



Ms Anna Collyer  
Chair  
Australian Energy Market Commission (AEMC)  
Submitted online: <https://www.aemc.gov.au>

27 May 2021

Dear Ms Collyer

### **Submission to AEMC draft rules for integrating distributed energy resources**

SA Power Networks is pleased to provide the attached submission to the AEMC Draft Rule Determination—Access, pricing and incentives arrangements for Distributed Energy Resources (DER).

SA Power Networks is the primary electricity distribution network service provider (distributor) in South Australia, serving approximately 900,000 customers in communities across our state. We are also at the forefront of the distributed energy transition, with a third of our residential customers now having their own rooftop solar generation and increasing investment by business in solar and battery systems. With a total installed capacity of over 1,500 MW, taken together, distributed solar is now the largest single generator in our state.

As one of the original rule change proponents, together with consumer and environmental advocates, we have been advocating for reforms to update the regulatory framework in relation to DER. This is to ensure that the framework can effectively accommodate the significant transformation in the way our customers want to use energy and our distribution network. We want to support customers' desires to generate renewable energy, store and share this energy through our network, in an efficient way for these customers and the broader customer base.

We consider that the current regulatory framework, largely written when DER was not prevalent, will not continue to best serve our customers' needs. The framework lacks clarity on customers' rights and distributors' obligations. As networks each approach, at differing times, their inherent capacities to support energy exported from customer DER, threshold questions arise and it is imperative that we resolve these now, particularly given the long timeframes in actioning regulatory reform. These questions are whether distributors should:

1. invest in additional network hosting capacity to enable customers to export their solar energy;
2. achieve particular levels of service performance for DER customers; and
3. signal the network costs and benefits of solar exports to DER customers via network tariffs (charges or rewards to customers).

To this end, we strongly support the AEMC Draft Determination. We welcome the AEMC's response to the abovementioned questions, in particular by proposing that:

1. distributors should have regulatory obligations to meet and manage demand for 'export services', using existing regulatory arrangements for network planning and expenditure assessment, and ensuring that customers can continue to connect DER and export their excess energy;
2. regulation should provide for all incentive schemes to apply to distributors' provision of export services, including with respect to service performance, to provide customers with greater confidence in the service levels that distributors should achieve; and
3. distributors should be allowed, in consultation with their customers and stakeholders, to set prices for export services, to signal the costs and benefits of solar exports, via network tariffs that charge or reward DER customers in a cost reflective way for their use of the network.

The draft determination proposes a comprehensive and clear framework, with minimal change to existing regulation and with additional consumer safeguards. The framework is largely principles-based, and does not pre-determine required network investment nor the form of any export pricing. This enables each distributor to have an open dialogue with their own customers (DER and non-DER) and stakeholders, including governments, on the approaches that best suit their circumstances. This effectively empowers customers. Ultimately, the regulator's oversight will serve as the final back-stop to ensuring that any network spend is needed, efficient and that tariff approaches appropriately balance economic goals with the management of customer impacts.

Our submission outlines our detailed comments on the Draft Determination. We raise some issues requiring further consideration to ensure that the specific drafting of the rules accords with the policy intent of the reforms. Our submission does not provide specific re-drafting suggestions. Rather, given the detailed nature of this task, we would instead welcome further collaborative engagement with the AEMC on how the drafting of the rules can best match the policy intent.

If you would like to discuss the contents of this submission, please contact Bruno Coelho on 0419 666 389 or [bruno.coelho@sapowernetworks.com.au](mailto:bruno.coelho@sapowernetworks.com.au)

Yours sincerely



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# Access, pricing and incentive arrangements for DER

Submission to AEMC draft rule determination

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## Executive summary

SA Power Networks is the primary electricity distribution network service provider (distributor) in South Australia. We believe that by enabling the continued uptake of customer's Distributed Energy Resources (DER), our network can support the transformation of our state's energy system to one that is safe, reliable, affordable and decarbonised.

In the last decade, the rapid growth in rooftop solar has fundamentally changed the role of the distribution network. Our customers are no longer just consumers of energy but, increasingly, producers, and now expect to use the network to share their surplus energy with others.

In 2019, the Australian Renewable Energy Agency (ARENA) sponsored a review involving stakeholders from across the electricity sector, initiated by customer advocates, to consider how the regulations governing distributors should be updated to reflect these changing customer needs. This review recognised that, as networks begin to approach their intrinsic capacity to transport energy upstream, several threshold questions arise, and regulation lacks guidance on how these should be addressed. These questions include:

1. should distributors invest in additional network hosting capacity to allow energy exported from customers' DER;
2. what service performance level(s) should distributors achieve for DER customers; and
3. should the costs of network hosting capacity be recovered from all customers or DER customers only?

