29 September 2022

Sara Stark
DER – Network Regulation
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Sent via email: sara.stark@aer.gov.au

Dear Ms Stark

Submission on Incentivising and Measuring Export Service Performance

SA Power Networks (SAPN) welcomes the opportunity to comment on the Australian Energy Regulator's (AER) Consultation Paper on Incentivising and Measuring Export Service Performance (Consultation Paper).[1]

As one of the proponents of the Access, Pricing and Incentives rule change, we are pleased that having developed an export pricing guideline, the AER is now considering other changes to more fully enact the rule change.

SA Power Networks is at the forefront of the customer-led distributed energy transition requiring significant innovation and investment to support customer demand for 'export services'. We expect further expenditure in coming years will be necessary to ensure sufficient network capacity is available to meet continued strong demand for these services. The timing of this review is therefore key, as it is important going into the next round of Distribution Determinations that:

- distributors have clarity on the service outcomes that they should be guided to achieve, under an open access regulatory framework; and
- benchmarking approaches measure not only the costs that networks like ours have been and will increasingly be incurring, but also the value of the service that we are enabling for customers.

Our submission focuses on the need for greater agreement on the higher level principles and approach that should underpin this review. We feel that this higher level discussion is necessary prior to engaging on the more technically complex questions posed in the Consultation Paper. We would welcome continued close engagement with the AER and stakeholders in progressing this review.

Our key views at this stage, as raised in our submission, are that:

- **export service incentives should be developed**, as we see there is a role for incentives in guiding a more refined view of the service outcomes that distributors should seek to achieve for customers, across their customer base and over time;
- distributors vary considerably in the level of Distributed Energy Resources (DER) on their networks and their ability to measure export service performance. Given the vastly different circumstances of each distributor, **there should be flexibility for distributors to develop their own 'bespoke incentives'**, which could also help in trialing service performance metrics and incentive approaches that may be later be standardised over the long-term;

[1] AER, *Consultation Paper: Incentivising and measuring export service performance*, August 2022

- **there are a number of incentive mechanisms that could be applied together**, with a 'bespoke export incentive' serving as the principal financial incentive to drive customer service outcomes and an allowance and / or margin mechanism providing a complementary means of encouraging innovation in export service enablement or in addressing more targeted customer service issues;
- **a Guaranteed Service Level mechanism could be considered**, but purely as a recognition of inconvenience in cases of repeatedly poor service performance, rather than serving as an incentive for efficient network investment decisions;
- **performance reporting can help to improve transparency** for customers in evaluating the export service performance of their distributor and in influencing the service outcomes that they expect;
- **there is a likely need to consider a range of service performance metrics in combination** and for differing use cases; and
- most importantly, **there should be recognition that the current benchmarking regime perversely disadvantages distribution businesses with high DER take-up**. High DER penetration both reduces energy throughput and increases costs, indicating deteriorating benchmark performance, when the converse is true – additional customer value is being delivered. On this basis, a fulsome / holistic review is urgently needed on the approach to, and models used for, benchmarking, in light of the increasing impacts of DER take-up on benchmarking performance.

We would be pleased to engage further with the AER as it conducts this review and welcome the transparent and open discussions that AER staff have held with networks thus far.

If you have any queries or require further information in relation to our submission, please contact Bruno Coelho on [redacted] or [redacted]

Yours sincerely

[redacted]

Mark Vincent
Executive General Manager Strategy and Transformation

1. Incentive mechanisms for export services

The role of incentives in guiding and refining customer service outcomes

As a proponent of the Access, Pricing and Incentives rule change, we advocated to include a service incentive scheme within the regulatory framework, to guide distributors on the level of service that they should seek to achieve for customers of export services over time. We envisaged that such a scheme could be akin to the Service Target Performance Incentive Scheme (STPIS) that currently applies to the 'consumption service'.

With the rule change enacted, it is now important to more specifically identify the role for service incentives, namely the issue for customers that service incentives should seek to address. This will assist stakeholders to this review, in their more detailed considerations of incentive design and required performance metrics.

Our view is that there remains a clear role for service incentives in guiding the level of service that distributors should seek to achieve, across its customer base and over time. This is noting that:

- while the rule change has provided a clear requirement, via the capital and operating expenditure objectives, on distributors to ensure sufficient network capacity in order to 'meet' customer demand for export services, there is less clarity on how distributors should 'manage' customer demand for export services, as referenced in the rules. This is particularly relevant for distributors like ourselves who have developed innovative capabilities to flexibility manage exports, and for whom the least cost way of 'managing' exports is to curtail export energy to minimise network capacity upgrades – in such cases, guidance is needed on the right level of curtailment that will best align network expenditure with customer expectations;
- in the absence of a service incentive scheme or service standards, such as exist in various forms now for consumption services,[2] there is less guidance on what service outcome / level of service that distributors should seek to achieve both:
    - across different parts of the network – that is, should distributors be guided solely by differing costs to serve across the network, or should there be more equitable and standardised levels of service according to some agreed category of customer or segment such as occurs for consumption services now; and
    - during the course of a regulatory control period – that is, once a regulatory allowance is set in a Distribution Determination to achieve a baseline level of service, should networks be guided to consider, and have means to fund, opportunities to make incremental improvements in service outcomes over time, relative to the baseline.

