



5 October 2016

Attention: COAG Energy Council Secretariat
GPO Box 9839
Canberra ACT 2601

Via email: energycouncil@industry.gov.au

ENA submission to the Stand-alone energy systems in the Electricity Market Consultation Paper

Dear Secretariat

The ENA welcomes the opportunity to make a submission to the COAG Energy Council in response to the *Stand-alone energy systems in the Electricity Market Consultation Paper* published by the COAG Energy Council on 19 August 2016.

The Energy Networks Association is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

The COAG Energy Council's paper identifies four scenarios through which stand-alone energy systems could be deployed. One of these is the distributor led transition from the interconnected network. The Energy Council's depiction of the scenario, where it is more economic to serve existing customers at the edge of the grid via a stand-alone system, than via continued investment in the connecting lines, is one which the networks sector has been actively considering. However, at present, there appears to be a fundamental barrier in the National Electricity Rules (NER) that may prevent this. The ENA notes that Western Power has recently lodged a rule change request with the Australian Energy Market Commission (AEMC) seeking to address these deficiencies¹.

The ENA notes that in 'edge of grid' situations serving sparsely connected customers, an investment in a stand-alone energy system (SAS)² may be cheaper than replacement of the existing network, should this become necessary; for example to address bushfire risk. In that case, the deployment of a SAS/RAPS would be in all customers' interests. This is because, as the cheapest solution for the network to meet its supply obligations, this option should provide the lowest network charges for all customers on the tariff. The remote customer pays a tariff common with other customers in their customer class, and the costs of serving the customer class are averaged across those customers. Without this option being progressed by the network, investment in a RAPS would be unlikely to be pursued by an individual customer as it would be cost prohibitive to them directly.

The ENA accordingly supports further exploration and development of the distributor led scenario as it has significant potential to support the long-term interests of consumers. It is a clear opportunity for

¹ *Western Power Rule Change Proposal – Removing barriers to efficient network investment* available at: <http://www.aemc.gov.au/Rule-Changes/Alternatives-to-grid-supplied-network-services#>

² In these circumstances more accurately identified as a Remote Area Power Supply (RAPS).

regulatory reform to ensure the innovative use of technology by network providers to deliver the services customers value at more efficient cost.

In the consultation paper's depiction of the scenario, the paper poses several important questions, observing "...do affected customers have a legal right to object to these arrangements, and what, if any, additional protections do these customers have beyond what they already have access to under consumer law?". These questions are partly addressed through the assumption that in this model the assets would be regulated assets and the customers would remain regulated network customers. The model envisages that these customers would continue to benefit from the current regulatory framework mechanisms for the protection of grid connected customers, including:

- the obligation to supply the customer;
- reliability and quality standards;
- dispute resolution procedures; and
- access to retail offers.

The ENA notes that the Consultation Paper does not specifically include individual customer supplies. The definitions tend to imply some form of localised distribution system. However, both options should be available technical solutions to meet customer service obligations in an efficient manner. The potential to transition from a network delivered service to a RAPS or local distribution system should be available along with the potential for multiple customers to be supplied by independent systems. To the extent that the benefits of the proposed regulatory changes outweigh the costs, the ENA believes that these systems should be included in the COAG Energy Council's review, and are highly likely to represent early clear examples of stand-alone systems being economically beneficial.

The Consultation Paper proposes "*A stand-alone energy system could be defined as an energy system that is not connected to the interconnected national electricity system as defined in the NEL*". ENA supports this definition of a stand-alone energy system.

The US Department of Energy (DoE) definition of microgrids contemplates operation of microgrids in both grid-connected and island mode. In the ENA's view, for the purposes of stand-alone energy system regulation, if a microgrid has a grid connection (even if it is capable of operating in an island mode), then it is an embedded network and should be governed by the relevant embedded network regulatory framework. It may be appropriate for two definitions to be developed, with clear distinction between grid-connected and disconnected systems.

