039)**

Endeavour Energy appreciates the opportunity to respond to the AEMC's consultation paper on the rule change proposals of South Australian Power Networks (SAPN), the Total Environment Centre (TEC) together with the Australian Council of Social Service (ACOSS) and St Vincent De Paul Society Victoria (SVDP); *National Electricity Amendment (Distributed Energy Resources (DER) integration – updating regulatory arrangements Rule 2020*.

This request follows the Distributed Energy Integration Program (DEIP), a collaboration of government agencies, market authorities, industry and customer associations examining the value of DER and how it could be optimised in the National Electricity Market (NEM). This rule change also sits within a suite of industry reforms and reviews aimed at facilitating the technological transformation that is occurring within the NEM in a manner that benefits and empowers customers. In particular, the Energy Security Board's (ESB) Post 2025 Market Design for the NEM.

Whilst DEIP did not reach a consensus view on the optimal market design, it did outline a number of short and longer term reforms to address the increasing role of exported energy in the NEM:

- Immediate reforms: updating service definitions and classifications, creating additional planning obligations and/or incentives in the NER to optimise hosting capacity, considering access arrangements and enabling export pricing.
- Longer term reforms: implementation of full two-way access and pricing, accelerating the roll out of smart metering, promote network innovation and improved network visibility, monitoring and integration tools.

The three rule change proposals all address aspects of the DEIP findings with different points of emphasis:

- SAPN: focus on clarifying definitions and pricing principles in the NER and outlining how existing expenditure assessment, incentive scheme and access arrangements can be extended to export hosting capacity as a result.
- TEC and ACOSS: focus on the interaction of access and pricing reforms with the objective of providing a base level of hosting rights, allowing prosumers to earn additional benefits for their exports and allowing prosumers to tailor their level of hosting capacity. There is also a focus on imposing additional planning obligations on networks to maximise hosting capacity and to make investment decisions based on market benefits.
- SVDP: focus on the equitable and efficient pricing of export hosting capacity investment. There is a concern that current pricing restrictions in the NER, namely the ability to apply distribution charges to exporters, will result in non-DER customers (who are more likely to be vulnerable customers) further subsidising DER customers.

We consider this rule change process to be a positive step in implementing changes that will help Endeavour Energy, and all networks, to support the increasing number of customers who want to connect solar and storage devices and export energy into the grid. Currently, there are pockets of significant DER penetration across our network and we expect continued growth, particularly in new development areas in Western Sydney. It is important that a framework is in place for us to efficiently manage these opportunities as they emerge, so we can continue our transition to the energy future and more cost-reflective pricing.

In our view, export hosting capacity should, as far as reasonably practicable, be subject to the same principles and approach as any other service that networks provide. Whilst structural changes across the NEM may be required to adjust to bi-directional energy flows, the NER requires less significant changes to account for DER.

Our position is this rule change is necessary so that when constraints emerge and/or industry or jurisdictional standards are developed, networks will have an ability to plan and invest in an efficient level of export hosting capacity. Networks should also be able to signal the efficient use of DER to customers through the efficient and equitable allocation of the costs and benefits associated with DER use on our network. Our position on the key aspects of the proposed rule changes are as follows.

#### Definitions and service classification

The NER definition of 'distribution service' (and any others as required such a 'retail customer') should be amended to more explicitly acknowledge two-way energy flows. We support the proposed amendments outlined in SAPN's proposal.

Once export hosting capacity is clarified as a distribution service it will be up to the AER to decide on the form of regulation that should apply to it through a determination process. Whilst no amendment to the NER is required, the AEMC may wish to provide guidance on this matter.

We support SAPN's position that export hosting shares the monopoly characteristics of import services and is therefore best suited to regulation as a standard control service with some aspects (like certain connection services) regulated as alternate control services. Similar to import services, network augmentation driven by small customers export hosting demand will most practically be planned and funded via SCS.

#### Expenditure assessment & planning obligations

As above, we do not consider changes to the NER are required. Once clarified as a distribution service, export service investments would be made on the basis of an 'identified need'. Networks will be obliged to maintain existing service levels and meet or manage expected demand for this service guided by the capital and operating objectives in the NER and as assessed by the AER.

