Enabling a distributed energy future

Response to AEMC Consultation Paper: Distributed energy resources integration - updating regulatory arrangements

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Energy Networks Australia

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Key messages

- Customers are rapidly adopting DER, and the role of the distribution network, and the services required of it, has changed – **the distribution network increasingly provides two way flows as a growing number of customers both consume and export electricity**. **The existing regulatory framework, however, is not designed for an electricity network that provides bi-directional flows**, and is becoming an impediment to networks enabling the ongoing uptake of DER.
- **An updated regulatory framework that explicitly recognises the export services DNSPs provide to customers is fundamental to enabling the customer-driven transition to distributed energy**.
- A capacity of the regulatory regime to accommodate export charges increases the options available to **enable efficient price signals to be provided to customers, better allocates the costs and benefits of DER, and provides a mechanism for those who highly value export access**. Currently the cost of hosting DER on the shared network is borne by all customers, including those who do not have access to, or cannot afford to, invest in their own DER.
- Any introduction of **export charges will be revenue neutral** to the DNSP and could **also better target and facilitate rewards for customers if they provide benefits for networks at key times**.

1 Overview

Energy Networks Australia appreciates the opportunity to provide a response to the Australian Energy Market Commission's (AEMC or the Commission) Consultation Paper[1] on the three rule change requests that aim to better facilitate the efficient integration of distributed energy resources for the grid of the future.[2]

Energy Networks Australia is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

Distributed energy resources are becoming an increasingly significant part of Australia's energy mix. As outlined in this submission, Energy Networks Australia is strongly supportive of regulatory reform that explicitly recognises the changing role of the electricity grid; from one of traditionally providing consumption services to one of facilitating the two-way flow of energy.

This reform is key to ensuring that distribution network service providers (DNSPs) can continue to enable the customer-driven transition to distributed energy.

1.1 Recommendations

Energy Networks Australia supports SA Power Networks' rule change proposal. In this submission we provide a number of recommendations for the Commission's consideration, however, we also acknowledge the further role that the Technical Working Group has in exploring key issues in a greater

[1] Australian Energy Market Commission, *Distributed energy resources integration - updating regulatory arrangements, Consultation paper*, 30 July 2020.

[2] *Allowing DNSPs to charge for exports to the network* (ERC0310) from St Vincent de Paul Society Victoria, *Access, pricing and incentive arrangements for distributed energy resources* (ERC0311 and RRC0309) from SA Power Networks, and *Network planning, and access for distributed energy resources* (ERC0309) from Total Environment Centre and Australian Council of Social Service.

depth. **Table 1** below provides an overview of Energy Networks Australia's recommendations with further detail to be found within this submission.

Table 1: Energy Networks Australia – Recommendations

#	Recommendation
1	Amend the regulatory framework to recognise that DNSPs provide export services, and customers can request and receive export services → thereby recognising these as services that customers value. To realise this, the definition of terms applicable to 'distribution service' in the regulatory framework (and any other amendments to the rules as necessary) need to be updated so that these terms explicitly recognise that the distribution network now not only conveys electricity to customers (consumption services) but also conveys electricity from customers (export services).
2	The NER should not mandate a particular classification to be assigned to export services. The AER should instead follow the current process outlined in the NER to arrive at a service classification decision, as per the current approach for consumption services.
3	The application of the existing capital and operating expenditure objectives in the NER will mean that DNSPs will have an obligation to meet or manage customer demand for export services classified as Standard Control Services; matching the current treatment of consumption services classified as Standard Control Services. There is therefore not a further requirement to develop additional obligations specifically related to export services.
4	Once the regulatory framework explicitly recognises the provision of export services to customers (Recommendation 1), the existing incentive schemes, including the STPIS, can be adapted to apply to export services.
5	The AER should adapt the STPIS to apply for export services. This is considered preferential to prescribing the details of the scheme in the NER, which would limit the responsiveness and adaptability of the scheme. The introduction of the STPIS will need to consider the different customer preferences and data capabilities of each DNSP, and allow for transition paths as necessary.
6	Jurisdictions should have flexibility to develop and apply service standards for export services, consistent with the current treatment for consumption services, which would then work alongside the amended STPIS designed by the AER. Explicit service standards for export services in the NER are not required.
7	To provide efficient price signals, and improve equity, the regulatory regime should accommodate export charges. Energy Networks Australia recommends removal of NER 6.1.4 (Prohibition of DUOS charges for the export of energy).
8	The development and introduction of any export charges should be led through the existing formal Tariff Structure Statement process, which will allow for strong consultation with customers and stakeholders on the design and timing of any export charges.

