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Merryn York
Acting Chair
Australian Energy Market Commission (AEMC)
GPO Box 2603
Sydney NSW 2001

Locked Bag 14051
Melbourne City Mail Centre
Victoria 8001 Australia
T: 1300 360 795
www.ausnetservices.com.au

Dear Merryn,

Network Planning and Access for Distributed Energy Resources – Consultation Paper

AusNet Services welcomes the opportunity to respond to the AEMC's Consultation Paper 'Distributed Energy Resources Integration – Updating Regulatory Arrangements'.

The integration of Distributed Energy Resources (DER) is an area that presents opportunities for customers to manage their energy costs and generate clean energy, reducing total emissions required to meet their energy needs. Our recent customer research has found strong support for networks facilitating export of energy from solar PV. However, there is a low level of awareness that solar PV can cause voltage problems for the distribution network, and that investment or export constraints may be required to address this.

DER also creates both opportunities and challenges for networks. In some cases and locations it can provide network support and help to manage peak demand. Where this is the case, a financial reward should be provided. However, additional investment may also be required to manage the technical challenges associated with a grid that was designed for one-way, but must now manage two-way, flows. While increasing export puts downwards pressure on wholesale market prices, benefiting all customers, there will be a point at which this benefit is offset by additional costs. Where this is the case, additional investment should be broadly supported by customers and suitable pricing arrangements.

The current regulatory framework does not formally acknowledge export services, nor does it explicitly govern network access, planning, or pricing for these services. While the NER provide sufficient guidance for the AER to make decisions on DER investment levels, it is appropriate to formalise the application of economic regulation to these services. This will provide more certainty for all parties – including customers, networks, and commercial energy service providers – and start to address the range of equity issues that the current arrangements create.

Consistent with many other areas of energy policy, a consistent national DER framework is to be preferred where possible. However, there are several reasons why customers in different jurisdictions may have different expectations and preferences when it comes to DER access and pricing. This could be due to differences in climate (impacting payback periods and therefore take up-rates) and State Government policies. For this reason, a framework that

provides options in the NER, with the ability for jurisdictions to set complementary access standards and/ or pricing approaches, could be considered in this context.

Allocation of Hosting Capacity

How to fairly and efficiently allocate existing and future hosting capacity is one of the most challenging questions to be answered in this review. Many equity issues prevail – including the allocation between first movers (who have benefited from relatively unimpeded access) and future DER customers, and the inherent differences in hosting capacity depending on where a customer is located on the network.

A related issue that AusNet Services highlighted in the 2018 Economic Regulatory Frameworks review is the ‘straw that breaks the camels back’ problem. Under the current regulatory arrangements, DER customers can export where it can be accommodated by the network, without paying additional costs. However, once localised hosting capacity has been exhausted, if the required investment is not justified by the expected benefit it will provide through unlocking additional export (i.e. it fails the market benefit test), the next DER customer requesting export services will face a choice between paying for the full cost of the required network upgrade (at the time of connection) to address the network constraint (increasing hosting capacity), or being export limited.

Designing a coordination mechanism that enables all DER customers who will directly benefit to share the upfront costs of required upgrades to relieve a constraint (where it fails the market benefit test) will facilitate more DER export while avoiding price increases for non-DER customers. This change in the framework would increase the number of DER customers able to benefit from export services while maintaining prices for other customers.

Responses to the questions in the consultation paper are found below. Please contact Charlotte Eddy, Manager Economic Regulation (0434 893 873) with any questions in relation to this submission.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Hallam', written in a cursive style.

Tom Hallam
General Manager Regulation
AusNet Services

Response to Consultation Paper Questions

QUESTION 1: APPROACH TO RULE CHANGE ASSESSMENT

1. *Is the assessment framework, specifically the criteria outlined above, appropriate for considering the proposed rule changes?*
2. *Are there any other relevant considerations that should be included in the assessment framework?*

We agree with the AEMC's proposed assessment framework and do not suggest any other relevant considerations.