We consider the AER's ongoing DER valuation and expenditure assessment review will help clarify how networks can value DER investment and demonstrate its efficiency. We are not supportive of mandating a market benefits test to be applied to all investment. This would be inflexible and increase the risk of over or under investment in export hosting capacity. We also question whether a 'DER integration plan' needs to be a prescribed requirement of a determination. It would be inconsistent with the requirements of other expenditure categories and perhaps better suited to an AER guideline or expectation.

#### Standards and incentives

It will be critical for networks to provide a level of export hosting that customers value. This can be achieved through standards, incentives or both. Noting the ESB's DER Governance review, it may be inappropriate to specify service standards in the NER at this stage. Furthermore, our preliminary view is that jurisdictional regulators are best placed to develop and administer minimum DER standards if required.

Subject to a period of information gathering and valuing DER, incentive schemes could be used to incentivise networks to meet a benchmark level of service or improve their historical performance (where valued by customers). This incentive scheme could focus directly on DER export hosting or power quality more broadly. We support SAPN's proposal that the STPIS could be expanded to include a quality of supply component. Alternatively, networks could propose small scale incentive schemes (like AusNet's proposed Customer Service Incentive Scheme) to address DER hosting and service quality.

### Pricing principles

The pricing objective and principles in the NER remain fit-for-purpose and should enable networks, in consultation with stakeholders and as determined by the AER, to allocate costs and develop tariffs for export customers in an efficient manner and in consideration of the customer impacts.

We do not consider it is necessary to prescribe export pricing structures and doing so would be out-of-step with the pricing approach taken for the other network services we provide. It also creates practical issues like the potential need for separate RABs and could exacerbate the risk of cross-subsidy or mispricing opportunities between import and export pricing.

Overall, we consider the long-term interests of customers' will best be served by a regulatory framework that recognises the bi-directional flow of energy and incentivises an efficient level of service quality through efficient pricing, robust expenditure assessment and incentive based regulation.

Our responses to the questions in the consultation paper are contained in Appendix A to this letter. If you have any queries or wish to discuss our submission further please contact Patrick Duffy, Regulatory Strategy Manager at Endeavour Energy on (02) 9853 4375 or via email at [patrick.duffy@endeavourenergy.com.au](mailto:patrick.duffy@endeavourenergy.com.au).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Danielle Manley', with a stylized, cursive script.

**Danielle Manley**  
**Acting General Manager – Customer Experience**

## Endeavour Energy Question Responses

### **Question 1**

**1. Is the assessment framework, specifically the criteria outlined above, appropriate for considering the proposed rule changes?**

**2. Are there any other relevant considerations that should be included in the assessment framework?**

In assessing the AER's proposed rule change, the first step is to decide whether a rule change is required. The advancement of the National Electricity Objective (NEO) should guide this assessment. We consider the assessment criteria outlined in the consultation paper is suitable for determining whether the proposed rules are likely to promote the NEO.

It may also be worth considering the extent to which the proposed rule complements other ongoing DER related reforms. We appreciate this may not be suited to inclusion in the formal assessment criteria, but it will be important that this rule change fits within the broader suite of industry reforms that are occurring. We view this rule change as a necessary step in enabling longer term reforms that will arise from the ESB Post 2025 Market Design for the NEM review.

### **Question 2**

**1. Should export services be recognised as part of the network services provided by DNSPs to customers?**

Yes – there is increasing demand for this service and an expectation that export hosting capacity will be available in order to manage their electricity usage and cost. The regulatory framework should explicitly recognise the bi-directional transformation that has occurred within the NEM.

**2. Are the proposed definition changes necessary and appropriate to enable export services to be recognised as part of the services provided by DNSPs to customers?**

There is ambiguity in the current definition of 'distribution services', potentially when read with 'retail customers' that a distribution service only relates to the consumption of energy and the conveyance of electricity to customers.

Whilst the current definition may accommodate export services it would be preferable if this was made clearer to avoid any confusion or doubt amongst stakeholders. We support SAPN's proposal that the definition of 'distribution service' be clarified to explicitly recognise that a distribution network conveys electricity *to and from* customers. The definition of a 'retail customer' may also require amendment to give effect to this change.

**3. Are there any unintended consequences that could arise from SAPN's proposed amendments to definitions?**

None to our knowledge.

Although we note that this change would not confer a level of primacy to export services compared to import service (or vice versa), which is appropriate. It simply clarifies that the existing NER service classification, expenditure assessment, planning framework, incentive regulation, pricing framework, etc. also applies to the conveyance of electricity to and from customers via the distribution system.

