

17 February 2020

Mr John Pierce
Chairman
Australian Energy Market Commission

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Dear Mr Pierce

Regulatory Frameworks for Distributor-Led Stand-Alone Power Systems

SA Power Networks welcomes the opportunity to comment on the draft regulatory arrangements (the draft framework) for distributor-led Stand-Alone Power Systems (SAPS). Our submission (Attachment 1) comments on both the AEMC's Draft Report - updating the regulatory frameworks for SAPS and the AER's Explanatory note - Ring-fencing interaction with distributor-led SAPS.¹

We welcome the AEMC's progress and note the complexity of designing a framework addressing the concerns of all stakeholders. We remain supportive of reforms to increase options by which distributors can efficiently deliver energy to customers, in this case via SAPS. This is relevant for distributors operating a vast regional/rural network such as SA Power Networks.

However, the draft framework does not provide sufficient confidence for investment and innovation in the provision of SAPS and puts at risk timely and efficient service delivery for customers. Our concerns are that:

- there is no mechanism to assess if SAPS generation assets and their operation and maintenance will, at a point in time, be most efficiently supplied by a distributor or by a distributor outsourcing to a third party. Incentive regulation should remain neutral on the most efficient way of delivering distribution services, including via SAPS;
- there is a lack of clarity on key aspects which affect investment confidence including:
 - how to consider the current and future value that customers identified for provision of a SAPS may derive by remaining grid-connected, particularly where they own/plan to acquire Distributed Energy Resources (DER);
 - the process for managing the capacity of a SAPS on an ongoing basis, particularly where a customer requests an increase in the capacity of their SAPS;
 - the mechanisms by which distributors can recover their reasonable costs in being responsible for the supply of energy to a customer via a SAPS; and
 - approaches for resolving situations where a customer refuses grid disconnection.
- operating expenditures incurred by distributors in supplying SAPS should not be excluded from the AER Demand Management Incentive Scheme (DMIS) given that the provision of a SAPS presents many similarities to demand management; and

¹ The AER has invited stakeholders to provide comments on its Explanatory Note via submissions to the AEMC's Draft Report.

- simpler and interim alternatives could be considered to avoid complex National Electricity Market (NEM) registration and energy price design/payment processes required to derive an energy cost component aiming to replicate NEM energy supply that SAPS customers will no longer access, this complexity is not commensurate with the most likely initial forms of SAPS services.

We would be pleased to engage further on this important review. If you wish to discuss our submission further, please contact Bruno Coelho on 08 8404 5676 or email: bruno.coelho@sapowernetworks.com.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'P. Makinson', followed by a long horizontal line extending to the right.

Patrick Makinson
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Pre-conditions to the provision of a distributor-led SAPS

The provision of a distributor-led SAPS is predicated on there being an efficiency pre-condition, such that energy supply via a SAPS is assessed as preferable to replacing network grid assets which have been triggered for retirement. It would assist if the AEMC clarified that efficiency in this regard is to be interpreted consistent with the National Electricity Objective (NEO) as this would:

- indicate that in comparing replacement of network grid assets versus a SAPS, not only should direct relative costs (assets, operation and maintenance) be considered but also the relative quality, reliability and security of supply of electricity via the two alternative options;² and
- provide linkage to the capital and operating expenditure objectives in the National Electricity Rules (NER) which give effect to the NEO and will be used by the AER in assessing regulatory proposals.

Some cases may be limited to comparing direct costs and service performance. However, there are more complicated situations needing consideration. These are where a distributor identifies a customer is a candidate for a SAPS, but that customer has sunk investments in DER or desires to install DER in the future, to export their excess energy to the NEM, or export energy as their primary business model. It is unclear how these factors should be considered against the NER or Regulatory Investment Test-Distribution (RIT-D) Application Guidelines (and their list of market benefits). This is noting that current and future benefits of such customers remaining grid connected and using their DER in the NEM will pertain to both:

- the individual financial benefit they derive however, the RIT-D directs distributors to considering benefits to the market and all consumers rather than to individuals; and
- the benefits to all consumers and the market of the exported energy, such as via reducing fuel costs of energy dispatch, or reduced losses, however, it is only practical to assess energy export-related market benefits over a long time frame and across a distributor's entire customer base. Market benefits derived by a single distribution customer will unlikely exceed the cost of replacing network grid assets.