Defining assessment principles in considering incentive design

The primary aim of service incentives should be to drive distributors to deliver service outcomes valued by their customers, and in particular, to consider opportunities for incremental improvements in service outcomes over time relative to the baseline service outcome afforded via ex-ante regulatory allowances.

Other considerations should include the following:

- incentive penalties and rewards should be commensurate with the customer value being addressed, rather than a more negative framing of the problem being resolved;
- service incentives should aim to guide decisions on network investment to deliver customer service outcomes, rather than the investment decisions of customers – which will also be influenced by factors exogenous to distributors such as signals from customers' retailers and energy services

[2] For example, for the provision of consumption services in South Australia, we are guided to achieve certain targets of service performance according to categories of distribution feeders and certain regions like the CBD of Adelaide. These differ and are not equivalent across categories, and reflect the service levels that should be achieved across customers in aggregate for each category.

providers, or may be more appropriately addressed by other measures which are within networks' control such as the design of cost reflective tariff signals and connections pricing;

- service incentives should reward the actions that distributors can take (via tariff signals or network investments and operations) in maximising export hosting capacity and not be impacted by factors outside the control of networks;
- caution is needed to avoid perverse incentives for outcomes that do not promote overall efficiency for customers – particular regard is needed to ensure that export service performance is not incentivised in a way that disincentivises self-consumption when this may be most efficient;
- flexibility is needed to accommodate differences between distributors, with respect to current availability / quality of data, and their relative position / maturity in adapting their networks to accommodate distributed energy (i.e. their extent of existing network visibility, current hosting capacity, flexible export management capabilities etc) – particular regard is needed to ensure that incentives drive positive decisions for all networks, rather than favouring those who may have innovated the least in enabling export services to date; and
- referring to 'service performance' or 'service outcomes' rather than specifically to 'service levels' may provide greater flexibility in considering how incentives can drive distributors to deliver on the expectations of their customers.

Improving transparency on service performance

There are already inherent reputational incentives in the regulatory framework to drive distributors to enable positive outcomes for customers. As a business that is engaging with its customers on a business-as-usual basis, that seeks to continually build customer and stakeholder trust, and to minimise customer enquiries, SA Power Networks has, even ahead of the rule change, been driven to ensure that we:

- plan strategically and long term on how best to enable growing customer demand for export services. Ahead of our 2020-25 Distribution Determination, we set out a sequential series of actions over a short and long term on how we saw ourselves enabling good customer service by drawing on various tariff and non-tariff levers over time. We have innovated and been proactive in developing and offering new and flexible export services that our customers value; and
- deliver on our promises, with respect to our investments and customer service outcomes we proposed in our Regulatory Proposals to the AER, and with respect to the connection / service offers that we have been directly making to customers.

These existing reputational incentives can be further enhanced through reporting of a distributor's export service performance. This may assist with:

- comparing a distributor's performance relative to industry peers in other jurisdictions;
- enhancing a distributor's accountability on the export services they are offering to customers, or the service outcomes they sought to achieve with the investments in its Regulatory Proposals;
- allowing networks and regulators to better understand what data is available and in what form; and
- developing methods to interpret performance data, which could inform metrics to use in incentives.

Customising outcomes through bespoke service incentives

We think that it is worthwhile that the AER explore the longer-term potential to progress to a nationally consistent service incentive scheme for export services. Factors that may inhibit such a scheme now may be transitional in nature, and there will in any case be long lead-in times in designing and implementing new incentives.

However, in the short term, there is greater merit in allowing flexibility for distributors to consider designing bespoke incentives customised to their circumstances, in order to:

- work with the data that is available to them, rather than having to try and develop a NEM standardised set of performance data and metrics;
- engage with their customers and customer panels on the design of incentives and the service performance outcomes and metrics that they most value; and
- ensure that incentives are compatible with their connection, tariff and export service offers to customers, particularly any flexible export service offers they may be providing customers.

