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10 September 2020

Ms Merryn York
Chair (a/g) – Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Ms York

Re: AER submission on consultation paper: Distributed energy resources integration – Updating regulatory arrangements

The Australian Energy Regulator (**AER**) welcomes the opportunity to comment on the Australian Energy Market Commission's (**AEMC's**) consultation paper on the three rule change proposals to update regulatory arrangements for distributed energy resources (**DER**). The proposals come from:

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

The three proposals reflect the increasing need to ensure that the regulatory framework enables the efficient integration of DER, including DER export services.

The rule change proposals stem from the collaborative Distributed Energy Integration Program (**DEIP**). The AER has been pleased to participate in the DEIP alongside the other market bodies and a broad range of stakeholders, including consumer representatives and industry participants.

The Access and Pricing working group, established under the DEIP, most closely considered the issues covered by these rule changes. The working group's considerations have now moved from the DEIP context to the AEMC's rule change process.

As a package of reforms, the AER supports the broad objective of the rule change proposals to clarify how DER should be integrated into the regulatory framework that we administer.

The AER considers that the proposals should help provide a platform for better pricing signals governing exports of DER onto the electricity system. This should in turn help facilitate efficient network investment to support DER exports.

The AER also considers that improved network price signals should help to drive innovation from retailers, aggregators and other new service providers. These parties could offer a range of tariff and service combinations to assist owners of DER to optimise the use of their assets, either for export purposes or for their own use.

With the growth of DER, significant opportunities will arise for customers, through retailers or aggregators or other energy service providers, to sell their electricity into the grid at times when it is valued the most.

In this context, the AER notes that the Energy Security Board (**ESB**) is undertaking important related work on DER integration. For instance, the ESB is exploring introducing two sided markets which would help enable customers (through retailers and aggregators) sell their electricity into the wholesale electricity market. As large scale thermal generation is retired, and the volume of variable renewable grid-based generation increases, it will become increasingly important for the market to be able to access flexible capacity, including flexible generation and demand side capacity. DER represents a potential source of flexible capacity. DER can also support a reliable electricity system through two-sided markets, which can provide an important source of competition.

Similarly, as DER growth continues there may also be opportunities for owners of DER to provide services to DNSPs. These services could, for example, enable DNSPs to avoid the need for expensive poles and wires investments by contracting with aggregators or retailers to help manage localised congestion on the network, or for the provision of other system support services, such as voltage management.

The AER notes that initiatives to facilitate DER owners selling their electricity into the wholesale market, or selling services to DNSPs to manage localised congestion will need to be supported by DNSP access and pricing arrangements. Effective access and pricing arrangements should drive efficient levels of investment in grid hosting capacity for DER exports, and help customers optimise investment in and deployment of DER assets for export purposes and for their own use.

Ultimately, this will help ensure customers (through their energy retailer or service provider) access the distribution network to sell electricity into the wholesale market at times when it is valued the most, or to provide network support services when network value is maximised.

The AER would note that whether the customer chooses to export their DER or alternatively use the electricity themselves (to offset their own usage) should be a matter of choice for the customer, noting that different customers will have different preferences in relation to how they choose to engage with the retailers and aggregators and the products they wish to purchase.

In summary, the AER:

- Acknowledges the value in clarifying that export services are an element of the network service provided by electricity distributors, now and into the future.
- Supports the National Electricity Rules (**NER**) continuing to provide the AER the flexibility to expand the Service Target Performance Incentive Scheme (**STPIS**) to encompass export services. Maintaining this flexibility will allow the AER to consider this matter when it undertakes a holistic review of incentive schemes, without pre-

empting the outcome of such a review. It will also be important for the AER to have sufficient time to collect data to develop a suitable metric against which to measure performance.

- Supports removing clause 6.1.4 from the NER, which prevents DNSPs from considering the option of specifically charging for export services.
- Encourages the AEMC to consider any consequential amendments to the distribution planning arrangements under chapter 5 of the NER. Improved reporting and forecasting in relation to DER will likely be required to support many of the changes set out in the rule change proposals.