Considering least cost services to customers

We are concerned that while distributors will rightly be responsible for service performance of energy supplied via SAPS, the draft framework forces distributors to outsource the ownership, operation and maintenance of SAPS generation assets to a third party irrespective of the cost or quality of the third party's offer to the distributor.³ This may not have been intended by the AEMC, but is the effect of the framework given how it interacts with the AER's Ring-Fencing Guideline.⁴

Regulation should be neutral and not mandate outsourcing in all circumstances. A mechanism is needed to allow assessment of whether a third party's service offer will better achieve service outcomes in customers' interests, consistent with the NEO, versus SAPS service provision by a distributor. This is noting that:

² This is particularly relevant in the case of SAPS being considered in remote/rural areas where reliability may be poor and there may be bushfire risk, both of which should be considered/valued in assessments.

³ Further, many SAPS may not have discernible 'network components' outside of the generation assets.

⁴ This appears to arise because the AEMC has seen fit to retain a NEM energy component to SAPS service delivery, in which case a generator must register with AEMO (even though they are not providing any services into the NEM) and distributors are under the Ring-fencing Guideline prohibited from providing generation services. If this wasn't the case, the generation assets would simply comprise assets used as inputs to the distribution service, akin to how grid scale batteries are currently treated where these are used for network support, indeed the intention of these reforms is to incorporate SAPS solutions within the scope of the inputs that comprise distribution services.

- there is no justification for customers facing higher costs and/or lower service performance if a distributor can provide a more efficient service offer, and it is flawed to justify less preferable outcomes for customers on the basis that this may stimulate future competition:
 - The NEO directs regulation to promote outcomes that are efficient (with respect to price and service performance⁵), with efficiency being the goal and not competition.
 - Mandating outsourcing to a third party, even if more costly than what a distributor can provide, would result in customers of a distributors' regulated services cross-subsidising the development of competition and third-party service providers.
 - Some aspects of a SAPS service will likely have natural monopoly characteristics (economies of scale and scope). This is particularly for ongoing operation and maintenance (as the AEMC appear to note), and even more so in a vast jurisdiction like South Australia where third parties may need to travel hundreds or thousands of kilometres between SAPS customers in regional areas, whereas distributors have existing regional depots and field crews.
- the whole premise of incentive regulation is that distributors are motivated to choose the most efficient way of delivering distribution services, be it via network assets or demand management, capital or operating expenditure, network grid assets or SAPS, and in-house provision or outsourcing. Regulation should not 'pick winners', and distributors are best placed to manage their services.
- there are several existing regulatory mechanisms for fully scrutinising decisions distributors make under incentive regulation and there is no scope to opt for in-house service provision if this is not efficient:
 - the AER applies increasingly comprehensive testing of distributors' proposed investments against alternative solutions in its distribution determinations; and
 - for material cases, the RIT-D requires a public process for assessing investments against alternatives.

If the AEMC considers existing regulatory mechanisms are insufficient to protect future competition for SAPS services, perhaps for projects below the RIT-D threshold, then it could consider either:

1. requiring distributors to run a public tender for the provision of SAPS services, similar to the requirement that distributors now must now run a public tender for demand management solutions to apply for the DMIS. Importantly, a public tender process:
 - must allow distributors to assess a third party's offer on a cost and service performance basis against its own offer - with regard to the NEO and following standard procurement principles.⁶ Distributors could also potentially signal to the market their own service costs and allow third parties the opportunity to present a superior offer; and
 - would not provide distributors any exclusive right to the provision of other SAPS services over time, as there would be no barrier to third parties presenting offers as new opportunities emerge; or

⁵ That is with respect to: price, quality, safety and security of supply of electricity; and the reliability, safety and security of the national electricity system.