2 Background

2.1 Rule change requests

In July 2020, the Commission received three rule change proposals from the following rule change proponents:

- St Vincent de Paul Society Victoria (SVDP),
- SA Power Networks (SAPN), and
- Total Environment Centre and Australian Council of Social Service (TEC/ACOSS).

In recognition of the electricity system transformation, all three rule change requests propose changes to the current regulatory framework to recognise the role of, and aim to better facilitate the efficient integration of, distributed energy resources (DER).

These rule change proposals are a result of the extensive and collaborative process that was conducted as part of the Australian Renewable Energy Agency's (ARENA) Distributed Energy Integration Program (DEIP).

2.2 ARENA DEIP Access & Pricing

ARENA's DEIP brings together energy peak bodies, market authorities, industry associations and consumer associations to maximise the value of DER for all energy users. The program includes four distinct work packages, including:

- DER Access and Pricing,
- DER Interoperability (Data, Communications & Cyber Security),
- DER Market Development, and
- Electric Vehicles.

Energy Networks Australia is a member of the DEIP Steering Group, led by ARENA, and following initial development work by other parties joined as an active participant in the DER Access and Pricing work package in late 2019.

The DER Access and Pricing work package explores how the economic regulatory framework for electricity networks can evolve to meet changing community expectations. The package aims to build consensus on equitable and efficient DER access and pricing models, focused on customer-centric principles.[3]

The DEIP process has been a positive example of transparency and collaboration across a broad range of stakeholders, and Energy Networks Australia welcomes the rule change proposals that have been developed and submitted as a result of this close collaboration.

[3] https://arena.gov.au/knowledge-innovation/distributed-energy-integration-program/.

3 Enabling a distributed energy future

Key messages

- Customers are rapidly adopting DER, and the role of the distribution network, and the services required of it, has changed – it increasingly provides two-way flows as customers both consume and export electricity.
- The wide-spread adoption of DER creates opportunities, and as the essential infrastructure that connects these technologies, DNSPs are an enabler of these opportunities.
- To ensure that distribution networks are able to accommodate this two-way flow, and support this customer-driven change, DNSPs will have to make targeted investments specifically to allow increasing amounts of customer export → these are investments that would not otherwise have been required.

3.1 The energy transformation

Australia's energy system is undergoing a significant transition, moving away from large coal and gas centralised generation to smaller scale dispersed generation that is increasingly renewable generation.

In the last decade, renewable (wind and solar) generation as a share of total National Electricity Market (NEM) generation has risen from 2 per cent in 2009 to 16 per cent in 2019.[4]

This transformation is occurring both at grid scale, and at the individual customer level.

Distributed energy resources, or DER, are renewable energy systems that are commonly located 'behind the meter' i.e. located past the network point of supply. They commonly include rooftop solar photovoltaic (PV), battery storage, electric vehicles, and other forms of demand response.

The Australian Energy Market Operator (AEMO) has observed that parts of the NEM have some of the world's highest levels of residential solar PV.[5] As demonstrated in **Breakout Box 1**, the levels of DER penetration in Australia has increased significantly over the last decade.

This transformation has fundamentally changed the role of the distribution network. Traditionally, distribution networks supplied energy downstream to end-use customers ('consumption services'). However, distribution networks are increasingly being used to export customers' surplus energy, household generation net of household consumption, upstream to other customers or the market ('export services').

This is evidenced in the Australian Energy Regulator's (AER) 2020 State of the Energy Market, which notes that rooftop solar generation as a proportion of total generation in the NEM is increasing exponentially.