On the third point above, we support DNSPs being able to consider the option and design of both import and export charges, which they will consult on when developing their tariff structure statements (**TSSs**). The existing TSS process is fit for this purpose as it allows DNSPs to take jurisdictional and customer-specific factors into account, in consultation with stakeholders, and subject to the AER's assessment and approval based on a set of principles set out in the NER.

A principles-based approach rather than the NER banning certain options outright, promotes innovation and flexibility to adapt arrangements over time to the evolving challenges of the energy system transition, including meeting decarbonisation targets. Removing clause 6.1.4 should help drive better price signals governing network investment to support exports and should unlock a range of options for service and tariff combinations.

Over time, we expect this will enable DER customers to exercise greater choice over the services they access, including services that reduce the involuntary curtailment of their exports. Similarly, this should assist DNSPs in better managing network constraints and the use of their assets in the long term interests of electricity consumers.

For our detailed considerations, please see **Attachment A** to this letter.

We look forward to continue working with the AEMC and other stakeholders to ensure the regulatory regime is fit-for-purpose and sufficiently adaptable to support the timely and efficient integration of DER in the National Electricity Market. To discuss any matter raised in this submission, please contact Mark Feather, General Manager, Policy and Performance on (03) 9290 6958 or Lisa Beckmann, Assistant Director, Policy and Performance on (02) 6243 1379.

Yours sincerely

A handwritten signature in blue ink that reads "Jim Cox". The signature is written in a cursive, slightly stylized font.

Jim Cox
Deputy Chair
Australian Energy Regulator

Sent by email on: 10.09.2020

Attachment A: Detailed response to the consultation paper

Proposed changes around the ‘distribution services’ definition

SAPN’s proposal includes updating the definition of ‘distribution services’ in the NER to explicitly recognise the conveyance of electricity ‘from’ consumers. Given that DNSPs have already been providing export services in response to customer demand, the proposed clarified definition appears reasonable and fit-for-purpose. The proposed definition would also clarify that export services form part of distribution services, which would make clear that DNSPs are expected to provide export services, where prudent and efficient. This additional clarification might assist stakeholders in understanding how export services fit within the regulatory framework.

While we support the proposed update to the definition ‘distribution services’ as being beneficial, analysis that we have recently undertaken as part of the Victorian distribution reset process indicates that we do not consider this is necessary for the regulatory framework to facilitate the provision of export services. We have formed the view that the current definition is sufficiently broad to include export services as a standard control service in the Framework and Approach process. Consequently, the current definition permits us to assess expenditure from an export services lens.

We share SAPN’s view that amendments to service classifications are not needed to recognise that the export of DER is a distribution service. In our view, the NER currently enable us to define whether a service is a distribution service, and the form of regulation factors and other elements of NER clause 6.2.1 lead us through the classification process. We also maintain an Electricity Distribution Service Classification Guideline to clarify the distribution service classification process for stakeholders. In this guideline, we clarify that ‘common distribution services’ relate to ‘the conveyance or flow of electricity through the network for consumers’, rather than implying that these services only capture the conveyance of electricity ‘to’ consumers.

Updating the regulatory framework – recognising the evolving role of distributors

SAPN’s proposal suggests that if export services are recognised as distribution services, they can be explicitly considered in service classification, benefit from the direct application of the capital and operating expenditure objectives and criteria, and be subject to regulatory mechanisms such as incentive mechanisms. We agree with this view. Moreover, the application of the capital and operating expenditure objectives and criteria to expenditure relating to export services should help define a prudent and efficient level of investment. Insights we have received from consumers as part of the current Victorian distribution reset process is that, while consumers support DER integration, they also support the associated capital expenditure to be economically prudent and efficient.¹

TEC/ACOSS propose a new obligation for DNSPs to develop a DER integration strategy as part of their regulatory proposals. In the AER’s 2017 Tariff Structure Statement (**TSS**) future direction commentary, we supported a similar concept by calling on DNSPs to present their pricing, expenditure, and demand management and connection strategies as a package. In

¹ Such insights are provided in submissions from the Consumer Challenge Panel, Energy Consumers Australia, Energy Users Association of Australia, Victorian Greenhouse Alliances. See <https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/powercor-determination-2021-26/proposal>.

this package, DNSPs would explain what options they considered and what trade-offs they made. Of the DNSPs, SAPN best demonstrated these linkages as part of its 2020-25 regulatory proposal. This was important for demonstrating how SAPN approached DER integration holistically, and how these plans fed into its broader network strategy. Given other DNSPs did not adequately demonstrate these linkages, we support the DER integration strategy becoming an obligation on DNSPs.