⁶ Any standard procurement process employed by distributors would be expected to consider both price and non-price factors in deciding on which supplier to prefer and if outsourcing or in-house provision should be preferred. For example, non-price factors could include: reputation and track-record; liability and insurance arrangements; financial security; skills and experience; availability of resources etc. In our view, consideration should be given to these kind of factors as ultimately, they may affect customer service outcomes with respect to the NEO (price, quality, reliability, safety and security).



2. recommending the AER amend the Ring-Fencing Guidelines to explicitly acknowledge that when assessing waiver applications, the AER will have regard to not only to whether a third party is willing to provide an offer, but also price and non-price considerations with that offer (consistent with the NEO and standard procurement practices) that may affect customer outcomes. At present, the AER's Explanatory Note on SAPS Ring-Fencing does not indicate that it will have regard to these factors.⁷

Ongoing management of SAPS capacity

While not explicit in the draft framework, we interpret that it will rightly be the role of the distributor to manage the capacity of a SAPS on an ongoing basis, noting that:

- this mirrors distributors' current responsibilities in managing the capacity of the distribution network grid; and
- for SAPS supply, which will be a 'distribution service', it is the distributor who will have ongoing responsibility for service performance (eg reliability, security, quality, etc).

To decide the initial capacity of a SAPS for a customer, a distributor will need to calculate that customer's typical consumption and demand. This may require some prudent over-sizing so that capacity is not exceeded with minor changes to energy usage. However, the process by which distributors are to manage the capacity of a SAPS on an ongoing basis is unclear and needs considering, noting the following.

Optimising use of capacity

While the AEMC suggests it is unlikely SAPS customers will require a different network tariff and to be assigned a unique tariff class,⁸ we note that a SAPS' capacity may need some optimisation. For example, it will not be ideal for back-up diesel generators to be running on an extended basis. There may be role for network tariff or other signals to assist with optimisation:

- As general distribution network tariffs shift to greater cost reflectivity (ie away from flat consumption charges), these tariffs (and their charging windows) may also assist in optimising the use of a customer's SAPS motivating customers to shift some energy use to when PV panels are generating.
- However, there may still be a need to consider network tariffs specific to SAPS customers over time, which contain variable charging parameters and charging windows that are tailored to minimising a SAPS customer's use of their backup generation (eg diesel fuel).⁹ The AEMC and AER should consider how this would be accommodated within the wording of the distribution pricing rules in chapter 6 of the NER.
- Alternatively, there could be a role for offering rebates to encourage customers to optimise their SAPS.

⁷ AER, *Explanatory Note—Ring-Fencing interaction with distributor-led stand-alone power systems*, December 2019, p.3.

⁸ The AEMC also notes that the premise for allowing distributor-led SAPS is that customers currently only face a cross-subsidised network tariff and that if customers were to face a locational cost reflective network tariff after being transitioned to a SAPS then this would not keep with the objective of ensuring these customers are no worse off compared to their previous supply via the interconnected grid (and their previous postage stamp price).

⁹ For small customers these would still preserve postage stamp pricing requirements, in jurisdictions such as South Australia where these are mandated by law.



Actioning customer requests for additional capacity

Importantly, a process is needed to action customer requests for additional SAPS capacity, to accommodate large changes to their energy consumption and demand. For example, a small SAPS customer may wish to charge electric vehicles, or an agri-business may wish to increase production capacity. It is unclear if the AEMC envisages the connection arrangements in Chapter 5A of the NER or an alternative process applying:

- Chapter 5A of the NER and the processes in a distributor's Connection Policy currently determine how much a customer should contribute toward an alteration/augmentation of their connection and how much should be recovered from all customers, this is via the application of a 'cost/revenue' test.¹⁰
- It appears Chapter 5A could apply where a customer wishes to increase their SAPS' capacity, although amendment to a distributor's Connection Policy may be needed along with other NER changes:
 - For chapter 5A to apply, the AEMC must define what comprises the 'connection assets', 'extension assets' and 'augmentation' within a SAPS and what is owned by the SAPS customer or distributor.
 - A significant change in a SAPS customer's required demand could be deemed by distributors to trigger a connection alteration and the additional revenue recovered from that customer's increased usage could be compared against the incremental costs of upgrading the SAPS.¹¹
 - SAPS could be subject to an augmentation threshold that would be detailed in a distributor's Connection Policy, below which a customer would not pay for augmentation.¹² SAPS system augmentations would need to be subject to an individual calculation rather than a published rate.

Distribution service cost recovery mechanisms

Distributors need confidence that they can reasonably invest and recover the costs they incur in providing 'distribution services' via a SAPS, and this is not achieved by the draft framework. The following need addressing.

Recovery of capital and operating expenditures:

- Distributors can only recover capital expenditure for the network component of a SAPS. However, it remains unclear what is interpreted as the 'network' component (particularly in an individual power system), and the connection, extension and augmentation components where customers request additional capacity and if these are owned by the distributor.

¹⁰ Connection Policies are approved by the AER in a distribution determination and set for a 5-year regulatory control period. These policies also link to the level of forecast connections related capital expenditures approved by the AER for 5 years.

¹¹ It should be noted that in some cases this may mean the SAPS customer does not pay anything for upgrading their SAPS, where their increased revenue rebate exceeds the costs and consequently all the costs would be recovered from all customers via future DUoS tariffs.

¹² Connection Policies could refer to a specific value or the existing thresholds within these policies (ie single-phase system which is 25kVA).



- Where a distributor outsources to a third party, costs of acquiring generation/storage assets and their maintenance are to be treated as operating expenditure (opex), without a recovery mechanism. While costs may initially be immaterial in isolation, distributors already face significant challenges in remaining within the AER opex allowances due to the changing nature of services provided and ongoing changes to regulatory requirements.¹³ Without a specific cost recovery mechanism, distributors would need to:
 - absorb these costs until the opex is included in the ‘base-year’ used to forecast expenditures for a subsequent regulatory period. SAPS costs may not be evenly spread across a 5-year period, and third parties may seek to recover their assets upfront from the distributor rather than via an annuity; or
 - propose opex in their 5-yearly regulatory proposals to the AER. This avenue may work in future if SAPS costs could be accurately forecast (unlikely at present), and if the AER permits their consideration in its approach to opex step changes.

Investment confidence and cost recovery via Ring-Fencing waivers

Distributors can be granted a waiver under certain circumstances, in order to provide some or all components of a SAPS service. It is likely this avenue will be required given natural monopoly characteristics of some SAPS activities, however:

- It does not promote confidence for innovation, purchasing inventory and training of staff if SAPS services are subject to obtaining a short-term waiver, which can be revoked or not renewed after 5 years. Waivers should apply for the life of a SAPS asset, which may typically be 7-10 years.
- If a waiver is granted, it is also unclear how distributors can recover the costs of generation/storage assets they must acquire. At the AEMC workshop AER staff stated a preference for these assets to be recovered outside of the RAB. There is no apparent precedent for the regulatory and accounting treatment of an asset used to provide distribution services to reside outside the RAB. Further, the AER would need to clarify which rate of return would apply to assets sitting outside the RAB.

Incorporating SAPS solutions into the AER’s DMIS

The draft framework excludes SAPS solutions from the DMIS, without this being discussed in the AEMC draft report. Our view is that any opex a distributor reasonably incurs in being responsible for supplying energy to a SAPS customer, should be eligible for the DMIS, on the basis that:

- like demand management, provision of a SAPS will be an alternative to traditional network grid supply where a constraint may emerge on the network (ie a network asset is triggered for retirement);
- consistent with the DMIS’ underlying premise for demand management, providing SAPS will require innovation by distributors, configuring SAPS to customers’ needs, arranging timely maintenance, customer notification and engagement, and designing new third-party contracts for nascent activities; and

¹³ For example:

- cost pass throughs have a high materiality threshold and distributors typically have to incur higher opex that may arise from new regulatory obligations/requirements or other demands without regulatory funding;
- the AER’s current approach to measuring opex outputs which in turn is used to forecast growth in a distributor’s required opex, may not be keeping pace with the changing nature of distribution services; and
- distributors are now required to achieve an ex-ante imposed productivity target (adjustment to opex) of 0.5%.