Breakout Box 1: DER penetration

- 1 in 4 dwellings are now fitted with rooftop solar.
- Australians have invested ≈$26 billion in small-scale renewable generation since 2011 (mainly rooftop solar electricity and heating).
- Distributed solar PV generation already exceeds the largest scheduled generator in the NEM today.
- By 2023, AEMO is forecasting enough rooftop solar to power the entire of SA during low demand periods.

Sourced from March 2020 RBA Bulletin, AEMO RIS Stage 1 Report, and May 2020 AEMO Technical Report.

[4] Australian Energy Regulator, *Data – State of the energy market 2020 – Chapter 2 National electricity market – Figure 2.13 – Wind and solar generation share of total generation*, June 2020.

[5] Australian Energy Market Operator, *Renewable Integration Study: Stage 1 report*, April 2020, page 6.

In 2009, rooftop solar was only 0.02 per cent of total generation, growing to 2 per cent in 2014, and by 2019, rooftop solar PV made up 5 per cent of total generation in the NEM.[6]

For many customers, the ability of distribution networks to host DER is therefore increasingly becoming as important as its traditional role of delivering energy to end-users.

3.2 DER opportunities and operating challenges

DER create a number of new opportunities for customers, including the ability to sell surplus energy or participate in a Virtual Power Plant (VPP). It is a priority for network providers to enable these opportunities, as the essential infrastructure that connects these technologies.

Increasing levels of DER connected to the network, however, give rise to different types of operating challenges that require solutions. In particular, it can result in voltage constraints. When rooftop solar PV and battery invertors export into the grid, it causes voltage rise in the local network. At higher penetrations of rooftop solar PV, the voltage level can exceed the range required in the Australian standard. This causes customers' invertors to trip and may cause quality of supply issues for all customers in that part of the network.

The network now must operate over a much greater 'dynamic range' of power flows, as explained in **Breakout Box 2**.

Breakout Box 2: Can networks just reduce the voltage?

The simple answer is no.

Networks were efficiently designed and built to accommodate voltage drop under load.

If the voltage was lowered across the network, this could cause under-voltage at peak demand periods, potentially leading to unreliable supply when it is needed the most.

With high levels of connected DER, networks need to operate over a much greater 'dynamic range' of power flows than they were traditionally designed for. To enable this, they need to invest in the capabilities of the network.

3.3 DER hosting capacity

While distribution networks designed for consumption services do have an inherent capacity to also provide export services, this 'inherent hosting capacity' is finite and is being reached in a number of NEM regions.[7]

This means either that:

- DNSPs will not be able to meet the ongoing customer demand for export services → service levels will decline from those customers have experienced, and DNSPs may need to introduce zero-export limits, or
- DNSPs will need to make targeted investments specifically to cater for the demand for export services; investments that would otherwise not have been required.

This investment will include not only traditional network solutions to increase hosting capacity, but also increasingly investment in non-network solutions.

[6] Australian Energy Regulator, *Data – State of the energy market 2020 – Chapter 1 The electricity market in transition – Figure 1.6 – Renewable generation in the NEM*, June 2020.

[7] For example, refer to Figure 7 in SA Power Networks' EA Tech – LV Management Strategy (SA Power Networks, *2020-2025 Regulatory Proposal: Supporting document 5.21*, 18 December 2018, page 14).

4 Modernising the regulatory framework

Key messages

- The existing regulatory framework is not designed for an electricity network that provides bi-directional flows, and is becoming an impediment to networks enabling the ongoing uptake of DER.
- When updating the regulatory framework, ENA supports a minimal change approach → leveraging off the framework designed for consumption services reduces regulatory burden and the risks of material regulatory change for all stakeholders.
- Export services should be recognised as part of the distribution service provided to customers → DNSPs will then have a new requirement to meet or manage customer demand for export services.

