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Sent via email: [AERresets2024-29@aer.gov.au](mailto:AERresets2024-29@aer.gov.au)

Dear Dr Funston,

### **Framework and approach for NSW, ACT, TAS & NT: Preliminary positions paper**

SA Power Networks welcomes the opportunity to comment on the Australian Energy Regulator's (AER's) Framework and approach for NSW, ACT, TAS and NT preliminary positions paper, released for consultation on 11 April 2022.

This Framework and Approach (F&A) process has implications for the energy market beyond the businesses regulated for the 2024-29 regulatory control period, as it will potentially determine the type of economic regulation that the AER will apply to services provided by all distribution network service providers (DNSPs) in subsequent regulatory determinations.

Following the Australian Energy Market Commission's (AEMC's) access, pricing and incentive arrangements for distributed energy resources (DER) rule change, export services are now explicitly captured within the scope of 'distribution services' and can now be formally classified.

SA Power Networks' submission on this F&A is largely confined to the proposed classification of export services. Our key views are that:

- The classification of the export services should be consistent with the classification for consumption-based services, as they are delivered through common network assets;
- Distribution of export energy already forms part of the common distribution service as defined in the AER's Service Classification Guideline, which is classified as a Standard Control Service (SCS);
- An Alternative Control Service (ACS) classification is better suited to situations where costs of service provision, and the assets used in service provision, are able to be directly attributed to the customer requesting the service;
- Efficiency in the use of DER is best provided by distributors being able to send price signals to customers, this is most effectively managed through an SCS classification where prices are developed as part of the broader SCS DUOS pricing;
- Classification of export connections should align with consumption connections, providing greater consistency in the treatment of consumption, generation and battery connections. This also recognises the ability for DNSPs to charge for export energy in the future.

- Augmentation associated with large embedded generators should be classified as SCS, with customers paying augmentation charges in accordance with the DNSPs Connection Policy. This recognises the shared nature of these assets;
- Large embedded generation connections under Chapter 5 of the National Electricity Rules (NER) will continue to be treated as ACS and fund all costs associated with their connection to the distribution network;
- Export services do not need to be explicitly listed in the AER's Service Classification Guideline baseline list of services; and
- Each DNSP's Connection Policy would detail the relevant load / export limits that may apply to each connection type taking into account intrinsic hosting capacity and consideration of network constraints.

Broadly speaking, as export services involve the use of the shared distribution network to export energy, these are natural monopoly services that should be regulated by the AER and provided for in networks' SCS regulated revenue allowance.

If you have any queries or require further information in relation to our submission, please contact Debbie Voltz on [REDACTED]

Yours sincerely

[REDACTED]

Mark Vincent  
EXECUTIVE GENERAL MANAGER STRATEGY AND TRANSFORMATION



## Background

The rapid growth in distributed energy resources (DER) has fundamentally changed the role of the distribution network, with the Australian Energy Market Commission (AEMC) formally recognising export services are part of the core services provided by distribution network service providers (DNSPs) in its access, pricing and incentive arrangements for DER rule change<sup>1</sup>. The package of reforms under the AEMC's final rule has three key components:

- Clear obligations on DNSPs to provide export services;
- Enabling new network tariff options that reward customers; and
- Strengthening consumer protections and regulatory oversight.

Export services are provided through the shared distribution network. This rule change recognises that distribution networks that were initially built to bring electricity one-way to consumers are now being used by consumers to export their surplus generation into the grid. While networks inherently have a basic level of capacity to support exports, this capacity is rapidly being exhausted, with customers facing growing limitations to the amount of energy that can be exported whilst maintaining network stability. The explicit recognition of export services as a distribution service by the AEMC means that the existing planning and investment requirements, incentive schemes and controls that currently apply to consumption services will now also apply to a DNSP's provision of export services.

