Consultation Paper Review of the Regulatory Frameworks for Stand-Alone Power Systems – Priority 2

29 March 2019

Energy Networks Australia

Introduction

Energy Networks Australia (ENA) welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC) Consultation Paper titled 'Review of the regulatory frameworks for stand-alone power systems – Priority 2' (Consultation Paper).

ENA's key messages in relation to third-party stand-alone power systems (SAPS) are outlined below, with further details provided in the body of the submission. Responses to the questions posed in the Consultation Paper can be found in Attachment A to this submission.

ENA is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks, with 21 member companies providing more than 16 million electricity and gas connections to almost every home and business across Australia.

Key messages

- The level of regulation should be calibrated to need - varying between individual power systems (IPSs) and microgrids
- The level of regulation to apply to a microgrid should be determined through a risk-based assessment of the characteristics of the microgrid, including safety and customer protection issues, not necessarily the size of the microgrid.
- Any targeted sales by third-party SAPS providers to existing grid-connected customers must satisfy the efficiency pre-condition, to meet the National Electricity Objective.
- Explicit informed consent should be obtained from all customers moving to a third-party SAPS.
- Registration, licensing and prudential assurances of third-party SAPS are imperative.
- Any regulatory obligations associated with third-party SAPS must be solely funded by third-party SAPS providers and should not give rise to any costs for grid-connected customers.

Regulatory treatment of IPSs

ENA considers that IPSs bought outright by a customer require less regulatory oversight than IPSs that offer a service or supply agreement that continues after the initial installation.

- Other than licensing/registration, the system safety imperative, and the need for explicit informed consent, the interests of customers who buy an IPS outright are adequately protected by Australian Consumer Law. Such customers, for example, are at liberty to accept a lower level of reliability, presumably in return for a lower up-front cost.
- IPSs that are part of an on-going agreement in relation to maintenance and/or the retailing of electricity (the landlord model outlined in the Consultation Paper) will require additional regulatory oversight, given the on-going relationship between the ISP supplier and the customer.

Given this difference, the rest of the ENA submission will focus only on the latter – that is, IPSs that are operating under some sort of agreement, whether short-term or long term, of fixed duration or infinite duration, between a customer and a provider.

Regulatory treatment of microgrids

ENA considers that microgrids generally require more regulation than IPSs as there are more risks associated with a larger system.

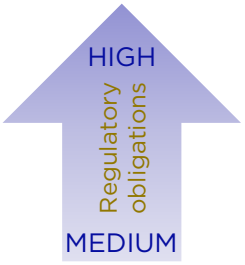
The appropriate regulatory treatment for microgrids would be best determined using a risk-based assessment against specific criteria, not just the number of customer's served. Larger and more complex microgrids should be subject to a similar level of regulation as DNSPs. This will avoid the creation of unregulated natural monopolies.

This approach was put forward by the Independent Pricing and Regulatory Tribunal (IPART) of NSW in its submission to the November 2017 NSW Government Discussion Paper, *Protecting consumers in a changing energy world*, available here. ENA supports this type of approach and suggests the following, largely in line with IPART's suggestion.

For simplicity and efficiency, electricity supply systems would fall into one of three categories - the higher the category, the greater the level of regulation

Figure 1 – Proposed categorisation of electricity supply systems

- Category 1: Distribution and transmission networks
- Category 2: More complex and higher risk embedded networks and microgrids
- Category 3: Less complex and lower risk embedded networks and microgrids



Existing distribution and transmission networks would represent Category 1.

Category 2 would include those embedded networks and microgrids that present a higher level of risk to the community, for example:

- High voltage embedded networks and microgrids as these present a higher safety risk to the community and workers
- Low voltage embedded networks, for instance those which cross roads and property boundaries outside of a strata title, and industrial centres.

A risk based assessment would be undertaken for remaining low voltage embedded networks and microgrids, to determine which systems fit into Category 2 and which systems fit into Category 3.

Possible risk-based criteria that could be used include:

- **Potential customer impacts** such as the number of customers, whether they are residential, commercial or industrial and how they may be impacted (or how customers may be impacted by the potential SAPS failure).

- The **suite of services** being provided by the third party, for example, peer-to-peer trading or vertical integration and the extent to which customers are protected under these services
- **System complexity**, such as the types of assets within the supply system, their size and the electricity load within the system.
- **Location/operating environment**, for instance, areas that experience extreme weather conditions, have different exposure to/access by members of the community or are in bushfire prone areas would present a different risk profile.
- **Skills** required to safely manage and operate the electrical assets in the installation.

On this basis, low voltage embedded networks such as caravan parks, shopping centres, and unit blocks would more likely be in Category 3.