4.1 Existing regulatory framework

The National Electricity Rules (NER) govern the economic regulation of the services provided by transmission and distribution networks in the NEM.[8] The National Electricity Objective (NEO), as defined in the National Electricity Law (NEL), is:

> *"to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –*
>
> *(a) price, quality, safety and reliability and security of supply of electricity; and*
>
> *(b) the reliability, safety and security of the national electricity system."*

The regulatory framework, however, was developed when energy flows were largely one-way, and therefore was originally designed for the provision of consumption services (the conveyance of electricity to end-use customers). This is evidenced in the NER and NEL, which include key definitions that govern the provision of services that DNSPs provide, and how they are regulated.

Breakout Box 3 provides the current definition of a 'distribution service' and related terms, as provided in the Commission's Consultation Paper.[9]

[8] In the Northern Territory, the National Electricity Rules as in force in the Northern Territory (NT NER) apply.

[9] Australian Energy Market Commission, *Distributed energy resources integration - updating regulatory arrangements, Consultation paper*, 30 July 2020, Box 2, page 17 – 18.

Breakout Box 3: Distribution Service and Distribution System

- NER (chapter 10) defines a 'distribution service' as 'a service provided by means of, or in connection with, a distribution system'.
- NEL section 2 contains a parallel definition: '***electricity network service*** means a service provided by means of, or in connection with, a transmission system or distribution system'.
- NEL section 2: '***distribution system*** means the apparatus, electric lines, equipment, plant and buildings used to convey or control the conveyance of electricity that the Rules specify as, or as forming part of, a distribution system'.
- NER (chapter 10) definitions relating to 'distribution service':
  - a 'distribution system' is defined as 'a distribution network, together with the connection assets associated with the distribution network, which is connected to another transmission or distribution system…'
  - a 'distribution network' is defined as 'a network which is not a transmission network'
  - a 'network' (used in the definitions of both transmission network and distribution network) is defined as the apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to customers (whether wholesale or retail) excluding any connection assets…'

Sourced from the Australian Energy Market Commission.

As demonstrated in Breakout Box 3, the regulatory framework does not explicitly recognise the provision of export services as a 'distribution service' provided by a DNSP. In addition, there are differing meanings of a 'retail customer' within the regulatory framework.[10]

This ambiguity has consequences – it not only provides uncertainty regarding a customer's right to export to the grid but also means that a DNSP does not have a clear mandate to be able to plan and invest in their network to provide these services that customers increasingly value.

4.2 Modernising the regulatory framework

4.2.1 Recognition of export services in the regulatory framework

Energy Networks Australia supports the rule change proponents' recommendations to update the regulatory framework in order to better recognise export services. This will enable customers to make informed choices on the services that they value.

Energy Networks Australia considers that this can be best achieved by ensuring, to the greatest extent possible, symmetry between the regulation of consumption services and export services. Mirroring the current well-established regulatory framework for consumption services is considered to be highly efficient and also reduce the risks of material regulatory change to all stakeholders.

[10] Refer to Box 3 in the Commission's Consultation Paper (Australian Energy Market Commission's, *Distributed energy resources integration - updating regulatory arrangements, Consultation paper*, 30 July 2020, page 18 – 19).

Recommendation 1: Amend the regulatory framework to recognise that DNSPs provide export services, and customers can request and receive export services → thereby recognising these as services that customers value.