As one of the original rule proponents<sup>1</sup>, along with environmental and consumer advocates, we are advocating for reforms to update the regulatory framework to clarify customers' rights and distributors' obligations.

To this end, we strongly support the AEMC Draft Rule Determination (Draft Determination, or Draft Rules). It provides a clear and comprehensive framework that supports efficient network investment in hosting capacity in line with customer demand, while minimising regulatory change and providing additional customer safeguards. Consistent with current practice, the framework is principles-based, and does not pre-determine network investment levels nor any export pricing outcomes. This enables distributors to have a dialogue with their customers (DER and non-DER) and stakeholders on approaches that best suit their circumstances. Flexibility empowers customers to have a voice on regulatory outcomes.

We support the key elements of the Draft Determination which propose that:

- **export services should be recognised in regulation**—ensuring regulation is fit-for-purpose and applies clearly to DER customers and distributors;
- **distributors should be obligated to invest in network capacity** to enable customers to export energy from their DER—providing clear requirements to plan to meet or manage customer demand for the export service, and allowing customers to continue to connect DER and export their energy.
- **performance incentives should be applied to export services**—improving DER customers' expectations on service levels, and holding distributors accountable for the service they provide; and
- **pricing of export services should be allowed**—enabling distributors to consider, in consultation with customers and stakeholders, signalling the network costs and benefits of solar exports via network tariffs which charge or reward DER customers in a cost reflective way for their use of the network.

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<sup>1</sup> SAPN, *Rule change proposal for access and pricing of Distributed Energy Resources (DER) – enabling customer choice as we continue the transition to a distributed energy future*, 7 July 2020. Accessible on the AEMC website: <https://www.aemc.gov.au>

Within this context, our submission deals dominantly with ensuring that the specific drafting of the rules accords with the policy intent of the reforms. On the specific components of the Draft Determination, we raise the following:

- the rule amendments to recognise the provision of export services to customers achieve their key objective, but the specific drafting should be reviewed for clarity and to avoid unintended outcomes;
- existing mechanisms for network planning and expenditure assessment have been effectively extended to export services. While we support new safeguards, the information required in the plain-language ‘overview document’ can be better targeted to the document’s intent, and service metrics are better identified by the AER review of service incentives so that reported information matches its intended use;
- the enablement of all existing incentive schemes to apply to export services will provide balance between cost efficiency and service performance. Service performance incentives will improve clarity for customers on the service levels distributors should achieve. We welcome the AER being tasked with reviewing options for service incentives, but a specified timeframe for actually developing these incentives would be beneficial given their importance in providing a well-balanced framework;
- the removal of the prohibition on export pricing will enable distributors to engage with their customers and stakeholders on how to recover the future costs of enabling energy exported from customers’ DER, and how to potentially reward DER customers where their exports can help manage network congestion;
- the amendments to the pricing rules will better enable their application to export services, and the ‘export tariff transition strategy’ will provide a further safeguard by requiring articulation and consultation on the approach to managing customer impacts from any potential new export tariffs; and
- the amendments to the existing connection arrangements provide some additional clarity with respect to export services. However, while we support these amendments, we are concerned that they are insufficient, and that additional amendments are needed to ensure outcomes are consistent with the intent of the AEMC reforms. Consideration is needed on how best to address the allocation of service liabilities, how to codify the necessarily flexible nature of any export services, and how to enable distributor-specific terms and conditions to apply to ongoing export service provision.

Our submission does not propose specific re-drafting suggestions to address the issues we raise in this submission. Rather, given the detailed nature of this task, we welcome the opportunity to engage collaboratively with the AEMC on how these issues might best be addressed in the drafting of the National Electricity Rules (NER) and / or National Energy Retail Rules (NERR).

## Recognising the provision of export services to customers

The Draft Determination, consistent with our rule change proposal, has proposed amending several terms in the NER and NERR, to accommodate the provision of 'export services' to customers. More specifically, the amendments clarify that the services distributors provide can involve bi-directional energy flows.<sup>2</sup> We support the intent of these changes as enabling:

- the service of providing customers access to the distribution network to export energy from their DER, commonly referred to as the 'export service', to be specifically classified by the AER consistent with its current discretion in service classification;
- existing regulatory mechanisms to apply to 'export services' once classified, including: distribution network planning arrangements; distribution network expenditure assessment rules; distribution pricing rules; and connection arrangements including contract terms and conditions; and
- by virtue of these factors, distributors to have a clear obligation to plan network investment to enable customer DER, by needing to '...meet or manage demand...' from customers for export services.