**4. Are there more appropriate approaches to enable export services to be recognised under the framework that are not considered above?**

The AEMC could clarify how the existing definitions do adequately accommodate the bi-directional flow of energy (if the AEMC held this view). Otherwise we do not see a simpler or more effective approach than that proposed by SAPN.

**5. Are there any other issues related to definitions that the Commission should consider?**

None to our knowledge.

### **Question 3**

- 1. Are the proposed approaches to the classification of export services necessary and appropriate?**
- 2. Are there more appropriate approaches to enable DNSP expenditure on export services to be economically regulated that are not discussed above?**
- 3. Are there any other issues related to service classification that the Commission should consider?**

We do not consider any amendments are required to the service classification framework to explicitly recognise the export of DER as a distribution service. As noted above, once the definitional changes are made (if required) the AER would be able to classify these services in its framework and approach and distribution determination processes.

Whilst this rule change process does not need to directly address the subsequent classification of export services we support the observations made by SAPN. Specifically, that export services involve the use of the shared network and are therefore most likely natural monopoly services that should be regulated as part of a networks' standard control services within a single asset base. Noting that some connections (larger customers) may be regulated as alternative control services.

### **Question 4**

- 1. Should the NER be amended to impose obligations on DNSPs to provide export services as proposed?**

As noted in SAPN's proposal, extending the definition of distribution services will impose an obligation on networks to provide export services. Assuming export services are classified as a standard control service, networks will have an obligation to meet and manage demand for export services and to maintain existing levels of service quality i.e. on the basis of identified need.

We note that DER standards or incentive scheme may impose additional obligations or incentives to provide export services beyond the expenditure objectives. In our view, the expenditure assessment framework and incentive framework will ensure that networks look for least cost solutions to efficiently manage export services, as is currently the case for import services.

We are not supportive of additional obligations being imposed on networks in the NER. For instance, the TEC and ACROSS proposal that networks be obliged to optimise existing infrastructure to maximise DER export hosting capacity. In our view, this elevates export services above import when this may not be reflective of what customers value. Networks should seek to optimise export capacity on the network, but this does not necessarily equate to maximising and this objective is perhaps better achieved via an incentive scheme. Imposing planning standards or obligations on networks could result in over-investment in export hosting capacity.

Relatedly, we note TEC and ACROSS's proposal that a base level of export hosting be introduced that customers would be entitled to and a framework to allow prosumers to 'purchase' additional capacity. We note the ESB's DER Governance Review which may establish an authority or process for setting minimum DER standards. We are supportive of this process and consider jurisdictional differences, such as the number of negative pricing trading intervals, will need to be accounted for in determining an appropriate 'base' level.

We do not think this rule change process is best suited to establishing these standards and we will continue to engage on this issue in other forums. Irrespective of whether a standard export hosting capacity is set we consider the connection process should mirror import connection arrangements and existing connection processes in Chapter 5 and 5A of the NER (which directly address embedded generation connection offers).

## **2. Would it be appropriate to impose obligations on DNSPs to consider network planning solutions in relation to DER integration?**

### **a. Is there a need for the introduction of specific arrangements to guide network planning and investment decisions around additional DER hosting capacity?**

As part of justifying the efficiency and prudence of our capital plans during a determination process it would be necessary for a network to provide details on DER integration and investment strategy. Like any other category of capex, we would need to provide evidence on the investment required to meet our expectations of the demand for export hosting. This would include outlining our asset management practices/risk appetite, our forecasting approach, our consideration of investment options, including non-network options, and justification of our preferred solution.

It is not clear to us why the NER would need to mandate a consideration of DER integration or a formal documentation requirement. The expenditure objectives would require us to consider DER integration and the determination process would effectively require us to publish and consult on our plans/proposal. We note the AER can specify what DER related information it requires as part of a Determination Regulatory Information Notice (RIN) or set out expectations in its DER expenditure assessment guideline which is currently being developed. Between good regulatory practice, the Determination RIN and the AER's DER expenditure assessment guideline, we question whether additional documentation is formally required in the NER.

### **b. Do you consider that a net market benefit test is a useful way to guide DNSP network planning and investment for export services?**

As above, networks should provide an economic assessment of the costs and benefits of proposed investments in justifying the efficiency and prudence of its capex forecast. Network investment will be driven and/or prioritised by a range of factors including demand/need, risk management, compliance obligations, market benefits, etc.