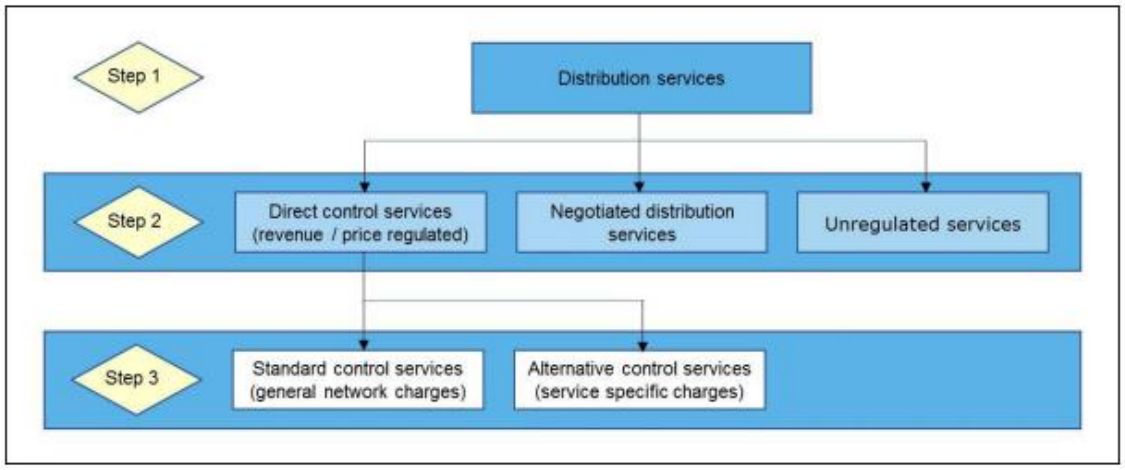
To realise this, the definition of terms applicable to 'distribution service' in the regulatory framework (and any other amendments to the rules as necessary) need to be updated so that these terms explicitly recognise that the distribution network now not only conveys electricity to customers (consumption services) but also conveys electricity from customers (export services).

4.2.2 Application of the regulatory framework

The NER require the AER to classify the distribution services that DNSP provide customers – the NER only permits distribution services to be classified. Once export services are explicitly recognised in the regulatory framework as distribution services (refer to Recommendation 1), it will allow the AER to then classify export services.

The AER's distribution services classification process is demonstrated in **Figure 1**.

Figure 1: Distribution service classification process



Source: Australian Energy Regulator[11]

The NER outlines the approach that the AER must follow when they classify services and includes a number of factors that the AER must have regard to when following the classification process.[12]

As noted above, Energy Networks Australia strongly supports amendment of the regulatory framework to recognise export services provided to customers. However, we do not recommend mandating in the NER the service classification *decision* that the AER should make with respect to export services.

As per the current process for consumption services, the AER should follow the process outlined in the NER to then arrive at a service classification decision during the during the Framework and Approach stage of a DNSP's regulatory determination.

Recommendation 2: The NER should not mandate a particular classification to be assigned to export services. The AER should instead follow the current process outlined in the NER to arrive at a service classification decision, as per the current approach for consumption services.

[11] Australian Energy Regulator, *Electricity Distribution Service Classification Guideline*, September 2018, Figure 1, page 12.

[12] NER, 6.2.1 and 6.2.2.

However, Energy Networks Australia supports SAPN's view, included in their rule change application, that:[13]

- as export services involve the use of the distribution network to export energy, these are natural monopoly services that should be regulated and provided for in networks' regulated revenue allowances,
- different aspects of export services may require a combination of Standard Control Services (SCS) and Alternative Control Services (ACS) classification (as per the current treatment of connection services),
- network augmentations driven by small customers will most practically be planned and funded on an ex-ante basis via SCS. This will mirror the approach taken (for the same practicality reasons) to the treatment of augmentations driven by small customers' consumption demand, and
- all network augmentations driven by any customer and recovered in SCS must be included in the same RAB as network assets used for consumption services, as the assets used to provide either service will be common.

For components of export services classified as SCS by the AER and requiring an ex-ante regulatory allowance, the capital and operating expenditure objectives in the NER will apply.

As shown in **Breakout Box 4**, this SCS classification would mean that network businesses will have a new requirement to meet or manage customer demand for export services.

It is Energy Networks Australia's view that the existing regulatory requirements, incentive schemes and controls that apply to distribution networks' provision of consumption services would apply and could be adapted to a DNSP's provision of export services.

The regulatory determination process operates under a propose-respond model, which means that DNSPs must submit a regulatory proposal to the AER every five years for approval, and the AER must make a decision about it.

This regulatory determination process requires DNSPs to engage with their customers and stakeholders in an integrated way with regards to key inputs such as their network and non-network solutions, connections policies and proposed tariffs. DER strategies and expenditure will be incorporated into this engagement process, and engagement with stakeholders is best facilitated through this process rather than a standalone strategy document.