We note that the Australian Energy Regulator (AER) is required to update the Service Classification Guideline to reflect the AEMC's final rules by 1 July 2022.<sup>2</sup>

In classifying a direct control service as a Standard Control Service (SCS) or Alternative Control Service (ACS), the AER must have regard to:

- the potential for development of competition in the relevant market and how our classification might influence that potential; and
- the possible effects of the classification on administrative costs; and
- the regulatory approach (if any) applicable in the preceding regulatory control period; and
- the desirability of a consistent regulatory approach to similar services (both within and beyond the relevant jurisdiction);
- the extent the costs of providing the relevant service are directly attributable to the person to whom the service is provided; and
- any other relevant factor.<sup>3</sup>

When considering the classification of export services, export services need be treated no differently to consumption-based services given the AEMC's rule change. It is useful to consider the distribution of export energy and the establishment of export connections separately, where these are defined as follows:

- Distribution of export energy – the provision of distribution services to convey power exported to the network; and

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<sup>1</sup> AEMC, National Electricity Amendment (Access, Pricing and Incentive arrangements for Distributed Energy Resources) Rule 2021, Rule Determination, 12 August 2021

<sup>2</sup> AEMC, National Electricity Amendment (Access, Pricing and Incentive arrangements for Distributed Energy Resources) Rule 2021, Rule Determination, 12 August 2021, page xi

<sup>3</sup> National Electricity Rules, cl. 6.2.2(c)(1-6)



- Connection of export energy – the establishment of a new connection or upgrading of an existing connection to the distribution network that has capacity to export energy to the grid.

## Distribution of export energy

Following the AEMC’s rule change, in particular, the change to definitions in the National Electricity Rules (NER), export services are now explicitly captured within the scope of ‘distribution services’ and can now be formally classified. In doing so, we think that the current definition of ‘common distribution service’ set out in the AER’s Service Classification Guideline, and the listing of activities under that service, does not need any explicit amendment. Distribution of export energy, while not explicitly listed, already forms part of the common distribution service, which relates to the conveyance or flow of electricity through the network for consumers<sup>4</sup> (whether that be, to or from customers). Common distribution service includes, but is not limited to, the following activities:

- the planning, design, repair, maintenance, construction, and operation of the distribution network;
- relocation of assets that form part of the distribution network;
- works to fix damage to the network (including emergency recoverable works); and
- procurement and provision of network demand management activities for distribution or system reliability, efficiency or security purposes.

These distribution activities are classified as a SCS, with associated costs shared by all customers and recovered under the SCS revenue cap form of control. As the AEMC’s rule change recognises distribution services include export services, there is no requirement for export services to be explicitly recognised as a stand-alone activity within the common distribution service category. This is consistent with the current approach undertaken for consumption services.

Classification of the distribution of export energy as ACS presents a number of challenges, including the need to create a new Regulated Asset Base (RAB) for export services. This is infeasible given that consumption and export services will typically draw on common network assets, and the assets themselves cannot be ‘split’ between two RABs. ACS is better suited to situations where costs of service provision, and the assets used in service provision, are specific to a customer request, for example metering and public lighting.

We note that Farrierswier also were engaged by the AEMC during the rule change process to consider the effectiveness of the Tariff Structure Statement (TSS) process and options for implementing export charges. Farrierswier found that augmenting the existing SCS DUoS service was the most straight forward pathway to implementation.<sup>5</sup> They acknowledged that DNSPs would need to include these services and their tariff structures in their TSS and apply the network pricing objective and principles in the NER.

The AER recently released new Export Tariff Guidelines<sup>6</sup>, which detail the principles to be considered in setting tariffs to reflect the long run marginal cost of providing export services. Export charges should reflect the long run marginal cost of providing additional (incremental) export service capacity including:

- any augmentation capital expenditure linked to the export service;
- potentially, some portion of replacement capital expenditure, because some replacement expenditure decisions may vary depending on demand for the export service; and

<sup>4</sup> AER, Electricity Distribution Service Classification Guideline, September 2018, page 9

<sup>5</sup> Farrierswier, Insights report: Effectiveness of the TSS process and options for implementing export charges, 11 March 2021, page 38

<sup>6</sup> AER, Export Tariff Guidelines, May 2022



- operating expenditure dedicated to providing additional export service capacity, or a proportion of this opex if it is incurred to provide both the export and consumption service.<sup>7</sup>

ACS charges tend to be static and are suited to one-off service requests, or in the case of public lighting, to services that can feasibly be charged under an annuity pricing approach. Efficiency in the use of DER is best provided by distributors being able to send price signals to customers. Prices may vary depending on times at which exports can help the manage stability of the network and may include positive or negative (rewards) prices as intended by the AEMC's rule change. A static charging approach is likely to lead to inefficiency for customers directly, and inefficiency in the management of network constraints.