The ENA notes the complex issues for individual customers supplied via the alternative stand-alone power system scenarios presented in the consultation paper. As a minimum, customers supplied by stand-alone energy systems should be accorded the relevant customer protections provided to customers in embedded networks.

The ENA notes that a number of related processes are occurring concurrently. The COAG Energy Council has recently lodged a rule change request with the AEMC to *promote the contestable provision of services from emerging technologies*, the AER is developing its *Electricity Ring-Fencing Guideline 2016* and as mentioned above, Western Power has also lodged a relevant rule change request. The COAG Energy Council has also recently released consultation papers on *Consumer Protections for Behind the Meter Electricity Supply* and on *Energy Storage Registration* in addition to this consultation paper.

It would be of benefit to all stakeholders and reduce the risk of unintended consequences in the regulatory outcomes, if these processes were explicitly coordinated.

Please find responses to the specific consultation questions below at Attachment A. If further information is sought on this matter, please contact Ms Kate Healey, Director Regulation, on 02 6272 1516 or by email on khealey@ena.asn.au.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'John Bradley', is centered on the page.

John Bradley
Chief Executive Officer

ATTACHMENT A

Consultation questions	ENA response
<p><i>What objectives, beyond the Energy Council's general objective, should be held in mind in addressing regulatory arrangements for stand-alone systems?</i></p>	<ul style="list-style-type: none"> • Principles such as those included in the Council of Australian Government's <i>'Best Practice Regulation – A Guide for Ministerial Councils and National Standard Setting Bodies'</i> should be utilised. • The Competition Principles Agreement should be considered when addressing regulatory arrangements for stand-alone systems. • The ENA believes that it is important to recognise that the National Electricity Objective (NEO) applies with respect to all consumers affected by a stand-alone energy system initiative, not only the customers in the stand-alone network.
<p><i>What is an appropriate definition for our purposes?</i></p>	<ul style="list-style-type: none"> • The US DoE definition only contemplates systems that have some form of network connection. This definition precludes the situation whereby a DNSP pursues a stand-alone energy system alternative to traditional network investment. • For the distributor led model, the definition needs to include stand-alone energy systems serving customers individually. The scenario is that part of an existing feeder supplying remote customers is removed and the 'community' is supplied by stand-alone energy systems located at each connection point. Accordingly, ENA supports the NEL definition of a stand-alone energy system.
<p><i>What are the different regulatory issues which arise from stand-alone systems that are connected to the grid versus those that are not?</i></p>	<ul style="list-style-type: none"> • If a stand-alone energy system can operate in both grid-connected and island mode, it should be treated as an embedded network. Stand-alone energy systems have the potential to cause power security issues if they are connected to an interconnected network. Hence, such systems would require connection agreements. However, if they operate as a stand-alone energy system, then there is no need for a connection agreement. • Regulatory issues which may arise include: <ul style="list-style-type: none"> ○ service reliability: maintaining the reliability of systems in the situation of stand-alone energy system failure; ○ embedded network connection requirements; ○ retailer choice: consumers may not have a choice of retailer or may be required to sign long-term contracts; and ○ consumer protections: these issues can be related to re-energisation /de-energisation. • The distribution led model envisaged should be treated as a distribution service and regulated as a standard control service, i.e. participants are assigned a regular mass market network tariff. • Note that one of our members, Ergon Energy, considers that existing jurisdictional arrangements applying to their 33 isolated supply systems are sufficient and as such, notwithstanding any decision that some form of