While supporting the intent, we recommend further review of the wording of the Draft Rules, to provide better clarity and avoid unintended interpretations and consequences, in particular:

- the drafting must avoid any risk of distributors' activities in enabling DER hosting capacity to be inadvertently deemed to be unregulated / unclassified services until each distributor's next regulatory determination wherein 'export services' would be formally classified by the AER as comprising a 'distribution service'. This outcome is not intended by the Draft Determination, nor the recent AER distribution determinations, which for a number of distributors including ourselves, have allowed expenditures which include those to enable customer DER in some form;
- the amendments to, and new terms added to the NER may need further review:
  - the terms used in connection with distributors' obligations in Chapter 6 are unclear if 'distribution service end-user' is intended as being broader than the amended term 'retail customer';<sup>3</sup> and
  - the terms pertaining to connection arrangements under Chapter 5A may have the unintended consequence of connection arrangements ceasing to effectively apply at the connection enquiry stage as they do now;<sup>4</sup> and
- while the Draft Rules amend several sections of the NERR, bi-directional services appear to require referencing in additional parts of the NERR in order to effectively accommodate these services, particularly in respect of the 'Model Terms and Conditions for Deemed Standard Connection Contracts'.<sup>5</sup>

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<sup>2</sup> This is achieved by:

- amendment to the NER term 'network', which supports the definition of a 'distribution service', so that it is neutral to the direction in which energy is conveyed;
- amendments to the NER to refer to the usage of 'distribution services' which can include 'export services' rather than just referencing usage of the network; and
- amendments to the NERR to provide generic reference to supply services (accommodating services involving bi-directional energy flows).

<sup>3</sup> It appears that the AEMC intends 'distribution service end-user' include 'retail customers' and customers buying direct from the National Electricity Market (NEM).

<sup>4</sup> For example, the new term 'embedded generating unit operator' in Schedule 5A.1 of the NER no longer references an intention to operate or connect. It is important that the rules continue to apply effectively to the process whereby a distributor is making a connection offer to a person, but that person is not yet operating / connected.

<sup>5</sup> These are set out in Schedule 2 of the NERR.

## Enabling efficient provision of export services

The Draft Determination proposes, consistent with our rule change proposal, to enable existing regulatory arrangements for distribution network planning and expenditure assessment to be applied to ‘export services’. We support this proposal on the basis that:

- applying symmetrical rules will minimise the extent of and costs of any regulatory changes required, avoid creating different frameworks for planning and recovering investments between consumption and export services, and make use of approaches that have proven to work in other service contexts; and
- existing arrangements can effectively enable the overall objective of promoting efficient investment and preventing over-investment by distributors in supporting customers’ desires for export services.

New required information reporting is also proposed, to provide greater transparency for customers and stakeholders on issues facing the distribution network and export service performance. While we support the intent of these safeguards, their specific application can be refined as discussed below.

### *Overview document*

Distributors are required to prepare an ‘overview document’ to accompany a Regulatory Proposal to the AER. This aims to facilitate customer and stakeholder engagement in the Regulatory Determination process, by providing a plain-language summary of expenditure and pricing plans. Our views on the proposed amendments to the overview document are that:

- It is appropriate that this document should outline interactions between elements of a regulatory proposal,<sup>6</sup> interrelationships between the regulatory proposal and service performance, and a summary of how the distributor has engaged in arriving at its proposal.
- It is appropriate that the engagement that distributors are to outline in the document be framed not only in the context of customers but also groups that represent customers, retailers, and Market Small Generation Aggregators. This more accurately reflects the broader scope of the stakeholder engagement that distributors currently undertake.
- As a regulatory proposal covers all distribution services including plans for the more material and essential consumption service, it appears disproportionate to require extensive detail in a plain language document, on costs and cost allocation approaches (and alternatives) for export services specifically.<sup>7</sup> Such detail is better provided elsewhere in a regulatory proposal such as in the business case documents distributors use to propose expenditures on hosting capacity, or the Tariff Structure Statement (TSS).
- It should be clarified if the intent is for distributors to prepare a single overview document or two documents, with one specifically pertaining to the TSS. We consider it preferable that there be one overview document covering both expenditure and pricing plans, to minimise regulatory burden and improve accessibility to customers.

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<sup>6</sup> This includes the interactions between price signals, network and non-network spends, and connection arrangements.

<sup>7</sup> We refer here to the NER Draft Rules: 6.8.2(c1)(3),(4), and (7).