ENA believes this criteria-based approach has real merit in providing a regulatory framework proportionate with microgrid risk, though clearly:

- more work would be required to develop a comprehensive risk based assessment for determining the appropriate network categorisation criteria;
- changes to these proposed categories will likely be required when the Australian Energy Market Commission (AEMC) publishes its final report for "Updating Regulatory Frameworks for Embedded Networks"; and
- assessment criteria would have to be made publicly available to minimise regulatory uncertainty to investors.

Efficiency pre-condition is imperative

If the National Electricity Objective (NEO) is to be met, a third-party SAPS must satisfy the efficiency pre-condition, just as a DNSP led SAPS must do. Remaining grid-connected customers should be no worse-off following the installation of a third-party SAPS.

The NEO 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:*
>
> - *price, quality, safety and reliability and security of supply of electricity*
> - *the reliability, safety and security of the national electricity system."*

This pre-condition will generally be met where either:

- ageing infrastructure at the fringe of the grid is close to requiring replacement; and
- there is no significant planned expansion beyond that current fringe of the grid.

OR

- there is increased demand within existing network areas which cannot be adequately met by existing network infrastructure and would otherwise require significant upgrading. For example, subdivisions or where a new business with a high demand for energy takes over an existing brownfield site.

This pre-condition is unlikely to be met in most brownfield locations within meshed network areas or in regional nodes, particularly where it results in significant demand being removed from the inter-connected grid. Situations where economic inefficiencies arise as a result of duplication of investment for which both investments have to be paid for is clearly at odds with the NEO.

Without this pre-condition, there is a real risk that grid-connected customers suffer economic loss as third-party SAPS installations in the wrong locations will leave grid-connected customers paying more than would otherwise have been the case.

This issue will arise when the compensation from third-party SAPS providers for asset transfers and stranded assets does not outweigh the efficiency losses to grid-connected customers of having the extra customer(s) connected to the grid.

Consider, for example, the potential outcome where:

- A township of 15,000 customers in an upstream section of a largely radial distribution network, is targeted by a third-party to move 'off-grid'. In this instance, the compensation payments to the DNSP for asset transfers and stranded assets will never outweigh the longer-term losses to grid-connected customers who lose the ability to share the DNSP's costs with 15,000 customers. This becomes even more of an economic risk to downstream customers should locational pricing ever come into play.
- A large customer with high usage within a meshed area of the network is enticed by a third-party to go 'off-grid'. Again, the compensation for any stranded assets will not outweigh the economic loss to grid-connected customers of having to now pay more to make up for the revenue shortfall previously provided by this customer.

Whilst ENA recognises that any single customer can elect to go 'off-grid' at any time of their own volition, third-party SAPS providers should not be allowed to specifically target grid-connected customers/locations where the economic efficiency of a SAPS will not be achieved. This pre-condition will:

- provide the necessary protection for grid-connected customers by ensuring third-party SAPS investments occur in areas/sites that are beneficial to all electricity customers; and
- ensure any regulatory and rule-based arrangements recommended by the Commission satisfy the NEO.

Explicit informed consent

ENA agrees with the requirement that all third-party SAPS installations require the explicit informed consent of all customers if they are transitioning from the interconnected grid.

In addition to the details around the SAPS provider and system, consent should also be obtained in relation to:

- any trade-offs an IPS customer is accepting, for example, lower reliability for a cheaper price (noting that DNSP's should be given the opportunity to compete if a customer is happy with a lower level of reliability),

- the likely timeframes for SAPS maintenance and repair activities,
- the calculation as to how prices will be established and, if required, shared between customers,
- acceptance of the likely longer-term pricing profile (to minimise the risk of 'sweetheart' deals being used to entice customers), and
- acceptance of:
  - any foregone customer protections,
  - the loss of grid connection and the likely costs to reconnect,
  - the risk of SAPS provider failure and any applicable provider of last resort scheme,
  - the potential loss of property value in disconnecting from the grid, and
  - the implications for them of any future change in usage, for example installing an air conditioner, buying an electric vehicle or expanding a business.

Customers should demonstrate that they holistically understand the consequences of their decision to go off-grid both in the near and long-term as part of giving their explicit informed consent.

Asset transfers and asset stranding

The Consultation Paper does not contain any details as to how the valuation of any asset transfers and stranded distribution assets, referred to in the 'Draft Report – Review of the regulatory frameworks for stand-alone power systems – Priority 1' (Priority 1 Draft Report), will be effected in a manner consistent with the assumptions and operation of current economic regulatory framework.

Whilst the AEMC intends the valuation to be determined through commercial negotiations between the distributor and the third party SAPS provider, under "an AER-supervised mechanism"[1], it is not clear how this would be implemented in practice.