In applying any bespoke incentives, our views are that:

- the AER could adopt a similar framework to its Customer Service Incentive Scheme (CSIS), where a shell was created by the AER to set the basic parameters, reporting and auditing requirements, but otherwise flexibility was provided to distributors to design their metrics and approach;
- the financial revenue at risk / reward should be material enough to drive network decisions on hosting capacity, and the financial incentive should be in addition to / separate from the current CSIS and current STPIS for consumption services to avoid weakening incentives to maintain / improve service performance for consumption services;
- each distributor should have the option to propose or not propose a bespoke incentive, and consider in their respective circumstances, when that incentive could apply in a financial sense versus applying in a paper-trial form for a period of time; and
- the learnings observed from transparent reporting against bespoke incentives, could be used by the AER to inform the design of any NEM-wide standardised service incentive over the longer term.

An allowance and / or margin mechanism could complement a bespoke scheme

We envisage that several incentive mechanisms could be applied together to achieve differing but complementary goals. In the same way that the STPIS serves as the principal service performance incentive, and the DMIS and DMIAM drive innovation in managing changing demand for service, we believe that:

- the bespoke incentive could serve as the primary financial incentive guiding service performance;
- an allowance / margin mechanism could then seek to drive networks to identify and pursue new and innovative ways of maximising network hosting capacity for DER:
    - the Access, Pricing and Incentives Rule Change made provision for the current DMIS and DMIAM to apply to the management of export services, subject to the AER considering any potential design changes to these mechanisms;
    - we consider that both the DMIAM and DMIS should apply to export services, but that the maximum funding allowance of the DMIAM be reviewed on the basis that it is currently immaterial and has been consistently fully utilised by our business among others; and
    - the DMIAM and DMIS could potentially apply to fund trials and projects that may seek to target service improvements to specific network areas or customer segments that may not be addressed via the primary bespoke incentive. This could include, projects such as community energy initiatives, which may improve the export service, and which customers in SA Power Networks' engagement for our 2025-30 Regulatory Proposal have told us that they support us exploring, but which may be unable to be delivered under the current regulatory framework.

The role for a Guaranteed Service Level mechanism

We think that a GSL mechanism could be considered. However, a GSL should not intend to serve as an incentive to drive decisions on the efficient level of network investment as in our view:

- a GSL's primary role is to recognise inconvenience to individual customers who receive repeatedly poor service performance relative to other customers – as such, the GSL should not aim to provide full economic compensation such as for lost Feed-In-Tariff revenue;

- in designing GSL eligibility criteria, a key consideration is likely to be whether some customers experience service performance below the deemed intrinsic hosting capacity of the distribution network, as this is intended to be the basic service offering that distributors must provide and which customers have paid for via their consumption service network tariffs; and
- GSL costs would need to be able to be forecast and recovered in Distribution Determinations.[3]

2. Performance reporting for export services

Metrics for shorter-term performance reporting

We would welcome further consultation before deciding on the AER question on whether financial year 2020-21 should be a base year to start reporting data for most export service performance metrics.

The metrics themselves need to be agreed first, with consideration then given to whether there is available data for these metrics. In our response[4] to the AER's prior information request ahead of this review, we raised concerns with two of the three short-term performance metrics listed in Table 5 of the Consultation Paper which do not appear to yet be addressed. In our view:

- 'approved to requested export capacity ratio' is likely to be meaningless for small customers which make up the bulk of export customers noting:
    - these customers applications are generally not assessed on an individual basis. These customers typically get 5kW by default and in some networks may even get zero in exceptional circumstances;
    - networks cannot control what customers 'request' which is a key input to this metric; and
    - where networks have flexible export offers, approved capacity has no relationship to actual service performance.
- 'approved export capacity to installed capacity' is likely to also be problematic in the context where networks have flexible export offers.

The contextual metrics listed in table 5 appear largely appropriate. We consider that contextual detail on service performance metrics will be important as these metrics may not capture the true quality of the export service provided to customers or how efficiently a network has provided services to customers, contextual detail on each metric is needed to assist stakeholders in interpreting the reports. For example, DER penetration levels may provide useful context, as a network with low penetration will be able to host higher levels of exports on a per-customer basis, relative to a network with high penetration.

Metrics for longer-term performance reporting

As per the findings of work we undertook via the University of Technology Sydney 'Race for 2030' research,[5] there is a likely need to consider several service performance metrics in combination, given the likely different applications between incentive design, benchmarking as well as service performance reporting. We encourage the AER to consider this work in its review.

For incentives and performance reporting, we support the AER's view that over the longer-term, a measure of export service reliability in the form of the amount of energy that is subject to involuntary export curtailment, may be a suitable metric. However:

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3 Current GSL costs are currently recovered across all customers via operating expenditure.