Breakout Box 4: Capex & opex objectives in the NER

A DNSP must:

1. meet or manage the expected demand for SCS,
2. comply with all applicable regulatory obligations or requirements associated with the provision of SCS, and
3. to the extent that there are no applicable regulatory obligations or requirements, the DNSP must maintain the quality, reliability and security of supply of SCS, and maintain the reliability, security, and safety of the distribution system.

For those export services classified as SCS, the above objectives will then apply.

A DNSP will propose a prudent and efficient level of expenditure that is needed to meet target service levels based on forecast demand over each five-year regulatory control period. The AER will only approve expenditure associated with export services that the AER is satisfied reasonably reflects the pre-determined capital and operating expenditure criteria in the NER.

Recommendation 3: The application of the existing capital and operating expenditure objectives in the NER will mean that DNSPs will have an obligation to meet or manage customer demand for export services classified as Standard Control Services; matching the current treatment of consumption services classified as Standard Control Services. There is therefore not a further requirement to develop additional obligations specifically related to export services.

[13] SA Power Networks, *Rule change proposal for access and pricing of distributed energy resources*, 7 July 2020, page 18.

5 Providing incentives for efficient network expenditure

Key messages

- Once the regulatory framework explicitly recognises the provision of export services to customers, the existing incentive schemes can be adapted to a DNSP's provision of export services.
- Energy Networks Australia considers the STPIS is the most appropriate mechanism for creating export services incentives. Energy Networks Australia supports the AER adapting the STPIS for export services in consultation with stakeholders, rather than prescribing the details of the scheme in the NER, which will limit the responsiveness and adaptability of the scheme.
- Flexibility to introduce jurisdictional export services should be accommodated, rather than including explicit service standards in the NER.

5.1 Incentive-based regulation

Australia's energy networks are regulated through an incentive-based system that encourages networks to find better ways to serve customers.

Incentive regulation, administered by the AER in Australia, is designed to replicate the forces of a competitive market and encourage monopoly businesses to further reduce costs and improve efficiency, without compromising the standard of service to customers. It is recognised as a powerful form of regulation as it drives businesses to reveal their efficient costs to serve customers. This information then helps a regulator set even more efficient benchmarks for performance in the future.

The AER sets an ex-ante revenue allowance for each DNSP through the regulatory determination process mentioned in Section 4; that is, it sets the maximum allowable revenue that a DNSP is able to recover from customers prior to the start of each regulatory control period for which that revenue allowance applies.

In addition, the AER is able to apply specific incentive schemes to DNSPs, and a brief overview of the customer benefits of these are included in **Breakout Box 5**.

Energy Networks Australia's *Rewarding Performance: How customers benefit from incentive-based regulation* report found that regulated energy networks operating under incentive schemes over the past 13 years will deliver an estimated $6.3 billon of additional benefit to Australian energy customers.[14]

Breakout Box 5: Customer benefits of AER incentive schemes

- **Efficiency Benefit Sharing Scheme (EBSS):** provides customers with a share in opex savings.
- **Capital Expenditure Sharing Scheme (CESS):** provides customers with a share in capex savings.
- **Service Target Performance Incentive Scheme (STPIS):** service performance is protected or improved even as networks seek efficiencies.
- **Demand Management Incentive Scheme (DMIS):** customers share in the savings of non-network demand management solutions.

5.2 Incorporating DER

As mentioned in Section 4.2, it is Energy Networks Australia's view that the existing regulatory requirements, incentive schemes and controls that apply to distribution networks' provision of consumption services would apply and could be adapted to a DNSP's provision of export services.

[14] Energy Networks Australia, *Rewarding Performance: How customers benefit from incentive-based regulation*, July 2019.

In particular, Energy Networks Australia considers that there is a role for all existing incentive schemes (EBSS, CESS, STPIS, and DMIS) to apply to export services. In order for this to be given effect, however, Recommendation 1 in Section 4.2, must be realised i.e. the regulatory framework must first recognise the provision of export services to customers.