Asset stranding costs, will need to include any costs related to:

- decommissioning and right-sizing the network;
- alterations to ensure the security, reliability and safety of the system; and
- the share of any operating costs to be recovered, such that grid-connected customers are no worse-off than they would otherwise have been.

Any mechanism for determining these costs will need to consider:

- How to identify stranded assets;
- Potential methods for valuing assets;
- How any efficiency losses to grid-connected customers are to be valued;
- The formula to calculate the economic efficiency of a SAPS;

[1] Draft report Review of stand-alone power systems – Priority 1, AEMC, 18 December 2018, para 50, p.X

- The envisaged dispute resolution framework for instances where a DNSP and third-party SAPS provider cannot agree on a valuation, including the following:
  - Who assesses the adequacy of valuations and against what criteria?
  - Can a DNSP be compelled to let assets go under this process? ENA believes that where an efficiency pre-condition is not supported by the AEMC, that DNSPs should have the right to refuse/dispose of any of their assets.
  - What is the perceived role of the AER in such a process?
- Consistency of such outcomes with the basis and regulatory risk assumptions contained in the AER rate of return binding guideline.

Provider of last resort

This is an area of concern to DNSPs if they are nominated or required to 'pick up the pieces' of any third-party SAPS failure. It is likely that a number of third-party SAPS providers will fail or look to wind-up their operations at some point. This poses a real risk to affected customers if adequate frameworks are not developed in response to the possibility.

DNSP's recognise that they are well placed to become a Provider of Last Resort (POLR) for customers on third-party SAPS in their distribution area, however ENA does not support DNSP's becoming a POLR if remaining grid-connected customers are negatively impacted.

Grid-connected customers should not bear the risk of other customers electing to go off-grid with third party SAPS providers. Similarly, grid-connected customers bearing the risk of third-party failure sends the wrong commercial incentives to third-party providers and they may, as a result employ more aggressive, inappropriate strategies. As such, there must be a scheme in place protecting grid-connected customers from bearing the financial risk of third-party SAPS providers failing.

One option may be to require third-party SAPS providers to secure an appropriate POLR for every SAPS installation, either another SAPS provider or a DNSP. This party would be identified in the agreement with the customer. Such a scheme could be funded by the POLR charging the SAPS provider an appropriate on-going fee to cover their risk. This scheme would likely include requirements in relation to the products and technologies it employs, the availability of inventory spares, and the need to de-commission hazardous assets

Alternatively, all third-party SAPS providers could be required to hold appropriate insurance as part of their annual registration and/or licensing arrangement. The insurance scheme could be centrally administered and included as an additional cost in the SAPS agreement with customers, commensurate with its size and scale.

The cost implications for a POLR may vary depending on:

- the scale of the SAPS supply – an IPS is likely to be easier to take on than a microgrid;
- the location of the SAPS relative to the location of trained staff and equipment and the inter-connected grid; and

- the complexity of the SAPS, the products and technologies it employs and the availability of inventory spares;

ENA supports that where a DNSP does become a POLR:

- that the associated SAPS assets would become regulated assets from that date, noting that the associated POLR costs would need to be identified and separately recouped;
- it would be exempted from any ring-fencing obligations for the SAPS assets;
- in relation to an IPS, the DNSP would be able to replace any parts that are not consistent with its IPS approach and inventory (and charge the IPS customer accordingly); and
- they are free to reconnect the customer(s) to the inter-connected grid, if this is the most efficient solution.

To protect the interests of grid-connected customers, any associated POLR costs would need to be identified and recouped either from an insurance scheme or from the SAPS customers themselves, via a unique SAPS network pricing tariff.

If you have any question or would like to discuss the content of this submission, please contact Chris Gilbert on 03 9103 0409 or cgilbert@energynetworks.com.au

Sincerely

Andrew Dillon

Chief Executive Officer

Attachment A – Response to Consultation Paper questions

NOTE: As mentioned in the submission, **unless otherwise specified, all references to an IPS in this Attachment relate to those systems where some sort of agreement, whether short-term or long-term, of fixed duration or infinite duration, is undertaken between a customer and a provider.** In this instance, the provider maintains an on-going relationship with the customer so ENA believes that additional regulatory protections are required.