- as noted above, there are barriers to distributors recovering opex incurred in providing SAPS, particularly during a regulatory period where allowances are set, this is also the case for demand management opex. Applying an incentive bonus under the DMIS would provide some limited compensation for these barriers, just as it currently does for demand management opex.

NEM replication service model

We support the AEMC desire to replicate NEM supply arrangements in order to minimise changes that customers face when disconnected from the grid and supplied from a SAPS. The AEMC sought to design a framework applicable to all future scenarios, including where SAPS supply significant numbers of customers. While this has some merit, the complexity of this framework may not be commensurate with the more simple and limited form of SAPS solutions likely to prevail initially (supplying individuals or few customers).

The AEMC should consider if simpler and interim models could be applied for a number of years and later reviewed. An alternative could involve distributors paying all costs of SAPS service provision (including the energy component) and subsuming these into regulated DUoS charges. This model would:

- be cheaper for SAPS customers, as energy costs would only pertain to the variable costs of back-up fuel used by the SAPS;¹⁴
- avoid the need to design complex pricing arrangements for the energy component of SAPS supply and AEMO registration by generation service providers - prices for fuel/energy costs payable to generation service providers would be captured in contracts with distributors;
- maintain customers' access to retail markets, noting the AEMC sees a need to maintain customers' choice of retailer and access to competition, even though in practice it is hard to observe the value of this and what retailers would actually be competing on under the draft framework, particularly for individual power systems;
- see all costs incurred by the distributor being treated akin to current network support costs; and
- avoid complexity reflected in the draft framework whereby, to ensure generation service providers are kept whole:
 - distributors would need to agree a contract price to cover the generation assets and maintenance costs, and also agree further compensation for any divergence between the NEM settlement price the SAPS generation service provider recovers from AEMO and their actual energy costs; and
 - the SAPS generation service provider needs to obtain two separate revenue streams, one from AEMO and one from the distributor.¹⁵

We would be pleased to discuss with the AEMC in more specific detail how simpler models may potentially operate.

¹⁴ That is, customers would not have to pay to consume energy that is not generated by wholesale market generators and instead, generated likely by solar PV panels which have little to no variable costs.

¹⁵ If the AEMC considers that a NEM settlement price for SAPS is still required, then this contracting complexity discussed here could also be avoided by that settlement price being received by the distributor and used to off-set distribution charges for other customers.



Resolving situations where customers do not consent

The draft framework tries to replicate current energy supply arrangements so that customers disconnected from the grid and provided a SAPS do not see change. However, customers will see some changes, such as no longer accessing feed-in tariffs via their existing investments in DER, and no longer having the option of acquiring DER to export energy into the grid. While it may be unlikely customers will actively refuse SAPS supply, consideration is needed on distributors rights in resolving these situations, noting that:

- While distributors will not need to seek customers' explicit informed consent, they will seek to avoid damage to trust and reputation from forcing a customer's grid-disconnection against their will.
- The draft framework appears to require distributors to take customers off-grid where SAPS supply is the most efficient option, regardless of whether the customer refuses. The AER is unlikely to permit distributors to invest in the alternative option of replacing network assets where this is more costly than a SAPS solution as determined through a RIT-D or by applying the expenditure objectives in an AER distribution determination, neither provides an avenue for considering a customer's refusal.
- Customers may seek compensation from distributors for the sunk investments in DER that they will no longer be able to use for exporting excess energy into the market.