An ACS classification also inhibits the ability for distributors to consider phasing in export pricing in an effort to manage impacts on customers (a requirement under the pricing principles in the NER). For example, under a SCS classification, in seeking to manage customer impacts, DUOS tariffs for exports might be phased in over a number of years for existing DER customers. This would mean that a portion of costs of export service provision would continue to be recovered from all customers, this will not be possible if the service is classified as ACS.

SA Power Networks supports the classification of export services as SCS, noting export services are already implicitly included in the activities included within the common distribution service, and the listing of activities under that service. There is no requirement for export services to be explicitly recognised as a stand-alone activity within the common distribution service. This also recognises that integration of DER into the electricity grid benefits all electricity users, with DNSPs incentivised to reduce the cost of delivery of export services and share the efficiency benefits with all customers. In addition, many investments that provide additional export capacity, for example, conductor or transformer upgrades, will also provide additional capacity for consumption-based services provided to customers.

## Connection of export energy

The AEMC's rule change highlighted that DNSPs have been connecting a growing number of customers with DER over the past decade, doing so under a regulatory framework that was developed for a one-way transportation system. This has led to a varied approach to customer connection and the level of export services provided to customers, as well as different approaches and interpretations of the type and level of expenditure to accommodate the additional demand for export services<sup>8</sup>.

SA Power Networks' AER approved Connection Policy applies to all demand and embedded generation connections and sets out the circumstances in which connection charges are payable for establishing new connections or making connection alterations and the basis for determining such charges. This policy has been prepared in accordance with the requirements in Chapters 5A and 6 of the National Electricity Rules (NER) and the AER's Connection charge guidelines for electricity retail customers, under Chapter 5A of the National Electricity Rules, version 1.0 (AER connection charge guidelines for electricity retail customers). We note that the AER is required to update its Connection Charge Guideline to reflect the final rules by 1 July 2022.<sup>9</sup>

For the 2020-25 regulatory period, SA Power Networks applies three distinct connection types, these are summarised in Table 1 below.

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<sup>7</sup> AER, Export Tariff Guidelines, May 2022, page 12

<sup>8</sup> AEMC, National Electricity Amendment (Access, Pricing and Incentive arrangements for Distributed Energy Resources) Rule 2021, Rule Determination, 12 August 2021, page ii

<sup>9</sup> AEMC, National Electricity Amendment (Access, Pricing and Incentive arrangements for Distributed Energy Resources) Rule 2021, Rule Determination, 12 August 2021, page xi



Table 1 – SA Power Networks’ classification of connection services - 2020-25<sup>10</sup>

Connection Type	Description	Service Classification
<b>Basic Connection Service</b>	<p>Basic connection services are those connection services we provide on a routine basis and generally at a fixed fee.</p> <p>Types of customers:</p> <ul style="list-style-type: none"> <li>• residential customers (requiring no extension or upgrade);</li> <li>• small business customers; and</li> <li>• small embedded generators.</li> </ul>	<b>Standard Control Service (SCS)</b>
<b>Negotiated Connection Service</b>	<p>Negotiated connection services are generally more complex and more likely to require us to augment or extend our network.</p> <p>A shared network augmentation charge may also apply where the customer’s estimated maximum demand exceeds established thresholds. They may include two or more of the following components:</p> <ul style="list-style-type: none"> <li>• premises connections; and/or</li> <li>• extensions; and/or</li> <li>• network augmentation</li> </ul>	<p><b>Alternative Control Service (ACS)</b> Premises connections</p> <p><b>Standard Control Service (SCS)</b> Extension and Augmentation</p>
<b>Enhanced Connection Service</b>	<p>These connection services are provided at a standard that is above the least cost technically acceptable service (LCTAS), at the request of customers and charged at full additional cost of works.</p> <p>Customers are typically required to make a capital contribution that is additional to any other requested services including a request for a Standard connection service.</p> <p>Examples would include requests for a connection service that has:</p> <ul style="list-style-type: none"> <li>• increased reliability, standards, duplicate supply and upgrade from overhead to underground service;</li> <li>• excess levels of capacity or service; and/or</li> <li>• large embedded generators.</li> </ul>	<p><b>Alternative Control Service (ACS)</b> component in excess of LCTAS</p> <p><b>Standard Control Service (SCS)</b> Extension and Augmentation up to LCTAS.</p>

Small embedded generation is currently treated as a basic connection, this includes generators with a capacity of 5kW or less for a single-phase connection or 30kW or less for a three-phase connection. Large embedded generators, are classified as enhanced connections. This includes generators with a capacity of more than 5kW for a single-phase connection or 30kW for a three-phase connection.