QUESTION 1: SHOULD WE REGULATE THIRD-PARTY STAND-ALONE POWER SYSTEMS?	
(a) Is there a need for regulation of a third-party SAPS? Why or why not?	Yes, because of the inherent risks to customers around safety, reliability, service standards, longevity of the provider and the potential loss of consumer protections. A SAPS is essentially a monopoly provider of an essential service and where the service is shared by multiple customers, should be regulated in a similar way as DNSPs. Regulation will protect customers by creating a more level playing field between third-party SAPS providers and customers, especially as most customers are not familiar with their electricity demand and industry terminology. For customer's to make educated decisions, at a minimum the SAPS agreement should compare each aspect of the third-party SAPS service to the grid-equivalent. For example: safety. privacy; interruptions; capacity; noise; how growth in energy demand will be managed; any actions required by the customer to enable their supply; items included and excluded from maintenance and on-going servicing; and exactly what items are being provided with the service, for example, a local internet service. Proving credit worthiness and the adequacy of cash-flows and relevant insurances as part of a National licensing or registration process will minimise the risk of third-party SAPS providers becoming insolvent or otherwise winding up operations Third-party IPS providers, where they are providing a behind the meter solution, should also be required to adopt the New Energy Technology Consumer Code once it becomes operational as part of their license or registration. Regulation will also provide clarity around provider/operator of last resort operations, ensuring that DNSPs or any other parties that take over the operations of a failed provider have the ability to: » take on such assets, at no expense to grid-connected customers; and » recover any associated costs from any insurance scheme and/or relevant SAPS customers.

(b) If there is a need for regulation, is this sufficiently provided for via the existing broad-based regulatory framework (for example, the Australian Consumer Law)? Why or why not?	As an essential service, customers cannot rely solely on Australian Consumer Law (ACL) as the process is expensive (requiring lawyers) and too slow. In the meantime, the customer may be supplied with an unsafe, unreliable or inadequate essential service. Regulation will also assist third-party SAPS customers if the third-party SAPS provider ends up in liquidation or otherwise ceases to exist. These are relatively long-life assets that are not cheap to procure and the potential financial and safety risks to customers of asset failures are significant. Customers should also be provided with clarity around their likely longer-term pricing.
(c) If the existing broad-based regulatory framework is insufficient for the purposes of regulating a third-party SAPS, which additional regulations are needed? Should these additional regulations be national or jurisdictional?	ENA believes: » Third-party IPSs require a lower level of regulation as they relate to just one customer who has made the choice to accept the conditions outlined in an agreement. » Regulations for third-party microgrids, on the other hand, should cover the same areas as those provided to DNSP customers. ENA suggests that the proportionate level of obligations for microgrids be determined via a risk-based assessment against pre-determined criteria. » It is important that customers truly understand what they are agreeing to over the long term in making the decision to be supplied by a third-party SAPS, noting that customer preferences may change over time. As such, the customer agreement should compare each aspect of the third-party SAPS service to the grid-equivalent. » Third-party IPS providers, where they are providing a behind the meter solution, should also be required to adopt the New Energy Technology Consumer Code once it becomes operational as part of their license or registration.
(d) Do the seven dimensions identified by the Commission capture all the potential areas for regulation of a third-party SAPS? If not, which areas are not covered?	The proposed dimensions seem to cover the necessary areas, so long as the longer-term considerations around the on-going costs of operation and maintenance, as well as end-of-life costs and processes are included.
(e) Should the regulatory framework for a third-party SAPS distinguish between an IPS and a microgrid? Why or why not?	Yes, as mentioned in the body of ENA's submission: » IPSs require less regulation than microgrids as they relate to a customer specific solution and service level that the customer willingly accepts as part of signing the agreement. » Third-party IPSs bought outright require less regulation than third-party IPSs utilised under a longer-term service agreement. » Microgrids crossing property boundaries have the potential to cause significant safety and consumer protection risks.

(f) Should the regulatory framework for a third-party SAPS distinguish between microgrids based on size or some other criteria? If so, what might these criteria be?	Yes. The scale and depth of obligations to apply to a third-party microgrid should be determined by completing a risk-based assessment against pre-determined criteria.
(g) Should the regulatory framework for third-party SAPS address large customers as well as small customers? Why or why not?	Yes. Regardless of whether an IPS is for a small or large customer, there is a requirement for many of the seven dimensions to apply. In particular, a microgrid may encompass a mix of both small and large customers, and there is no argument for treating large customers differently to small customers. The interests of smaller customers may, however, require more consideration where a microgrid is dominated by one very large customer, like a mine. In general, very large customers are better resourced to look after their own interests.
QUESTION 2: PROPOSED ASSESSMENT CRITERIA FOR A THIRD-PARTY SAPS	
(a) Are there assessment criteria included that should not be? If so, what are these?	The assessment criteria seem adequate.
(b) What should be the broad objectives under the Commission's assessment of a third-party SAPS regulatory framework?	ENA sees two broad objectives: 1. To protect the interests and safety of third-party SAPS customers. 2. To ensure grid-connected customers are left 'no worse-off' from the installation or failure of a third-party SAPS.
QUESTION 3: NATIONAL AND JURISDICTIONAL REGULATORY FRAMEWORKS FOR A THIRD-PARTY SAPS	
(a) What, in your view, are the advantages for jurisdictions to allow some parts of the interconnected grid to transition to a community SAPS regulated under a jurisdictional framework?	Jurisdictional frameworks recognise that not all areas of the NEM are equal, as such they can provide bespoke arrangements at a local level to better manage local opportunities and challenges. However, no community SAPS should occur within the inter-connected grid without the efficiency pre-condition being satisfied.