Consultation questions	ENA response
	<p>regulation of stand-alone energy systems is required, could be reasonably distinguished and therefore remain subject to the existing jurisdictional framework.</p> <ul style="list-style-type: none"> • The ENA notes that stand-alone energy system customers who choose to live in communities (including greenfield developments) have access to the Australian Consumer Law consumer protections as well as relevant jurisdictional safety laws.
<p><i>Are there any other potential business models we should consider?</i></p>	<ul style="list-style-type: none"> • The scenarios and ownership models are broad ranging and appropriate for the analysis.
<p><i>What are the unique regulatory challenges presented by each ownership model?</i></p>	<ul style="list-style-type: none"> • The landlord model, co-op model, district model and municipal model will not provide the consumer protections available under NECF if the current NEL definition of stand-alone energy system is used. For example: <ul style="list-style-type: none"> ○ lack of competition once a system is committed to (unless customers choose to opt out and access other commercial alternatives i.e. solar panels and batteries). ○ stand-alone energy systems may not have the same reliability as grid connected electricity supply. • Other models could work as long as the stand-alone energy systems are licenced and operate under the relevant regulatory obligations. • The DNSP model differs from the others in that the service would remain regulated, with no change to the DNSP's contract with the customer, and hence there is potentially the opportunity for continuity of service level, retailer of choice and industry consumer protection provisions.
<p><i>Are some ownership models more closely aligned with the National Electricity Objective than others?</i></p>	<ul style="list-style-type: none"> • The NEO has regard for the long term interests of consumers in terms of price, quality and reliability of electricity services. • The DNSP led model is most closely aligned to the NEO as the stand-alone energy systems would remain a regulated service, with no change to the DNSP's contract with the customer. • The ENA also notes that as demonstrated by the current jurisdictional arrangements in Queensland, many of these consumer protections can and do exist outside of these stand-alone energy systems being regulated under the NER (i.e. a regulated service). • The DNSP model is also aligned with the NEO because it aims to reduce the cost of supply for customers, and this is to the benefit of the broad customer base whose electricity is provided on that common tariff. • Relative reliability will depend on the solution provided. • DNSPs are subject to regulatory incentives and other regulatory oversight. • The next most aligned model is the co-op model, as this appears more likely to be governed by the participants than the remaining models and may provide financial benefits to members.

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<p><i>How would the discipline of price and service competition be maintained on stand-alone power infrastructure providers, given customers would not be able to switch retailers in the event they became dissatisfied with energy prices and/or customer service?</i></p>	<ul style="list-style-type: none"> • The ENA supports a customer’s right to choice and is in general supportive of light handed regulation. As discussed below, the ENA does not support the extension of price regulation to customers of non-DNSP owned stand-alone energy systems. The price paid for the electricity must be based on a commercial arrangement between the provider of the system and the consumer. • In the case of the ‘distribution led’ model the existing service compact would be maintained and customers would be provided with their network service via a different delivery model. • However, if the service compact is to be changed such as in a market-led micro-grid or SAPs it will be important to ensure both sufficient customer information is provided to support informed decisions. The scope for potential price or service changes would need to be carefully evaluated. • Without some form of prices oversight or light-handed regulation, if customers are unhappy with their experience supplied by a market-led stand-alone energy system, they would have limited options, including self-supply. This choice itself may be constrained by contractual issues and may be cost prohibitive.
<p><i>What contractual relationships should exist, and to what extent should they be regulated, between parties involved in the supply of the services of stand-alone systems?</i></p>	<ul style="list-style-type: none"> • This should be a matter for the precinct energy supplier and participants to negotiate. • The process is evolutionary and it’s currently too early and constraining to specify standards. • The provision of all necessary information to prospective participants, so that they can make a properly informed decision should be required and enforced. • This should not be an issue for the DNSP led model should the Western Power rule change be approved by the AEMC. The contractual arrangements for the stand-alone energy system customer would depend on the contractual arrangements in place for the general customers within the network that the stand-alone energy system is located within. • Equally, regardless of whether the Western Power rule change is approved by the AEMC, sufficient contractual relationships exist for Queensland’s isolated supply system customers. • The contractual arrangements should allow retailer choice, if customers were previously connected on to the grid.
<p><i>How can the incentives of the procurers of stand-alone systems be aligned with the end use customers they will serve?</i></p>	<ul style="list-style-type: none"> • Drivers outside of the regulatory framework could motivate the uptake of stand-alone energy systems, such as land becoming available, property prices, or environmental considerations. In promoting the NEO, the regulatory framework should signal where and when stand-alone energy systems are efficient. This will align the benefits to customers with those of the stand-alone energy service provider. • Potential barriers to the regulatory framework working in this way should be reviewed by the Energy Council. Barriers could include (but not be limited to) the following: <ul style="list-style-type: none"> ○ current network tariffs are largely averaged with little time based and no locational signals. There are various jurisdictional government imposed constraints on both of these matters being addressed. Without