QUESTION 2: DEFINITIONAL ISSUES

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

Yes. Explicitly recognising these services in the National Electricity Rules will enhance certainty for stakeholders regarding the application of economic regulation to these services, and hence the need for efficient investment to support these.

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

The proposed definitional changes appear appropriate.

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

We have not identified any unintended consequences that may occur, but the changes warrant a thorough legal review prior to finalising the rule change.

4. *Are there more appropriate approaches to enable export services to be recognised under the framework that are not considered above?*
5. *Are there any other issues related to definitions that the Commission should consider?*

We have not identified any alternative approaches or other issues.

QUESTION 3: PROPOSED CHANGES TO DEFINITIONS

1. *Are the proposed approaches to the classification of export services necessary and appropriate?*

We agree that the AER should classify export services as part of its F&A paper in the regulatory determination process. We agree with SAPN that, as the assets used to provide export services are also used to provide consumption services, there is a strong case to classify export services as standard control services.

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

We do not have any comments on these questions at this stage.

QUESTION 4: OBLIGATIONS ON DNSPs

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

AusNet Services does not see the need for the introduction of a specific obligation in the NER to require DNSPs to provide export services. DNSPs currently have incentives, albeit no direct financial ones, to provide these services given their importance to DER customers who have invested in embedded generation. In addition, access standards could be set in jurisdictional provisions, if desirable.

We agree with SAPN that the changes to the NER to formally recognise and classify these services and the application of incentive schemes such as the STPIS will provide stronger incentives for DNSPs to invest in the provision of these services.

2. *Would it be appropriate to impose obligations on DNSPs to consider network planning solutions in relation to DER integration?*
 - a. *Is there a need for the introduction of specific arrangements to guide network planning and investment decisions around additional DER hosting capacity?*
 - b. *Do you consider that a net market benefit test is a useful way to guide DNSP network planning and investment for export services?*

While there may be merit in the TEC/ ACROSS proposal to require networks to submit a 5 yearly DER integration strategy (DERIS) as part of its regulatory proposal, the proposed content of the DERIS closely matches the information networks, including AusNet Services, have presented to the AER (and is likely to continue to be presented) as part of revenue proposals. This type of information is needed by the AER to assess any DER integration expenditure. As networks have an incentive to present this information in an accessible, customer friendly way to enable stakeholders to meaningfully comment on our proposal, any such requirement may be unnecessary.

Formalising a regulatory obligation that requires the provision of information in a particular form in the NER goes beyond the current provisions for documentation required to support investment in consumption services.

We agree that a net market benefit test is a useful way to guide DNSP network planning and investment for export services. We adopted this approach for DER integration expenditure in our electricity distribution revenue proposal submitted to the AER in January 2020 and believe it is supported by the current regulatory framework. The application of a market benefits test to DER integration investment ensures that investment only occurs up to the point that all customers will benefit through lower wholesale market prices. Investment beyond these levels should only be targeted if there is strong stakeholder support and / or if this is supported by pricing arrangements.

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

The allocation of export capacity involves a myriad of equity issues. Currently, customers who connected DER systems early have benefitted by having greater access to export than customers who connected systems later on or will connect in future. The majority of customer with existing embedded generation have a legally binding connection agreement with their DNSP. These

agreements can only be altered by means mutual agreement. Hence applying changes in the regulatory framework for existing connections is difficult. Therefore, any changes to the principles governing the allocation of export capacity – whether set out in the NER or in jurisdictional legislation – should be founded on broad stakeholder support.

QUESTION 5: EFFICIENCY INCENTIVES

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

We agree with SAPN that all existing incentive schemes can apply (including the EBSS, CESS, DMIS, CSIS) other than the STPIS, for which an additional parameter will need to be developed.

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

The STPIS should be extended to export services, which would be appropriate as the STPIS sets service targets. This would be preferred over introducing an additional incentive scheme into the framework.