Recommendation 4: Once the regulatory framework explicitly recognises the provision of export services to customers (Recommendation 1), the existing incentive schemes, including the STPIS, can be adapted to apply to export services.

The STPIS, however, requires work to adapt it to apply to export services, and Energy Networks Australia recommends that this be left to the AER to design. This approach is considered strongly preferable to prescribing the details of the scheme in the NER, which will limit the responsiveness and adaptability of the scheme.

Recommendation 5: The AER should adapt the STPIS to apply for export services.

This is considered preferential to prescribing the details of the scheme in the NER, which would limit the responsiveness and adaptability of the scheme. The introduction of the STPIS will need to consider the different customer preferences and data capabilities of each DNSP, and allow for transition paths as necessary.

However, Energy Networks Australia supports SAPN's recommendation, included in their rule change application, that:[15]

- the STPIS would work together with any defined service standards if these are developed by jurisdictions,
- with or without any service standards, the STPIS should motivate networks to maintain or improve service performance for customers of export services on average across some (to be determined) group(s) of customers consistent with customer expectations and willingness to pay as per the current NER principles for the STPIS,
- the STPIS would need to establish a baseline level of service performance that networks are incentivised to maintain and improve upon. Key considerations likely include:
    - the need to derive service performance measures that, mirroring the approach to consumption, apply as averages across all customers, or across broad classes of customers, or regions, rather than in respect of any individual customer's service level.

      The aim would be to avoid systemic poor outcomes to some customers without creating incentives to augment specific parts of the network to improve individual customer performance where this is inefficient. That is, these measures should not imply any level of firm access.
    - how to measure and express service performance, such as referring to average annual hours of availability of a certain level of export capacity for a given customer group, and
    - determining how performance targets should be set and adjusted over time to deliver the best outcomes for customers.
- as occurred when the STPIS was first applied to consumption services, an adapted STPIS for export services would ideally be established progressively over a period of time, to build confidence in requisite measurement processes, systems and datasets. In that interim period, until the STPIS is operational, a reporting regime could be applied to encourage effective management of

[15] SA Power Networks, *Rule change proposal for access and pricing of distributed energy resources*, 7 July 2020, page 20.

performance. As with any other service, there is also an intrinsic incentive for networks to manage performance so as to minimise customer complaints, and

- a Guaranteed Service Level (GSL) inconvenience payment, developed under the STPIS, should apply to customers of export services who experience service performance well outside of average levels. This should be a payment for inconvenience, mirroring the payments made on the consumption side. It is not considered justified to use a GSL to compensate for lost income due to service interruptions (e.g. lost Feed-In-Tariff revenue), or any other form of financially firm access to the distribution network.

Some DNSPs are currently subject to jurisdictional service standards for consumption services, whereas other DNSPs are not – the NER accommodates both approaches under the same capital and operating expenditure objectives, criteria and factors. Therefore, the same flexibility to develop jurisdictional standards should be accommodated for export services, rather than the establishment of export service standards in the NER.

Recommendation 6: Jurisdictions should have flexibility to develop and apply service standards for export services, consistent with the current treatment for consumption services, which would then work alongside the amended STPIS designed by the AER.

Explicit service standards for export services in the NER are not required.

6 Pricing of export services

Key messages

» Any export charges introduced will not increase revenue for DNSPs. Network tariffs are designed to recover a set target revenue allowance set by the AER. Specific tariff designs do not increase revenue for DNSPs but instead determine how efficient costs are recovered from and between customers – therefore, introducing export tariffs is revenue neutral for DNSPs.

» The regulatory regime should be updated to accommodate export charges, under a timeframe and approach supported by customers and stakeholders. This provides an additional option for efficient price signals to be provided to customers upon which to base their DER investment and operations decisions, better allocates the costs and benefits of DER, and provides a mechanism for those that highly value export access.

To achieve this, NER 6.1.4 should be removed.

» A regulatory regime that accommodates export charges will also better facilitate and target rewards for customers if they provide benefits for networks at key times.