Networks should have the ability to propose investment on the basis of market benefits. The challenge with respect to DER will be reliably valuing the potential benefits. We note the AER's DER expenditure assessment guideline may provide options for doing so. However, it would not be appropriate to mandate that DER export capacity investment below the RIT-D threshold (or other categories of capex for that matter) be justified solely by reference to a mandated net market benefit test. It is a useful guide but not the only guide of network investment needs.

The expenditure objectives, criteria and factors remain appropriate, particularly as complemented by more detailed, category level guidelines. In conjunction with the incentive schemes, networks already have strong incentives to optimise the cost to benefit ratio in addressing network needs. An additional planning requirement for export services, in this case a net market benefit test, is not necessary and may actually constrain investment currently with uncertainty around valuing the broader benefits of DER and in the future where investment could be driven by DER service standards.

## **3. Should a principle for the allocation of export capacity in the NER be introduced? If so, what principle should be included?**

No. The pricing objective and principles already provide a suitable framework for guiding the allocation of residual and incremental export capacity costs. This allocation should be determined under the existing pricing rules in consultation with customers and stakeholders during the determination process. NER clause 6.18.5 does not embed a "first come, first served" or auction approach to allocating DER export hosting capacity.

We consider a DER access/service standard can more directly address concerns around fairness in the allocation of DER export hosting. As noted above, other industry reviews are more directly considering the issue of minimum DER access standards. Also, mirroring the connection process and principles that apply to import/consumption services are likely to be suitable for the connection of export services.

## **Question 5**

### **1. If 'distribution services' expressly include export services, are there any regulatory barriers to adapting existing incentive schemes to export services?**

No. If export services are included within 'distribution services' there are no barriers to the AER amending existing incentive schemes to cover DER export hosting or introducing new incentive schemes via a rule change.

### **2. Should the STPIS be extended to export services or is a new incentive scheme required?**

Our preference is an extension of the STPIS to include voltage quality. This is the best proxy for export capability and most DER curtailment is due to voltage rather than thermal capacity. Where voltage is not an issue, the network has at least the same capacity to accept exports as it has capacity to supply load (generally more of course as any coincident load negates the exports).

We support SAPN's objective of providing export services commensurate with customer demand and consider this will best be enabled by incentivising voltage optimisation. It is also worth noting that there are more benefits from voltage optimisation than DER export capability, including appliance lifetime improvement and avoided appliance energy wastage, for all customers. We consider an incentive scheme that incentivises the service quality received by both DER and non-DER customers would be preferable.

Relatedly, there is a question of whether the reliability component of the STPIS needs to consider the value of lost opportunity for export in the incentive rates. We note the AER completed a VCR study in 2019 and are currently reviewing DER valuation. If the STPIS is reviewed to introduce a quality of supply component, the reliability component may also require review.

The alternative to the STPIS is a new incentive scheme being introduced via a rule change, potentially after being trialled by networks and the AER via the small scale incentive scheme provisions in the NER (akin to AusNet's recently proposed Customer Service Incentive Scheme).

### **3. If the STPIS or a new incentive scheme is to apply to export services:**

#### **a. What are the practical challenges of designing relevant performance measures and collecting robust data? Can these challenges be overcome over time?**

As with the reliability component of the STPIS, there could be a period of data gathering to baseline performance prior to introducing an incentive scheme.

We recommend the scheme focus on voltage as it is measurable and there are good techniques available to extrapolate population performance values based on statistical samples of customer measurements. This means a reliable dataset can be developed even in jurisdictions with lower penetration of smart metering (as a voltage scheme will not require measurement of the whole population). Voltage is also less sensitive to year by year performance fluctuations so a shorter data gathering period, than the five years used for reliability, could be used to establish performance targets.

In our view, developing different measures for export services, such as direct measuring of gross DER exports, will be far more challenging to implement.

#### **b. Should the details of the scheme be prescribed in the NER or is it appropriate for the AER to design the scheme?**

We do not consider the NER should prescribe the details of the scheme but rather the objective and principles to guide its development. In the case of a DER or voltage scheme we recommend it form part of the STPIS. We consider the existing objective and factors are appropriate (with the exception of the clause noted below).