## *Distribution Annual Planning Report (DAPR)*

Distributors are required to prepare a DAPR, which aims to provide transparency on changes that may occur to the network over a forward-looking period, particularly with a view to enabling third-parties to propose credible alternatives to address network challenges.<sup>8</sup> Our views on the proposed DAPR amendments are that:

- It is consistent with the DAPR's intent to require the additional forecasts of generation capacity and information on changes in forecast generation which may impact on forecast system limitations. However, on the specific information requested:
  - clarity is needed if the listed information intends to apply to generation as opposed to load;<sup>9</sup> and
  - recognition is needed of the fact that some distributors, like ourselves, may not currently have the ability to produce accurate forecasts of generation capacity at a feeder level, and have only basic estimates at a zone-substation level;<sup>10</sup>
- The reporting of service performance metrics appears to go beyond the DAPR's intent, and may be better requested via AER processes including its Regulatory Information Notices to ensure that the information is targeted to its potential use, noting that:
  - this information may most likely be used by the AER to guide its assessment of the prudence of network hosting capacity expenditure and the design and application of new service performance incentives for export services; and
  - with the AER being tasked with reviewing potential service incentives, it would be appropriate for the AER to identify in that review, the metrics it considers would best inform its decision making.
- Without a clear understanding at this stage on how the information is to be used, it is difficult to determine its meaningfulness for the AER or third-parties in proposing non-network solutions to export driven network constraints. For example, the Draft Rules ask questions on what maximum export capacity different customers apply for and what they end up with, but answers to these may not be indicative or useful:
  - for large customers, who can present material implications for network capacity, and may face high upfront connection charges, there are often variations between the connection capacity they initially enquire about versus the capacity they are content with accepting once they have visibility of the potential connection costs;
  - for distributors with flexible export limits / operating envelopes, the maximum capacity that may be agreed in a contract, does not indicate the actual grade of service the customer receives;<sup>11</sup> and
  - even for distributors without flexible export limits, information on the ratio of what customers applied for versus what they received, may not be useful once networks start publishing hosting capacity maps. For example, if a solar installer can see that the maximum export in a customer's particular suburb is 2kW, they are unlikely to apply for more than that.

We would be pleased to collaborate with the AEMC, AER and stakeholders on how best to refine any information reporting requirements considered to be useful to the electricity sector.

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<sup>8</sup> AEMC, *Rule Determination – National Electricity Amendments (Distribution Network Planning and Expansion Framework) Rule 2012*, 11 October 2012, p.17.

<sup>9</sup> We refer here to the information listed in NER Draft Rules 5.8(b)(2)(iv)-(viii).

<sup>10</sup> We refer here to the information listed in NER Draft Rules 5.8(c)(5).

<sup>11</sup> The information in the DAPR may simply show that for example, all customers on a flexible export programme applied for a maximum of say 10kW export and were allocated a maximum capacity of 10kW export, even though some customers might be able to export 10kW more readily than other customers elsewhere in the network.

## Incentive arrangements and service levels

The Draft Determination proposes, consistent with our rule change proposal, to enable all existing incentive schemes to be applied / adapted to ‘export services’.<sup>12</sup> We support this as providing a framework that balances distributors’ incentives between cost efficiency, demand-management innovation, and service performance. Combining these incentives will best promote outcomes in customers’ long-term interests with respect to not only price but also the quality of service they receive.

Our main comments below concern the adaptation of the Service Target Performance Incentive Scheme (STPIS) to exports and the topic of service levels more generally.

### Service levels

Our rule change proposed to disallow distributors from applying zero static export limits and to recognise in the rules the concept of networks having an intrinsic capacity to accommodate a level of energy export. The Draft Determination proposes to not prescribe these matters in the rules, and we accept it is difficult to prescribe these outcomes in a meaningful and efficient manner for all distributors in their circumstances.

Therefore, we support the Draft Determination having instead set a framework where the service levels that customers receive for export services will / can be guided by:

- the service level targets to be set via an adapted STPIS or equivalent mechanism;
- jurisdictional service standards, where jurisdictions determine that such standards should apply; and
- any menu of service options (with commensurate tariffs) that distributors may be able to offer, and that their customers value.

The fact that regulation will not prescribe particular service options nor service levels, will not impede distributors from designing options that customers value, and will actually facilitate options being customised to individual jurisdictional circumstances. SA Power Networks intends to explore with its customers and stakeholders a number of potential service options (as described in Figure 1)<sup>13</sup>, on the basis that:

- we expect DER customers will be diverse in how they value the ‘export service’, with some valuing higher or lower maximum export capacity limits;
- we want to enable customer choice on service levels, as this will drive optimisation of network spend;
- each network has an intrinsic hosting capacity for DER, therefore customers with DER should all have access to at least this intrinsic level of export capacity, including without facing an export tariff (noting that there are no incremental costs driven by this service); and
- we expect that the implementation of flexible export limit capabilities (i.e. distributors dynamically managing the volume of exports on the network) will enable an increased range of service options with commensurate network tariffs that customers can choose from.