(b) What, in your view, are the advantages for jurisdictions to regulate some or all SAPS under a national framework?	A national framework: » provides consistency for all stakeholders regardless of where they are located; » provides efficiency benefits to SAPS providers; » is more efficient than having multiple, largely replicated frameworks; and » is already in existence for many of the pieces of the framework required for SAPS. So long as the national framework takes certain operating environment factors into account, for example energy storage requirements will differ between cold climates and hot climates, it would provide a more preferable framework for most regulatory aspects.
(c) Which do you think are the advantages of maintaining multiple SAPS frameworks within and across jurisdictions?	The main advantage is the bespoke treatment that can be offered – this is particularly the case for legacy SAPS that were established under different circumstances from that envisaged in the current Consultation Paper and will not necessarily need to operate under the regulatory framework being considered as part of this review.
(d) Which do you think are the disadvantages of maintaining multiple SAPS frameworks within and across jurisdictions?	Inefficiency through replication. This would be best limited to legacy SAPS where possible.
(e) Which elements of third-party SAPS regulation should fall under a national framework and which ones should fall under jurisdictional frameworks? Why?	A national framework is more appropriate for most aspects of SAPS regulation except for elements which already have existing state-based regimes such as customer protection ombudsman schemes.
QUESTION 4: REGISTRATION AND LICENSING	
(a) Would it be appropriate to apply either a licensing regime or a registration regime (or both) for third-party SAPS?	Yes, licensing and registration is required for third-party SAPS to minimise the risks of SAPS providers going into liquidation or otherwise ceasing operations. This risk applies to customers who may be left without a service provider and also DNSPs and other SAPS providers who may be called upon in a POLR event. As part of this process, third-party SAPS providers should satisfy a set of minimum technical standards to ensure safety, reliability and protection for customers. Providers should also have the backing of a provider of last resort (POLR) from the outset and may be required to satisfy minimum liquidity and cash flow ratios or have appropriate insurance.

(b) Does the justification for a licensing or registration regime for third-party SAPS differ for microgrids and IPSs?	No. As an essential service, the means by which electricity is supplied is irrelevant. A licensing or registration regime that recognises that third-party SAPS providers don't just own/install one or two systems, nor are they limited to providing either IPSs or microgrids would be most effective and help minimise the risk of potential misconduct or unacceptable customer outcomes from SAPS providers/operators. Having said that, the licensing and registration costs should not be so overly onerous that they hamper competition. They may need to be proportionate to the size of the third-party SAPS provider, the type of systems offered etc.
(c) Does the justification for a licensing or registration regime for third-party SAPS differ based on microgrid size? Why or why not?	No. As an essential service, the size of the microgrid is irrelevant.
(d) Should any licensing or registration regime for third-party SAPS be applied solely at a jurisdictional level, or a national level where this is consistent with NEM arrangements?	An annual licensing or registration fee under a national regime would offer third-party providers' access to the entire NEM. This would likely be cheaper and more efficient than SAPS providers paying separate fees for each jurisdiction they wished to operate in. Given the close ties of this dimension to the POLR, we would expect this aspect to also be covered in a national framework.
(e) Is there a requirement for specific arrangements to be developed to maintain the continuity of supply in the event of the failure of a third-party SAPS service provider? How might an operator of last resort be selected and funded?	Yes, this is of fundamental concern to DNSPs and other third-party SAPS providers. Refer the *Provider of last resort* section in the body of the ENA submission.
(f) Are there any other issues related to eligibility criteria and arrangements for maintaining the continuity of supply that the Commission should consider?	Only that the process should be subject to regular review to determine its appropriateness. For example, a large number of failed third-party SAPS may be an indicator that something is not working in the assessment of suitability. Customers should not be the victims of poor outcomes simply for the benefit of promoting competition of a monopoly service.
(g) Should any regulation address both large industrial customers and small customers?	Yes. As an essential service, the type of electricity customer is irrelevant.