#### **c. Are there any additional factors the AER should be required to take into account (eg, under NER clause 6.6.2 relating to the STPIS)?**

Clause 6.6.2(i) may require modification to more explicitly recognise exporters of electricity. Currently, it makes reference to the need to ensure that benefits to electricity *consumers* likely to result from the

scheme are sufficient to warrant any reward or penalty under the scheme for the network. The reference to 'consumers' may need to be replaced or expanded to also recognise 'producers' or 'exporters'.

It is also worth noting that the value of curtailed energy is currently relatively low for the average DER customer based on recent studies. In accordance with 6.6.2(i), as modified by this rule change, the reward or penalty for curtailed energy would be low. A more holistic view of the benefits of voltage optimisation (beyond export capacity) would likely result in a stronger case for implementing an incentive scheme.

**d. Do export service standards (to meet customer expectations) need to be established to set a performance 'baseline' for the incentive scheme?**

Not necessarily. Many jurisdictions currently set minimum reliability standards as a safety net for customers. The same could be done for export services but may not be necessary if the incentive scheme provides adequate incentive to address worst served customers.

For the purposes of establishing an incentive scheme a baseline of historical performance will be required to set targets. A standard would only be required if a benchmark level of service was being incentivised via the scheme, which would be out-of-step with how the reliability and customer service components of the STPIS operate.

However, this highlights another potential advantage of a voltage scheme as baseline standards already exist which can be applied across the NEM (rather than locational differences needing to be factored in). We do note Australian standards are currently 230V +10, -6%, if a scheme were to apply this standard would ideally be symmetrical. For instance, the European standard is 230V ±10%.

**Question 6**

**1. Should DNSPs have the option to propose to the AER charges for export services?**

Yes. Networks should be able to apply charges (positive or negative) to export services, excluding large generators, where it is efficient to do so.

**2. What are the potential benefits and costs of enabling export charges?**

Enabling export changes would enable networks to better signal (as necessary) the efficient use of DER to customers and more equitably allocate the costs or benefits associated with DER enablement and deployment. Cost-reflective price signals for export services should reduce future investment requirements by incentivising the efficient use of DER. It would also allow networks to reduce cross-subsidies that may exist in the allocation of the costs and/or benefits associated with DER export enablement

**3. If customers can already negotiate 'deeper' connection agreements, is a 'supplementary' connection arrangement required to allocate DER-related costs – as proposed by TEC/ACOSS?**

We consider the existing connection arrangements under Chapter 5 and 5A of the NER are appropriate as complemented by the determination process which classifies services (including connection services) and establishes a networks connection policy.

For the most part, we expect most DER customers will connect via the basic connection offer process, under an AER approved model standing offer. It is unlikely that small customers will need to go through the standard connection offer process and even more unlikely that small customers will trigger a negotiated connection application under rule 5.3A of the NER.

In which case, small customers will not be required to make a capital contribution towards the cost of associated network augmentations and these costs will instead be funded via standard control service revenue. We note that if any connection charges are required under a standard or negotiated connection process the NER provides guidance on how these charges are to be developed as well as the AER connection charge guidelines. We also note that schedule 5A.1, Part B of the NER provides for a separate and distinct set of requirements to be contained in a connection offer made to customer connecting embedded generation. We do not consider changes are required to this framework.

**4. If NER clause 6.1.4 is removed, and DNSPs are able to develop tariffs for export services:**

**a. What are the implementation issues?**

**b. Should the existing tariff structure statement process and pricing principles apply? For example, is a principle required to guide DNSP decisions on cost allocation between consumption and export services – as proposed by SAPN?**

**c. Are transitional or 'grandfathering' arrangements needed and, if so, should they be prescribed in the NER?**

We consider the existing pricing framework is reasonable and will allow networks to address these issues in consultation with customers, stakeholders and the AER through the determination process. We do not consider additional principles or arrangements are needed or should be specified in the NER.

**5. Should the regulatory framework better recognise the benefits DER services provide to DNSPs? For example, does SAPN's proposal to allow for negative prices address the issue?**

In our view networks can offer rebates under the existing pricing rules. However, the clarification proposed by SAPN would confirm our understanding. However, we note direct network support payments are likely to be simpler and more effective as direct reward payments are less likely to be lagged and not dependent on the customer's retailer passing it through.

**6. Should these reforms only apply to small customers?**

With respect to 6.1.4 yes, the prohibition of DUOS charges for the export of energy should remain for larger generators. We also note the concurrent Integrating Storage rule change process will consider the issue of what network charges should apply to the energy consumed by bi-directional resource providers (i.e. large batteries).