Small embedded generation customers are not charged for use of the distribution system nor charged any upfront charge for augmenting the distribution network. They would pay upfront to upgrade their connections assets if the generator’s export exceeds the capacity of their existing load connection. Large embedded generators will be required to pay the full cost of their connection as well as any extension or augmentation work required to support their connection, where these charges are administered as ACS.

In determining charges for non-registered large embedded generators, the following methodology is currently applied:

- The capital contribution required from the connection applicant will be calculated based on the total cost of the works required to support both the generation and load components of the connection service including addressing immediate network constraints;

<sup>10</sup> SA Power Networks Connection Policy for 2020-25, Table 1 page 4-5



- It is assumed no incremental revenue will be received by SA Power Networks from the generation component (e.g. no charges will be applied for export of power); and
- The relevant load for the purposes of calculating the contribution for augmentation will be the gross peak demand of the load, regardless of the embedded generator's expected electricity output.<sup>11</sup>

SA Power Networks' Connection Policy does not apply to embedded generators who are registered participants, (that is registered by AEMO to participate in the National Electricity Market), these applications are assessed in accordance with Chapter 5 of the Rules.

Noting the AEMC's rule change, SA Power Networks supports updating the classification of export connections to align with the classification for consumption-based connection services. This will provide greater consistency in the treatment of consumption, generation and battery<sup>12</sup> connections. The order a customer connects load or generation should not matter, the overall amount they pay should be the same. SA Power Networks is finding instances where customers are undertaking an initial generation connection and funding the required immediate augmentation works and then at a later date connecting a load where they may be charged an augmentation charge (ie \$/kVA) in accordance with our approved Connection Policy. Aligning the classification of consumption and export service connections will minimise this.

The proposed approach to align the classification of consumption-based and export connection services also recognises the ability for DNSPs to charge for export energy in the future, where costs allocated to consumption and export services should not overlap. Aligning consumption-based and export connection services will result in the following impacts to the classification of connection services:

- No change in the classification for small-embedded generation connections, with these continuing to be treated as basic connections.
- Large embedded generators connecting under Chapter 5A of the NER, would generally be classified as a negotiated connection. This is a change from our current classification, where large embedded generators are all classified as enhanced connections. As a negotiated connection, these customers would fully fund the premises connection (ACS), with any extension or augmentation classified as SCS. Consistent with negotiated consumption-based connections, large embedded generators would pay a capital contribution towards augmentation (less the relevant incremental revenue rebates), with these charges determined in accordance with the Connection Policy.
- Large embedded generator connections requested above the least cost technically acceptable service (LCTAS), would be treated as an enhanced connection. In this case the customer will fully fund the premises connection (ACS), with any extension or augmentation up to LCTAS treated as SCS, capital contributions for augmentation costs will continue to apply. The customer will also fully fund all work required above LCTAS.
- Large embedded generators connecting under Chapter 5 of the NER (i.e. as a registered participant) will continue to be treated as an enhanced connection, with these customers paying all costs associated with their connection to the distribution network as ACS.

Recovering network augmentation costs via SCS appears to be more consistent with the 'open access' nature of the regulatory framework, whereby customers do not get firm access rights and do not 'own' any particular network assets. As more customers connect DER over time, network hosting capacity is intended to be equally shared across all DER customers, regardless of when they have connected to the

<sup>11</sup> SA Power Networks Connection Policy for 2020-25, section 2.2.3 page 10

<sup>12</sup> Batteries which can both charge from the distribution network and discharge back into the distribution network, are treated as consumption when charging (importing from the grid) and an embedded generator when discharging (exporting to the grid).



network. Charging customers upfront via ACS might create the perception that those customers now own a certain level of network capacity.

Consistent with our approach to the distribution of export services, it is not necessary to explicitly list export connection services within the description for each of the connection service groupings in the framework. Any additional detail will be referenced within the DNSP's Connection Policy. This would include the relevant load / export limits that may apply to each connection type taking into account intrinsic hosting capacity and consideration of network constraints.