QUESTION 5: THIRD PARTY ACCESS TO THIRD-PARTY MICROGRIDS	
(a) Should third-party microgrids be subject to a third-party access regime?	Yes - microgrids should expect to become the new electricity providers in any growth areas they service. As such, they should expect to serve customers with different needs and expectations and operate effectively and efficiently. Part of this responsibility should entail third-party access. However, there are some circumstances where a small number of customers being supplied by a SAPS on property boundaries should not be subject to third-party access regimes as these customers may have entered into a SAPS arrangement without the expectation of third-party access. For instance two farmers separated by a property boundary agree to be supplied by the same third-party-led SAPS because of the efficiency benefits of using the same system without the expectation of third-party access. If they are not located in growth areas, it makes sense to define such an arrangement as an IPS for regulatory purposes. This access should also extend to customers wishing to install solar PV, batteries or other new technologies within a microgrid. It is important that customers have the choice to access the services they see as valuable, regardless of the type of network that delivers their electricity. In small communities there can be significant fluctuations in load due to the lack of diversity in load relating to small customer numbers or one predominant industry in town. For example, if the main employer in town closes the load could drop significantly. The additional costs are subsidised in some networks, but for third parties this is a risk.
(b) Should only third-party microgrids above a certain size be subject to a third party access regime?	No, not unless the third-party SAPS provider has obtained the explicit informed consent of all microgrid customers to forgo certain third-party access.
(c) Should third-party microgrid service providers be obliged to offer to supply or connect customers? Should these obligations address small customers only or both small customers and large industrial customers?	Yes, third-party microgrid providers should be obliged to offer to supply or connect customers. Given new customers may have minimal other options to secure supply e.g. an IPS or grid connection, then where they can connect to a microgrid in an efficient manner, they should be able to do so. This should also apply to large industrial customers, but not to the detriment of existing microgrid customers. A large industrial customer should be provided the same opportunity as any other customer to connect to the microgrid, even if it comes at a higher cost than an IPS alternative. The main concern will be ensuring that the on-going microgrid costs are shared fairly between existing customers and the new customer - generally one would expect some savings to pass through to existing customers as economies of scale are realised.

(d) To the extent that it would be appropriate to place obligations on operators of third-party microgrids to offer third-party access and/or to offer to supply new customers, should these obligations be applied through national or jurisdictional legislation?	National - in line with the existing national third party access regime.
(e) Do the concepts of third-party access or supply and connection obligations have any relevance for individual power systems?	No, on the basis that IPS arrangements may be tailored to the individual customer.
(f) Are there any other issues relating to third-party access or supply and connection obligations that the Commission should consider?	There are some other considerations around the equity of supply to microgrid customers: » How are the different consumer groups treated and priced in a micro grid? » What happens if a large user of energy in a microgrid uses market power to negotiate a disproportionately better deal? » How are the long term costs apportioned if there is significant decrease in energy consumption or the closure of a significant energy user in the microgrid? Considering the costs of a microgrid are mostly fixed in nature, this would have to be shared across a smaller customer base and will increase supply costs on a per customer basis.
QUESTION 6: ECONOMIC REGULATION	
(a) Should third-party SAPS be economically regulated and what should the scope of regulation be?	It depends on the type of SAPS. » Where regulation is required, the objective is to ensure the SAPS is run efficiently (costs are managed) for the interests of customers, resulting in fair and reasonable prices for customers. » If consumer protections are to apply, all the same considerations that apply to a DNSP will need to be considered, for example, service classifications, retail, network, generation, costs of system usage, tariffs and tariff equity for different sized customers etc.

(b) Should a different approach be taken for an IPS compared to a microgrid, or for different sized microgrids? If so, why? If not, why not?	» IPSs do not require economic regulation as the customer contracts directly with the provider, so has awareness of the price they will be charged. There must, however, be clarity for the customer as to the full life-cycle costs of the IPS, including expected on-going operation and maintenance costs, as well as end-of-life disposal costs. » Microgrids will require some form of economic regulation, the scale of which may be determined using risk-based assessment criteria.
(c) Which of 'full', 'light', or 'no' economic regulation is most appropriate for a third-party SAPS? Why?	Under the risk-based assessment approach put forward by ENA, microgrids would fall into one of two categories: » Higher risk microgrids would be subject to 'full' regulation; and » Lower risk microgrids would be subject to 'light' regulation.
(d) Are there other more appropriate approaches to economic regulation of a third-party SAPS not discussed above?	No comment.
(e) Should economic regulation of third-party SAPS be undertaken at a national or jurisdictional level?	The economic regulation of third-party SAPS should be undertaken at a national level to » ensure their treatment is consistent with DNSPs (where it needs to be); » allow SAPS providers to gain efficiencies in operating across different jurisdictions; and » Ensure alignment with national tariff reform initiatives.