**Figure 1: SA Power Networks initial thoughts on service options**

Service option	Inverter required	Export limit	Service level	Standing charge	Variable charge / reward
Basic	Basic inverter	1.5 kW fixed	1.5 kW @ 9x.x%	No	No
Fully Flexible	Smart inverter	1.5 – 10 kW	Min 1.5 kW @ 9x.x%	Yes	No
Prosumer	Smart inverter	1.5 – 10 kW	Min 5 kW @ 9x.x%	Yes	Yes

<sup>12</sup> This includes: the STPIS, the Efficiency Benefits Sharing Scheme (EBSS), the Capital Expenditure Sharing Scheme (CESS), the Demand Management Innovation Allowance Mechanism (DMIAM), the Demand Management Incentive Scheme (DMIS), and the Small Scale Incentive Scheme (SSIS).

<sup>13</sup> The service and tariff options described in Figure 1 represent SA Power Networks’ initial conceptual thoughts only. We would seek to work with our customers and stakeholders on which options they most value.

## STPIS for exports

As noted in our rule change proposal, adapting the STPIS will present complexity, but it is important this occur as service incentives play an important role in improving customers' confidence in the overall service level that distributors should achieve. Our views on the Draft Determination are that:

- we support requiring the AER to undertake and consult on a review, by a specified date (December 2022), of potential service performance incentives;
- given the importance of service incentives, it may also be beneficial for the AEMC to:
  - specify a timeframe by which the AER should be tasked with producing these incentives. This would be consistent with current / past practice where the AER has had to produce new schemes, with the decision then made subsequently as to how they should apply to each distributor in light of their circumstances and available data;
  - as an alternative, consider an AEMC review in a few years-time, on progress in implementing its envisaged regulatory framework, should further changes be required; and
  - reiterate in its Final Determination the clear policy intent provided in the Draft Determination, on the importance of having service incentives as part of a well-balanced regulatory framework for export services.
- we preferred that the NER, in specifying factors the AER is to consider in designing a STPIS (for consumption and export services), retain the reference to considering “...customers willingness to pay for improved service performance...”. This is currently a key guiding concept in promoting outcomes consistent with the National Electricity Objective (NEO) as discussed in our rule change proposal. However, we accept the Draft Determination proposal to remove this reference in favour of a reference to “...the value to distribution service end users of improved service performance...”, subject to:
  - this is in fact being required to avoid unduly restricting the AER in considering appropriate measures, noting that the Draft Rules also propose allowing the AER to consider “...any other factor it considers relevant...”; and
  - the AEMC Final Determination reiterating and making explicit, the policy intent provided in the Draft Determination, that consideration should be given to the value of enhanced service performance not only to all customers but to exporters specifically – noting that it is exporters who may ultimately pay for the provision of export services.<sup>14</sup> This clarity will be important for future AER decision-making.
- while the AER will be tasked with designing service incentives, we encourage the AEMC to further consider if any of the specific wording of this rule change risks unduly limiting the potential design of these incentives.<sup>15</sup> In our view there are likely to be a number of guiding principles on incentive design that we would look to define with the AER and other stakeholders. One of these is likely to be the principle that incentives should not be tied to individual customers' service levels, but rather to improvements in hosting capacity more broadly, otherwise, there may be perverse incentives to limit new customer connections so that performance levels do not deteriorate.

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<sup>14</sup> We accept that some flexibility may be needed because as outlined in the Draft Determination, it is likely that in some places, some network costs driven by export services may be recovered from all customers, particularly for example, during the period of time over which new export tariffs may be phased-in as part of a transition management approach.

<sup>15</sup> We note that the new rules factor of “...value to distribution service end users of improved service performance...” is silent on whether it is existing or new customers that should be considered, and whether it is individual customers' performance that should be considered.

## Distribution network pricing arrangements

The Draft Determination, consistent with our rule change proposal, proposes to remove the barrier to distributors using tariffs to signal the network cost (and inversely, the network benefit) arising from export services. Where network tariffs are considered, these would be applied according to the existing Distribution Pricing Rules. We support this proposal on the basis that:

- having accepted that distributors should be obligated to invest in network hosting capacity to enable customer DER, it is appropriate that export services be priced on a cost reflective basis to promote efficient network usage. Therefore:
  - customers without DER will not contribute to the costs of services they do not receive; and
  - customers with DER can express how they value an export service and service levels.
- customers can be paid / rewarded for exporting or consuming at times when this assists the network in managing congestion; and
- the existing distribution pricing rules are largely fit-for-purpose to apply to export service pricing.

Having said this, we note the importance of appropriate considerations of customer impacts, allowing customers who have already invested in solar panels time to respond to new pricing signals. We consider that this is already dealt with appropriately in the distribution pricing rules, allowing this issue to be considered in detail through consultation with our customers.