Efficiency incentives

The AEMC is seeking views on whether there are any regulatory barriers to adapting existing incentive schemes to export services. We support the NER providing the AER with flexibility to adapt incentive schemes to encompass export services, and are unaware of any current regulatory barriers in this regard.

The current consumption-focussed service standards and incentives under the STPIS work alongside cost minimisation incentives to encourage the efficient delivery of consumption services. While similar incentives to minimise costs apply to DER-related expenditure, performance incentives and standards around export services do not. Given this, it is worthwhile considering how to balance cost-minimisation incentives around export services. This could entail:

- The AER expanding the STPIS to incentivise performance associated with export services. This approach would provide national consistency and regulatory symmetry, although would also have challenges that may warrant a staged approach or transitional arrangements to overcome (discussed further below).
- Reputational incentives from the AER reporting or benchmarking DNSPs on export service performance. This approach would have similar (although lighter) incentives to expanding the STPIS, and could be a transitional measure before expanding the STPIS.
- Jurisdictions developing export-focussed service standards to apply in tandem with corresponding consumption-focussed service standards. This would have the disadvantage of not being a nationally consistent approach.
- The AER adjusting the strength of cost-minimisation incentives on DER-related expenditure. This would have the disadvantage of being an asymmetric approach to how the AER incentivises consumption services.

The AER sees benefits in expanding the STPIS to incentivise performance associated with export services. The NER currently provide the AER with flexibility in how it constructs the STPIS — for example, the provisions do not reference consumption services. We consider this flexibility is appropriate as it allows the AER to explore amending the STPIS as an element of the broader incentive framework. This would also provide us with the time and flexibility to address the challenges of expanding the STPIS to apply to export services. A notable challenge is the absence of a suitable metric against which to measure performance:

- Basing performance on connection and export metrics would not necessarily target service provision. Specifically, this would reward DNSPs for increased customer demand for solar PV, rather than improved export hosting capacity.
- If we were to base performance on inputs, such as the DER hosting capacity of the network, we could potentially reward the wrong behaviours. For instance, a DNSP's level of DER hosting capacity will not necessarily reflect whether the DNSP is making it easier or harder for customers to export (e.g. DNSPs imposing lower export limits on new connections could maximise DER hosting capacity). This could also reward DNSPs for where they have previously overbuilt.

- While a better metric would be based on export curtailment, this data is difficult to assess.

DER export curtailment can be measured in different ways— e.g. hard export limits (including bans), curtailment in response to overvoltage, enacting dynamic export limits. If the incentive overlooks a relevant metric, it could incentivise DNSPs to shift the method used to curtail exports, rather than to minimise curtailment. While it would be possible to create a reporting and measurement framework that captures all the relevant metrics, this will require a degree of judgement (including how to weight the different metrics). While there is potential for a suitable export curtailment measurement system to be developed out of AEMO's standards rule change, it will likely be several years before this becomes a reliable source of data.

In addition to forming a suitable performance metric, the AER would need to develop its own export service standard, against which to measure performance. We expect this task will take time, although will benefit from work we have already commenced on [assessing the benefits of DER-related expenditure](#).²

While the AER supports reviewing incentive schemes to support the efficient provision of export services, given the above challenges, we would likely adopt a staged approach. For instance, expanding the STPIS might entail the AER:

1. Identifying and testing a range of reporting metrics through paper trials, benchmarking and/or annual reporting.
2. Assessing whether the proposed metrics and reporting frameworks are of sufficient quality and incentive value to provide an overall benefit to consumers.