QUESTION 7: CONSUMER PROTECTIONS

(a) Is it appropriate to apply the full suite of energy-specific consumer protections (national and jurisdictional) to third-party SAPS? Are there any consumer protections which would not be appropriate and proportionate for third-party SAPS?	It depends on the type of SAPS: » For IPSs bought outright, no, so long as the customer agreement covers all framework aspects relative to a grid-equivalent connection. These systems should be covered only by Australian Consumer Law and the New Energy Technology Consumer Code, once it becomes operational. » For IPSs under a longer-term operating agreement, yes. » For microgrids, yes. All third-party SAPS must require explicit informed consent from all impacted customers.

(b) Are there any additional SAPS-specific consumer protection provisions which should apply to third-party SAPS? If so, what are they?	Need to ensure that customers do not receive unproven technologies, or technologies not yet adequately covered by safety standards.
(c) Is there a justification for the consumer protection provisions applied to third-party SAPS differing between microgrids and IPSs? or between microgrids of different sizes?	Yes. » A customer who buys an IPS outright agrees to do so at the price specified in their contract. Accepting this service means the customer forgoes access to certain consumer protections and is left with only Australian Consumer Law and the New Energy Technology Consumer Code, once it becomes operational. » All other SAPS customers should maintain access to the existing consumer protection provisions.
(d) Should consumer protections generally be applied to third-party SAPS on a national basis (excluding concessions and rebates and ombudsman schemes), or a jurisdictional basis?	Consumer protections will apply under a mix of both national and jurisdictional frameworks. This is consistent with the existing framework, whereby specific protections are offered under either a national (e.g. the National Energy Customer Framework), or jurisdictional (e.g. access to the ombudsman) frameworks.
(e) Are there any other consumer protection issues the Commission should consider?	Not that we are aware of.
QUESTION 8: RELIABILITY	
(a) Would it be appropriate to apply some form of regulatory reliability protections to third party SAPS? If so, how might such protections be specified?	It depends on the SAPS. » IPS customers may accept a lower reliability level for a trade-off in price. However, there should be a single minimum performance standard relating to quality of supply and reliability, encompassing extreme weather events and changes in customer load. This is because an IPS lacks the diversity of the inter-connected grid. » ENA does not believe that microgrids should be able to offer a lower level of reliability than the inter-connected grid. Therefore, it is appropriate to apply jurisdictional regulatory reliability protections to third party-led microgrids. » Guaranteed Service Level payments should also be included in the SAPS regulatory framework to manage non-compliance.

(b) Should IPSs be subject to any reliability standards, targets or benchmarks? If so, what may be appropriate?	Given an IPS serves just one customer, they may choose to agree to lower reliability standards, presumably in return for a lower cost system. This new reliability standard should be included in the IPS agreement with the customer and clearly form part of their explicit informed consent. However, as mentioned above, this standard should not be lower than a specified single minimum performance standard relating to quality of supply and reliability, encompassing extreme weather events and changes in customer load. Revising AS4509 Part 2 to include reliability (standards, calculations and training) must be undertaken as part of this framework.
(c) Should reliability standards for third-party SAPS be governed under jurisdictional frameworks, consistent with the existing governance for network reliability? Is there a case for having any element of reliability protections specified or developed at a national level?	Yes, SAPS should be governed under jurisdictional frameworks. There is no need for a national level of reliability protection. Reliability is primarily a jurisdictional function except for the operation of the service target performance incentive scheme. As such, jurisdictional regulation makes sense, especially as a SAPS is unlikely to lie across two jurisdictions.
(d) Are there any circumstances under which customers should be able to determine an acceptable level of reliability in consultation with the third-party SAPS provider? If so, what are those circumstances, and would any additional protections or information requirements be needed in relation to that negotiation?	Negotiation of reliability levels should only be allowed under an IPS arrangement. » The customer could negotiate with the third-party supplier an appropriate level of reliability that they are happy with, resulting in cheaper bills for the customer and a cheaper system for the third party supplier. However this standard should not be lower than a specified single minimum performance standard relating to quality of supply and reliability, encompassing extreme weather events and changes in customer load. » The third party should need to undertake extensive consultation with the customer and the customer should have to demonstrate they wholly understand the consequences of a lower reliability standard » Any agreed lowering of reliability should be clearly stated in the IPS agreement. ENA does not believe that reliability level negotiations should be allowed in relation to microgrids. This is particularly pertinent should a POLR event occur and the microgrid ends up as a regulated DNSP asset.
(e) Are there any other issues related to the reliability of third-party SAPS that the Commission should consider?	As described above, there should be a minimum reliability and service standard that takes into account extreme weather events and changes in customer load.