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	<p>sufficiently dynamic prices, customers who might be able to shift their demand with smart devices might not see much value in exporting energy or reducing use during peak network times and prematurely pursue off-grid / islanded stand-alone energy system options.</p> <ul style="list-style-type: none"> ○ customers may pursue off-grid / islanded stand-alone energy system options to completely avoid network charges. It should be noted that a significant contributor to network charges is the cost of various government environmental schemes. The COAG Energy Council should consider the role that requiring distributors to pass on these costs could have on motivating customers to pursue off-grid / islanded stand-alone power system options and any flow-on implications from this. ● For the proposed DNSP led model this is not an issue. ● Options include: <ul style="list-style-type: none"> ○ obligations to negotiate with participants in good faith; ○ obligation for prices to be fair and reasonable in the circumstances of the stand-alone energy system; ○ access to dispute resolution processes; ○ comparisons of prices in like networks could be provided to participants as a kind of benchmarking to aid negotiation. ● In the co-op model customers should be able to opt out at any time with a choice of commercial individual alternatives if they are cheaper, e.g. installing their own solar panels. ● Co-op models may provide sharing of financial benefits to members as the procurer and the end use customer may be the same people. However, for all the other models mentioned in the consultation paper, alignment of incentives may be an issue.
<p><i>How would we ensure that the public is protected against unreasonable rates, bad service, and negligence that results in safety or human health risks? For instance, would the ACL protections be sufficient for customers on stand-alone systems?</i></p>	<ul style="list-style-type: none"> ● For the potential DNSP led model this is not an issue. ● Stand-alone energy systems should only be permitted under jurisdictional licensing arrangements. Jurisdictional licenses are likely to specify relevant safety standards including a pricing rule that sets a schedule of the maximum tariffs that can be charged.

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<p><i>What would become the equivalent of a “retailer of last resort” in the event that an energy services company, delivering stand-alone power solutions, became insolvent? For example, should an insurance scheme or similar be considered for stand-alone system providers/operators in the event of insolvency?</i></p>	<ul style="list-style-type: none"> • This issue should be one of the components of information that must be included in the ‘prospectus’ provided to potential stand-alone energy system customers. • Stand-alone energy systems should only be operated under an appropriate jurisdictional licensing regime. Should the energy services company delivering the stand-alone energy system become insolvent, the government jurisdiction should step in and make arrangements through negotiations for another licensed entity to take over the failed entity. • In the distributor led model there is access to full contestable retail services and associated protections.
<p><i>What dispute resolution arrangements should be put in place for customers and should they be energy only dispute resolution or connected to broader tenancy/ownership arrangements?</i></p>	<ul style="list-style-type: none"> • The expansion of Energy Ombudsman Scheme services is an option, although ombudsman services for stand-alone energy systems should not be cross-subsidised by ombudsman fees from licensed retailers and distributors. • It may also be appropriate to require dispute resolution arrangements to be included in the prospectus (as discussed in preceding questions). • The stand-alone energy system operator should pay the dispute resolution costs, unless the dispute resolution body identifies the complaint as vexatious. • Under the potential DNSP led model customers would have access to an ombudsman scheme. • On occasion, the dispute resolution service provider may need to work closely with Fair Trading Offices or a co-operative arrangement may need to be instituted.
<p><i>What hardship and financial support provisions should apply to stand-alone energy customers?</i></p>	<ul style="list-style-type: none"> • The ENA recognises that hardship and financial support provisions will be necessary and should be subject to minimum standards. • Hardship and financial support provisions should be set out in the information provided to potential stand-alone energy system customers. • This should be a matter for State and Territory governments.
<p><i>How should the service standards that apply to each stand-alone energy system be decided?</i></p>	<ul style="list-style-type: none"> • Energy marketing laws should be required to ensure customers receive appropriate information before they enter into an energy contract. This should include reliability related information and any information available regarding price/reliability trade-offs under the deal.