New provisions are proposed to be added to the Distribution Pricing Rules. We support this, noting that:

- Amending the Network Pricing Objective (NPO) clarifies that consumption and export tariffs can be positive (charges) or negative (payments). This allows customers to be rewarded where they can shift consumption or export to times when it assists in managing network congestion. It is important though that negative pricing remain as a consideration rather than requirement, as this needs to be considered in each distributor's circumstances, noting it may be preferable to procure more localised responses from customers as part of a demand management initiative.
- Amending the Long Run Marginal Cost pricing principle to refer to "*...times of greatest utilisation of the relevant service...*" as opposed to "*...utilisation of the relevant part of the distribution network...*" helps clarify the application of this principle to peak use of consumption or export services.
- The requirement for an 'export tariff transition strategy' in the TSS, provides an additional safeguard, that export tariffs will not be introduced without a clear articulation of, and engagement on, the distributor's approach including how they will manage impacts on customers.<sup>16</sup>
- Amending the pricing principle requiring tariffs to be reasonably capable of being understood by customers, to refer to the option to otherwise ensure that tariffs are capable of being "*...directly or indirectly incorporated by retailers or Market Small Generation Aggregators...*", provides flexibility for future tariff innovation. This is particularly for tariffs which may aim to integrate with automated systems operated by customer intermediaries, rather than being received by customers directly.
- Requiring the AER to prepare an 'export tariff guideline', may promote greater confidence in the TSS process and transparency on AER expectations and interpretations of the pricing rules. We urge these Guidelines to be kept at a principled, rather than prescriptive, basis. Distributors must retain the ability to innovate and customise tariffs to the circumstances and preferences of their customers.

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<sup>16</sup> We accept the AEMC's desire to add an additional formal safeguard. However, even without this change, we would intend, and the NER would already require, that customer impacts be managed.

- Removing the clause requiring retail customers with Micro-Embedded Generators to be treated no less favourably than retail customers without such facilities but with a similar load profile, enables distributors to consider export pricing and developing a menu of tariff options, as the nature of customers' exports could become the basis for assigning customers to a tariff class.
- Increasing the maximum financial size of tariff trials to 1 percent of annual revenue per tariff or 5 percent of annual revenue cumulatively across all tariffs, provides more flexibility for tariff innovation.

## Terms and conditions of services

Regulation allows distributors to apply terms and conditions to customers wishing to connect their premises and equipment to the network and to receive an ongoing electricity service. These are mostly codified in connection arrangements, including the Model Standing Offer (MSO) for the initial connection, the Deemed Standard Connection Contract (DSCC) for the ongoing service, and individual customer agreements<sup>17</sup> (connection and ongoing service for large customers).<sup>18</sup> These terms and conditions seek to ensure that electricity supply accords with energy laws and distributors' licence requirements.

The Draft Determination proposes to amend the connections arrangements in the NER and NERR, and we interpret the policy intent as being to:

- clearly apply existing connection arrangements to the connection of DER and receipt of export services;
- reflect that export services are, unlike consumption services, not essential services, and may for this reason be necessarily more variable / flexible than consumption services;
- provide an 'open access' framework for export services, rather than one that is 'physically firm' or 'financially firm', such that there are no guarantees on the ability to export at all times; and
- ensure that regulation does not inhibit distributors from developing:
  - mechanisms such as flexible export limits / dynamic operating envelopes and other innovative export services where these are a prudent and efficient means of best utilising the network for export whilst maintaining network stability and minimising service costs to customers; and
  - a menu of export service options for customers, to give choices to DER customers who may value lower or higher grades of export capacity.<sup>19</sup>

We support the AEMC's policy intent. However, further amendment to the NER and NERR is required to give effect to this intent and avoid unintended consequences, as set out below.

### *Allocation of service liabilities*

A regulated service access framework must address the allocation of service liabilities, as it does now for the consumption service. However, the Draft Rules insufficiently address this issue for export services, and further rule amendments are required:

- for the essential consumption service, laws and regulations explicitly recognise that partial or total interruptions to the supply of electricity to a customer may occur for various reasons. As such, regulation limits distributors' liabilities to situations where they have acted in bad faith or negligently;
- the Draft Rules have not extended these existing limited liabilities to the export service, which would therefore expose distributors to greater financial service liabilities than exist for the essential consumption service, noting also that these are most likely to be 'consequential losses', for example, loss of revenue from retail 'Feed-in Tariffs'; and
- as such, we propose addressing this issue by amending the NERR to specify that by means of the NERR, the existing liability provisions codified in the NERL, can apply to any partial or total failure to supply export services as they do for consumption services. While this issue could be centrally addressed by a

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<sup>17</sup> These typically apply to large customers, where given the size of their network connection, the connection needs more specific / local considerations and agreement with the specific customer.

<sup>18</sup> Services may also be partly described in a TSS. For example, TSSs describe some specific service aspects such as in the case of controlled hot water loads, and agreed demand tariffs for large customers.

<sup>19</sup> With any menu of offers to be considered by distributors together with their customers, rather than being prescribed.