3. *If the STPIS or a new incentive scheme is to apply to export services:*
 - a. *What are the practical challenges of designing relevant performance measures and collecting robust data? Can these challenges be overcome over time?*

The practical challenges in designing an incentive scheme are outweighed by the benefit, and not disproportionately greater than those that have arisen historically with other incentive schemes that successfully operate today.

Notwithstanding this, one issue is how to set an appropriate baseline during a time of transition. This can be overcome over time, but in the near term, flexibility will be required when designing and applying the scheme.

In terms of data provision, the Victorian DNSPs have smart meters which provides, for individual customers, data on voltage and energy exported. These could be key inputs when designing a scheme which could apply in Victoria.

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

It is appropriate for the AER to design the scheme, given its experience of incentive schemes, and the additional flexibility to incorporate required future changes that this allows.

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

As well as considering the 'past performance of the distribution network' (6.6.2(3)(iii)) the AER should take into account forecasts in the uptake of DER. This is appropriate as export services have not yet reached the same 'steady state' as consumption services. If forecast DER uptake and penetration levels are materially different to those seen historically, the AER should have the flexibility to set the scheme's targets and parameters, and apply these in ways that are fit for purpose, and will not materially disadvantage either the DNSP or customers.

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

The baseline can either be set by establishing service standards to meet customer expectations or based on historical performance levels. To mirror the approach to the reliability of consumption services in Victoria, the use of historical performance levels should be considered. It will take some time to gather data to establish this baseline given we are currently in a period of rapid change.

QUESTION 6: PRICING ARRANGEMENTS

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

We do not see any reason why DNSPs should not have this option available. Whether this is applied or not will depend on a range of factors that are already considered by DNSPs in developing their Tariff Structure Statements (TSS), including consultation with customers and other stakeholders.

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

If enabling export charges is simply to provide the option, rather than compel networks to adopt these, then there is limited downside. In these circumstances, export charges will only be used to improve the efficiency of price signals when supported by a networks' customers.

We note that there are alternative ways to improve the efficiency of price signals provided to customers, including reform of existing tariff structures. Many of the practical barriers that have prevented significant shifts away from historical pricing structures over the last decade, also apply to the introduction of export charging.

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

As outlined in the cover letter, where investment is not justified by the net market benefit test, under the current framework, at the time of connection, the customer can pay the full costs of addressing the specific network constraint to enable them to export. In many cases this cost is prohibitively high. Designing a mechanism to enable all customers who benefit from this investment to share any upfront costs levied at the time of connection will enable greater levels of export for DER customers while maintaining prices for remaining customers.

- 4. If NER clause 6.1.4 is removed, and DNSPs are able to develop tariffs for export services:*
- a. What are the implementation issues?*
 - b. Should the existing tariff structure statement process and principles apply? For example, is a principle required to guide DNSP decisions on cost allocation between consumption and export services – as proposed by SAPN?*
 - c. Are transitional or 'grandfathering' arrangements needed and, if so, should they be prescribed in the NER?*

Implementing export tariffs will face many of the same implementation issues that exist in reforming consumption tariffs to become more cost reflective. This includes transitional issues. While there would be benefits to increasing standardisation of tariffs across the NEM, development of new tariffs need to be addressed by individual DNSPs through consultation with

its customer base and other stakeholders when developing Tariff Structure Statements, as the most desirable approaches may be unique to each network based on our differing historical approaches and future needs.

We agree that a principle should be designed to govern cost allocation between consumption and export services.

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

The current NER do not prohibit networks entering financial agreements with DER customers/ service providers when these provide benefits to the network. This may be complemented by negative export charges where these are applied by DNSPs.

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

It is difficult to define the size of the generators that these reforms should apply to, particularly without knowing the detail of the reforms to be implemented. However, unless there is an intent to adopt similar reforms for large scale generation, including those on the transmission network, to preserve competitive neutrality, these reforms should only apply at the small end of the generation spectrum, and only capture small scale DER. This may nevertheless still create an inequity between aggregated energy services and large-scale generation.