4 SAPN, Response to AER draft information request – export service metrics, 31 January 2022

5 Langham, E.L., Guerrero, J., Nagrath, K. and Roche, D. (2022). Measuring and communicating network export service quality. RACE for 2030 CRC.

- such a metric would need to be complemented by other metrics as used in isolation, it could create a perverse incentive to limit the amount of new DER allowed to connect to a network;
- contextual information relating to the performance of the export service would still be required to provide stakeholders with a more complete picture of performance, which could include information on the intrinsic hosting capacity of the network, weather and climate information, information on network characteristics and the preferences of a network's customers;
- we accept that this metric is not currently feasible due to data limitations across networks and due to the curtailment metric being theoretical in nature; and
- to work toward a curtailment metric that may apply more consistently across the NEM, networks could initially be given flexibility to trial and potentially propose their own methods of measuring curtailment (within their circumstances), as part of any application for a bespoke incentive.

Table 1 sets out other performance metrics that we consider could also have particular application to incentives and performance reporting.

Table 1: Potential alternative metrics for incentives and service performance reporting

Metric	Features
Total utilised Customer Energy Resource (CER) generation	▪ This is the amount of energy able to be produced by CER, accounting for energy self-consumed as well as exported and therefore captures the total value to customers. ▪ Encourages efficient enablement of solar and avoids potentially perverse incentives to maximise exports at the expense of self-consumption.
Duration of full export access	▪ The time that customers were able to experience uncurtailed access up to the limit set in their connection agreement / export service offer. ▪ Could account for periods of voltage curtailment and dynamic curtailment. Curtailment that occurs in situations where a customer has installed a system which is larger than their export limits listed in their connection agreements / service offers should not be counted unless curtailment occurs at a level which is below levels agreed therein.
Export service levels achieved	▪ Utilises the 'duration of full export access measure' to determine the percentage of time a network was able to provide the service levels listed in connection agreements / export service offerings. ▪ Takes into consideration customer service preferences and choice.

3. Integrating export service enablement into benchmarking

We have been concerned for several years now of the need to undertake a fulsome review of how to integrate export service enablement within the AER's approach to benchmarking.

SA Power Networks is likely to be most impacted, being at the forefront of the distributed energy transition. We have for several years been incurring expenditure in enabling export services and expect the materiality of this expenditure to increase as we consider the need to augment network hosting capacity in coming years. The impacts for us are that:

- our measured productivity is affected, as our expenditure enabling export services adds to benchmarking 'inputs' while the value of our export service enablement is not currently recognised as benchmarking 'outputs' and further, our enablement of export services directly affects other existing measured 'outputs' such as in relation to 'energy throughput'; and
- with the outputs of our export service enablement not considered in benchmarking models, the use of these models to forecast operating expenditure growth under the AER's base-step-trend method will also under-estimate our reasonably expected costs of service provision.

Effectively, under the current approach to benchmarking, as customers connect distributed generation to our network, our measured performance degrades, despite the value that our connections enablement provides to those and all customers. While it is the role of incentives to drive network decision making, the approach to benchmarking should at the very least not discourage the enablement of this consumer value.

Given these concerns, we strongly recommend that:

- as a first and urgent step, that the AER should undertake a materiality assessment of the impact of export service enablement on benchmarking outcomes;
- a fulsome / holistic review is then needed on the overall approach to benchmarking, in light of export services, which should consider for example:
    - potential new metrics for export service outputs – our initial view is that the metric of 'total utilised Customer Energy Resource (CER) generation could, longer-term, serve as a benchmarking 'output' (outlined above in section 2) or even potentially CER energy kW as a shorter term proxy;
    - the relevance of some existing metrics such as 'energy throughput' and 'maximum demand' in light of energy exports – as benchmarking aims to recognise the gross output delivered to customers (in the case of consumption services this includes for example energy delivered, customer numbers, maximum demand), to then account for DER it would appear logical at a minimum to add back in energy that is self-consumed and perhaps energy exported to the transmission network;
    - the interrelationships between export services and other benchmarking variables; and
    - the suitability of existing benchmarking models to accommodate DER;[6]
- only after a fulsome review, should consideration be given to the potential Operating Environment Factors (OEFs), noting that:
    - the development of OEFs will not address the problem, being that current benchmarking approaches have not been adapted to export services; and
    - OEFs are only relevant to comparative benchmarking analysis, which would then leave other applications of benchmarking models unadjusted, with benchmarking models also being applied to assess industry productivity and operating expenditure output growth in the setting of regulatory allowances.

[6] We note for example, that there are likely to be complexities arising from the fact that the AER's models draw on international data, and it may be difficult to find suitably comparable data on export service provision, noting that Australia and indeed South Australia is at the forefront of global change toward distributed energy.