QUESTION 9: NETWORK OPERATIONS	
(a) What are the key system security and technical standards that should be applied to all third-party microgrids at a minimum? Are there any minimum system security and technical standards that should apply to IPSs?	» All technical and system security standards should be applied to third-party microgrids. Microgrid customers should expect the same customer experience as if they were connected to the interconnected grid. This is especially important given the possibility that all customers may not have to give explicit informed consent to transition to a microgrid. » Other than general system safety and electrical standards, ENA does not believe that any minimum system security and technical standards should apply to IPSs. This is on the basis that the IPS is the result of a dedicated contract with a specific customer. As such, liability rests with the customer to make themselves aware of the likely impacts.
(b) Should there be a system operator role for large third-party SAPS? If so, what party would be most appropriate to perform this role, and what SAPS size threshold should trigger the need for this role?	Yes, a third-party microgrid should be able to accommodate a system operator role as required, just like the distribution network. » The role could be undertaken by the third-party themselves, or by another party in the contestable market. » This role will be required in a microgrid of any size, wherever customer's demand it. If this service is not provided when demanded, microgrid customers will effectively be connected to a second rate network, when compared to grid-connected customers. It would be a perverse regulatory outcome if microgrids do not (or cannot) offer customers access to the same level of services that can be obtained by grid-connected customers, effectively creating two classes of customers - "those with" and "those without". There is no requirement for a system operator role for an IPS.
(c) What are the key metering and settlement obligations that should be applied to all third-party microgrids at a minimum? Are there any metering or settlement requirements that would be relevant for IPS?	This depends on the microgrid. ENA suggests this would be a criteria in the risk-based assessment to determine the level of regulation to apply to a microgrid outlined in our submission under the heading *Regulatory treatment of microgrids*. The obligations for metering and settlement depend largely on the model adopted by the AEMC, but possible obligations would be: » If a third party microgrid contains high level functionality, for example peer to peer trading, the third party should have its own settlement system. » Where the third party microgrid does not provide advanced functionality and does not have its own settlement system, the final obligations decided by the AEMC for DNSP-led SAPS should also apply to third party SAPS.

(d) Should the regulatory frameworks for system security and metering and settlement be national or jurisdictional, or a combination of both?	A national system is preferable as it provides consistency across jurisdictions. However, the regulatory framework for metering should be under a combination of both national and jurisdictional frameworks. NEM chapter 7 rules could be derogated from under each jurisdictions application where the costs to implement are prohibitive.
(e) Are there any other issues related to system security, technical standards or metering and settlement that the Commission should consider in respect of third-party SAPS?	Metering and settlement requirements should be made part of the standard terms/conditions/licence for operating a SAPS network – such as frequency of billing, meter asset management and compliance to metrology standards.
QUESTION 10: SAFETY	
(a) Is it appropriate to apply the current jurisdictional safety obligations that are imposed on DNSPs on third-party SAPS? Are there any provisions which would not be proportionate for third-party SAPS?	Yes, it is appropriate to apply the current jurisdictional safety obligations that are imposed on DNSPs to third-party SAPS. Third-party SAPS are providing the same service to customers as a DNSP-led SAPS and the interconnected grid. This is consistent with the AEMC's draft recommendation in the priority 1 report that requires DNSP-led SAPS customers to receive equivalent consumer protections that they received prior to transitioning to a SAPS. Regardless of the form of electricity supply, customers, workers and the community have the right to know an electricity system is safe.
(b) What are the key safety obligations that should be applied to all third-party microgrids at a minimum? What are the minimum safety obligations for IPS?	Generally, SAPS safety obligations should be on par with those applied to DNSP's. » Microgrids require additional safety standards compared to IPSs around system security, safety management systems, incident reporting and notification. » IPS's need minimum technical and electrical standards so the customer can be assured their installation is safe. This must include customer training around any work they will be required to perform, for example, how to shut-down the IPS to replace the start-up diesel generator battery and then restart it safely. ENA recommends that on site audits be required for all third-party SAPS to minimise the potential that operators who may fail to comply with all requirements operate in the market.

(c) What compliance, monitoring and enforcement powers relating to safety are appropriate for third-party SAPS?	It is up to jurisdictions to monitor and enforce as safety regulation rests with jurisdictions. In terms of microgrids, however it is expected that a safety management system would be required at a minimum. Depending on the microgrid criteria, this may be subject to audit. A safety management system would need to outline how the SAPS provider plans for and undertakes any preventative maintenance (generally assuming this increases with age), as well as operational maintenance.
(d) Are there any other issues related to safety that the Commission should consider?	In terms of IPSs, customers will need to be made aware that safety may become more of an issue as the system ages. The agreement with the third-party SAPS provider must clearly outline how the customer is to manage the safety across the lifecycle of the IPS.