NERL change, NERR changes can satisfactorily address the issue and such changes to the NERR are permitted by the NERL.<sup>20</sup>

### *Scope for export service flexibility*

Regulation recognises that consumption services may be temporarily interrupted or curtailed due to several circumstances.<sup>21</sup> The Draft Determination proposes to amend the NERR to also explain the circumstances in which export services may be interrupted or curtailed. We welcome the intent, but consider that further rule amendments are needed for clarity, as follows:

- the NERR must more clearly explain that export services are necessarily flexible (even without flexible limits / dynamic operating envelopes) and may be temporarily interrupted or curtailed<sup>22</sup> or subject to fixed export limitations due to various circumstances extending beyond those which may interrupt or curtail consumption services, being where:
  - there is a ‘distributor planned interruption’ or ‘unplanned interruption’ affecting the supply of energy to a premises – in these circumstances, the export service would also be affected;
  - distributors must address a safety, reliability, quality or security issue with distribution services and / or the distribution system – in practice this would cover most situations where any flexible export limit is applied to manage network congestion to within the limitations of the distribution system, in addition to other situations such as where there is a risk to community / customer safety;
  - distributors are directed to do so by a relevant authority – this could include for example, a direction from the Australian Energy Market Operator (AEMO) or a jurisdictional government;<sup>23</sup> or
  - this accords with the conditions of any applicable tariff – noting there may be some scope for a TSS to describe the features of a particular service, as discussed above.
- recognition is also needed of the practical reality that in some cases the equipment used by customers to receive an export service (e.g. an inverter) may be temporarily disconnected, if this is the best available means of responding to a direction, or to a safety, reliability, quality or security issue.<sup>24</sup>

### *Distributor-specific terms and conditions*

Terms and conditions for consumption services are codified in the initial connection contract (the MSO for a basic connection service, and negotiated contracts for all other connections) and the DSCC which governs the ongoing service, or an AER approved Deemed Large Connection Contract<sup>25</sup> for large customers. Distributors can apply specific terms and conditions in initial connection contracts, but cannot divert from the terms and conditions the NERR specify for a DSCC except for jurisdictional requirements or as approved by the AER for large customers only.

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<sup>20</sup> The NERL allows the NERR to deal immunity from liability. NERL Section 237 states that the Rules may make provision for or with respect to (inter alia): “...the liability of retailers, distributors and customers for acts and omissions of immunity in respect of any such liability.” Section 237 further states that the Rules may: “...confer an immunity on, or limit the liability of, any person or body performing or exercising a function or power, or conferred a right, or on whom an obligation is imposed, under the Rules.”

<sup>21</sup> As per Section 10.1 of the NERR, this includes where there is a planned or unplanned interruption, or where this accords with any applicable tariff or under a contract with a retailer.

<sup>22</sup> We note that even the terms ‘curtailment’ and ‘interruptions’ may inaccurately transmit the fact that where a customer is subject to a flexible export / operating envelope, variations in exports from those specified in a maximum export limit, may be occurring on a permanent basis.

<sup>23</sup> For example, on 14 March 2021 in South Australia when AEMO actioned SA Power Networks to maintain system security by curtailing generation connected to the distribution network.

<sup>24</sup> This recently occurred in some places in South Australia, in the course of actioning an AEMO directive. It is also occurring more broadly today across the NEM where inverters trip-off.

<sup>25</sup> NERR Rule 78.

While this process works for consumption services, it is unlikely to for export services. We propose that the NERR be amended to introduce a mechanism for the AER to approve as part of the DSCC, additional distributor-specific terms and conditions for export services, on the basis that:

- Existing arrangements wherein distributors cannot alter the DSCC have not posed concerns for consumption services as these are largely standardised / homogenised, and typically the need for distributor-specific terms and conditions have been mainly concerned with the technical requirements of the initial connection to the network.
- In contrast, export services are likely to:
  - be more flexible and tailored to the circumstances and technical capabilities of individual distributors. Distributors may look to provide customers a menu of options on export services, with fixed capacity limits, and with occasional curtailment as a permanent aspect of the service. For example, distributors may seek to gradually move to various means of enabling flexible export limits / dynamic operating envelopes as a means of managing network congestion; and
  - require more specific technical considerations, given the nature of DER equipment being or which may be installed in future, and evolving distributor and industry standards in relation to these.<sup>26</sup>
- While distributor-specific terms and conditions can be added to the MSO (subject to AER approval) and negotiated contracts, these initial contracts may not be the best means of codifying these requirements. A new customer moving into an existing premises, would not have been privy to the initial agreement at the connection stage, and the ongoing applicability of the terms and conditions of that initial agreement may be in doubt.
- Providing a mechanism in the NERR for the AER to approve alterations to a distributor’s form of DSCC from the model terms currently specified in the NERR, would provide regulatory oversight of the reasonableness of any alterations. This would mirror the existing approach whereby the AER approves distributor-specific terms and conditions via the MSO. Our proposed mechanism is also modelled on the NERL process for AER approval of DSCCs for large customers.<sup>27</sup> As safeguards, the NERR could specify:
  - a distributor can only propose such alterations as necessary to accommodate the provision of export services over their distribution system;
  - that the AER can approve a DSCC if it is satisfied that the proposed alterations are necessary, fair and reasonable, and comply with applicable requirements of the energy laws; and
  - that the AER can specify changes required to a distributor’s proposed alterations, in cases where it does not approve an initial proposal.
- We consider that such a mechanism would be contemplated by the NERL and appropriate for inclusion in the NERR. In relation to “permitted alterations” to a DSCC, the NERL provides for “alterations of a kind specified or referred to the Rules”.<sup>28</sup> Further, the NERL contemplates that individual distributors may have a different form of DSCC with different “permitted alterations”, as it refers to a “distributor’s form of deemed standard connection contract”, rather than a single form applying to all distributors.