Pricing arrangements

We support the proposal from SAPN and SVDP to remove clause 6.1.4 of the NER, which prohibits DNSPs from specifically charging for export services. Removing this clause will enable two-way pricing so a fuller range of services that electricity customers request can be valued and provided (including for example, access to the wholesale electricity market). Similarly, two-way pricing will enable DNSPs to pay DER owners for the services they provide to support the network, such as demand response and voltage management. As such, we expect this update will enable a range of positive market developments that facilitate network support services and revenue streams for DER owners.

To support DER owners and other stakeholders in accessing value from providing network support (either through their DER or through demand management more broadly), we support SAPN's proposal for the NER to explicitly acknowledge that cost reflective distribution charges can also include negative prices. We expect this additional clarification would facilitate DNSPs to incentivise electricity customers to provide network support services at times when they are needed.

The existing TSS process is fit for ensuring that DNSPs only introduce such tariffs in close consultation with customers and in compliance with the distribution pricing principles under NER clause 6.18.5. In guiding tariffs to reflect the efficient costs of providing services, the current pricing principles should enable the development of efficient pricing signals for DER export services. That said, there may be ways to amend the pricing principles for greater

² See AER, *Assessing distributed energy resources integration expenditure*, under <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/assessing-distributed-energy-resources-integration-expenditure>.

flexibility, so that they remain fit-for-purpose. For example, the pricing principle to base tariffs on long run marginal cost might be more adaptable to emerging issues (e.g. minimum demand) if it referenced cost drivers in general, rather than cost drivers associated with times of greatest network utilisation. In this vein, adding new pricing principles (as SAPN and TEC/ACOSS propose) may not be preferable.

The TSS process inherently operates as a transitional process, as well as a way to take different jurisdictional circumstances and stakeholder preferences into account. Before introducing any new tariff class a DNSP will undertake detailed consultation that takes factors specific to its customers and jurisdiction into account. If there is reason to implement grandfathering arrangements, the NER already provide the flexibility for DNSPs to negotiate this with their customers in the development of the regulatory proposal. DNSPs may also consider the application of sub-threshold tariffs to trial more cost reflective options under NER clause 6.18.1C. We consider the flexibility that the NER provide for such negotiations to take place through the TSS process has been successful to date as it has allowed DNSPs to take jurisdictional-specific circumstances and customer preferences into account.³

While TEC/ACOSS request that their proposed rule changes only apply to small customers, the reasons behind this are unclear. We are uncertain about the rationale for having different arrangements for one customer class in the NER. Doing so could create unnecessary inconsistency and complexity.

Distribution planning arrangements

In exploring how the regulatory framework can better support the efficient provision of export services, it will also be valuable to consider any consequential amendments to the distribution annual planning process under Rule 5.13 of the NER. Specifically, we recommend the AEMC carefully review if any of the planning requirements are unnecessarily consumption-specific, particularly as improved reporting and forecasting in relation to DER will likely be required to support many of the changes set out in the rule change proposals.

The AER recommends the AEMC test the efficacy of the information requirements with the primary owners and users of this information – such as network planners and non-network proponents.

Certain information will become increasingly valuable as network planning increasingly considers export services and DER integration. Given this, it would be valuable to consider whether the planning arrangements require updating to better support DNSPs in making the following information publicly available:

- Information that DNSPs would already have, but are not necessarily required to publish. This includes evidence of integrated planning of import and export forecasts.
- Information to demonstrate that DNSPs have considered the impact of tariff reform when forecasting network usage patterns. Tariff arrangements are already an important consideration when forecasting for network planning and this will become more valuable as tariff arrangements evolve to send more efficient price signals.
- Information on export limits and impending constraints on exporting connections (including the value of such constraints). The AER's distribution system limitation

³ AER regulatory determinations demonstrate the impact of these negotiations in practice. For an example concerning a grandfathering arrangement see AER, *Final decision: Ergon Energy and Energy distribution determination 2020 to 2025, Attachment 18: Tariff structure statement*, June 2020, Section 18.4.9.

template could then guide DNSPs in providing such information in easily digestible forms, such as maps or geographical templates.

- identifying major DER related projects.