6.1 Existing regulatory framework

As previously outlined, the regulatory framework was developed when energy flows were largely one-way, and therefore was originally designed for the provision of consumption services (the conveyance of electricity to end-use customers). The NER currently includes a prohibition of export charges – NER 6.1.4 states:

> (a) A *Distribution Network Service Provider* must not charge a *Distribution Network User distribution use of system charges* for the export of electricity generated by the user into the *distribution network*.
>
> (b) This does not, however, preclude charges for the provision of *connection services*.

The network pricing objective in the NER, however, is:

> *"that the tariffs that a Distribution Network Service Provider charges in respect of its provision of direct control services to a retail customer should reflect the Distribution Network Service Provider's efficient costs of providing those services to the retail customer."*[16]

The NER also provide pricing principles that a DNSP must comply with in a manner to achieve the network pricing objective.

As the levels of DER penetration increase, and customers increasingly use the distribution network to export their surplus energy, this will drive new investment. However, given NER 6.1.4, all network costs, including the costs for export services, can only be recovered from connection charges, and charges for consumption services. This is not consistent with the network pricing objective of cost-reflective pricing.

The AER determines a DNSP's prudent and efficient forecast costs every five years – tariffs, including the introduction of any export tariffs, do not increase revenue for DNSPs (under a revenue cap) but instead determine how these costs are recovered from between customers – therefore, introducing export tariffs is revenue neutral for a DNSP.

6.2 Required reform

Energy Networks Australia supports cost-reflective network pricing reform, and recommends that the regulatory framework is updated to accommodate export charges. Recognition within the regulatory framework of the provision of export services to customers (Section 4) is interlinked with the efficient recovery of these costs, and cannot be considered in isolation.

This will not only enable efficient price signals to be provided to customers upon which to base their DER investment and operations decisions, it provides options to improve equity in allocating the costs and benefits of DER, and provides a mechanism for those that highly value export access.

The AEMC's Power of Choice review highlighted that over the longer term, more cost reflective pricing offers the prospect of lower electricity costs for all consumers.[17] Energy Networks Australia considers that the principle of charging customers on the basis of their use of services, the 'cost reflectivity' principle, is relevant for both consumption services and export services.

Recommendation 7: To provide efficient price signals, and improve equity, the regulatory regime should accommodate export charges.

Energy Networks Australia recommends removal of NER 6.1.4 (Prohibition of DUOS charges for the export of energy).

A DNSP, through the AER's regulatory determination process, must develop and submit a Tariff Structure Statement (TSS) to the AER for approval. The TSS is set for the five-year regulatory control period, and provides a degree of certainty to stakeholders about the future direction of the DNSP's network tariffs.

In the development of the TSS, a DNSP is required to engage with customers, and provide an overview to the AER of how they have sought to address any relevant concerns identified as a result of that engagement. Stakeholders are also afforded the opportunity to provide formal comment to the AER on a DNSP's proposed TSS through the regulatory determination process.

[16] NER, 6.18.5(a).

[17] Australian Energy Market Commission, *Power of choice review - giving consumers options in the way they use electricity*, Final Report, 30 November 2012, page viii.

The TSS provides an indicative tariff schedule for each year of the five-year regulatory control period but a DNSP is also required to submit annual pricing proposals to the AER that are compliant with the AER's final decision made through the regulatory determination process.

The TSS process requires consultation with customers and stakeholders, and would require that export charges—if deemed efficient under the network pricing objective— are introduced under a timeframe and approach supported by customers and stakeholders, and with AER oversight.

The network pricing principles in the NER require DNSPs to manage the impacts on customers of changes to network tariffs. DNSPs, on the consumption side, typically do this by considering transitions of various kinds, and Energy Networks Australia considers that these measures will also be required for any export tariffs. There will be trade-offs between faster or slower transitions, and these issues should be subject to close consultation with key stakeholders, including jurisdictional governments, through the TSS process.

Recommendation 8: The development and introduction of any export charges should be led through the existing formal Tariff Structure Statement process, which will allow for strong consultation with customers and stakeholders on the design and timing of any export charges.