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<sup>26</sup> We expect that for some distributors, the current DSCC terms and conditions specified in the NERR may be sufficient, but for other distributors additional terms may be required to reflect the particular way in which export services are provided over their networks.

<sup>27</sup> NERL, s 75.

<sup>28</sup> NERL, s 69(4).

## Other issues

The DSCC and model terms and conditions specified in the NERR were initially intended predominantly as a standard form contract for the typical small customer, noting that these customers normally pose similar network requirements on the network.<sup>29</sup> However, the terminology in rules may no longer be providing for this intent. We therefore also request the AEMC to consider how the rules could best clarify which threshold sizes of generating units are intended to be covered by the DSCC.<sup>30</sup> This is noting that:

- The DSCC provisions in the NERR reference the term ‘small generator’, which the NERR defines as a “...generating unit of the kind contemplated by Australian Standard AS 4777”.
- The version of AS 4777 applicable at the time the DSCC provisions were initiated, limited the maximum size of a low voltage inverter-connected generator to 30kVA in total (or 10kVA per phase), which typically limited the capacity of a small generator to the capacity of a small customer’s load connection.<sup>31</sup>
- However, there have since been two amendments to AS 4777, with the latest (December 2020) allowing compliant generators to be of significantly larger size. For example, we have since connected to our network, AS 4777 compliant generators that are 1,500kVA;
- Large generators have the potential to significantly impact the operation of the distribution system, and for this reason, large generator connections are typically subject to specific / individual considerations of their impact on the network and bespoke connection arrangements to control their operation.<sup>32</sup>
- It would be inappropriate for generators that are sufficiently large to have a material impact on the distribution system to be covered by the DSCC. Instead, we propose that these type of generators should be covered by an AER approved deemed large connection contract or that distributors should, as proposed above, be permitted to apply additional AER approved terms and conditions to their DSCC to apply to these type of generators.

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<sup>29</sup> This is specified in section 70 of the NERL, which outlines that the DSCC (and therefore the Model Terms and Conditions in the NERR) apply to “small customers” and “large customers for whom there is no applicable deemed AER approved standard connection contract”. The two other types of contracts are (1) deemed AER approved standard connection contracts for large customers, and (2) negotiated connection contracts for large and small customers.

<sup>30</sup> The current AER classification of SA Power Networks’ services provides that large generators are those with 30kW (3 phase) or above or 5kW (1 phase) or above, as these size generators require more specific assessment of their network implications, and therefore it would be inappropriate for these to be subject to the more generic ‘basic connection’ which is subject to an MSO.

<sup>31</sup> This refers to AS 4777.3, which was applicable at the time and until September 2016

<sup>32</sup> For generators with a capacity exceeding 200kVA, we require a direct communication link to our Supervisory Control and Data Acquisition (SCADA) system to control when the generator is permitted to operate or not, and control its export.

## Implementation timeframes

The Draft Determination specifies timeframes on tasks for the AER, AEMO and distributors. Our views are:

- we welcome the AEMC having recommended that the AER publish a report and consult on how it will take into account this rule change package in the metrics measured by the AER in its annual benchmarking process – we consider it important that benchmarking metrics reflect the provision of export services and the value that customers derive from these services;
- as noted earlier, we think it preferable to also add a specific timeframe by which the AER should have a new service incentive scheme developed – leaving aside the decision on how and when it should apply to each distributor;
- the timeframe recommended for updating standard terms and conditions be reviewed, in light of our proposal to introduce a mechanism in the NERR for the AER to review additional distributor-specific terms and conditions for a DSCC; and
- as noted earlier, it may be worth the AEMC undertaking a review of progress on the implementation of this regulatory framework to ensure that this progress matches the AEMC's intent, and to allow for any further required reforms to be made in a timely way.