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	<ul style="list-style-type: none"> • If service standards were to change, this would occur through a negotiation process between the stand-alone energy system provider and the potential customers.
<p><i>How will we ensure that customers are making fully informed decisions about the reliability standards and service quality of the energy services provided through a stand-alone energy system?</i></p>	<ul style="list-style-type: none"> • Consideration should be given as to whether the overall framework should be flexible and recognise that different situations may call for different responses. • In some situations, it might be unnecessary to require that all customers within a stand-alone energy system have the option of accessing their own retail offering, and a rigid approach here could stifle innovation. There might be situations where property developers, councils or governments seek tenders for an all-inclusive (vertically integrated) service provider (generation, network, retail) to provide stand-alone energy system customers with peer-to-peer energy, devices interacting efficiency between different properties, or to coordinate energy exported from a stand-alone energy system (in the case of a thinly connected stand-alone energy system). • Information requirements up-front. • Provision of mandatory dispute resolution services. • DNSPs may be able to provide a comparison information pack which shows what the reliability standards and customer protections are for grid connected customers.
<p><i>Under what governance framework will decisions about reliability versus cost trade-offs be made?</i></p>	<ul style="list-style-type: none"> • For market-led deployment of stand-alone energy systems this is ultimately a matter of customer choice. As long as the consumer is appropriately informed about potential reliability issues before entering into an arrangement to buy a stand-alone energy system or a property with a stand-alone energy system supplying it, if they subsequently experience problems that is a matter between them and their stand-alone energy system provider. Ombudsman services should be available, although, as mentioned above, these services should not be cross-subsidised by ombudsman fees from licensed retailers and distributors. • For the DNSP led model these questions are addressed through the assumption that the assets would be regulated assets and the customers would remain regulated network customers. The model envisages that these customers would continue to benefit from the current regulatory framework mechanisms for the protection of grid connected customers, including: <ul style="list-style-type: none"> ○ the obligation to supply the customer; ○ reliability and quality standards; ○ dispute resolution procedures; and ○ access to retail offers.
<p><i>How and by whom should standards be enforced?</i></p>	<ul style="list-style-type: none"> • Reliability standards should be enforced through State-based licensing regime and regulators. • Safety standards should be overseen by jurisdictional safety regulators.

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<i>Should some obligation to supply apply in an area where a stand-alone system is in place?</i>	<ul style="list-style-type: none"> • If the stand-alone energy system is a precinct scheme and the customer occupies an allotment in the precinct, then yes. The licence to operate the stand-alone energy system should set out the obligations. • This should be determined as part of the precinct planning application up front.
<i>Who should be the responsible party if an obligation to supply is put in place in a stand-alone system area?</i>	<ul style="list-style-type: none"> • The company providing the stand-alone energy system.
<i>What regulatory barriers exist to third parties supplying stand-alone energy solutions?</i>	<ul style="list-style-type: none"> • Jurisdictional licencing regimes may prevent third parties supplying stand-alone energy systems.
<i>How should the regulatory framework ensure that a stand-alone power system is considered as an option where this is the most efficient way to provide energy services?</i>	<ul style="list-style-type: none"> • The AER capital expenditure sharing scheme (CESS) provides DNSP incentives to pursue the most cost effective energy solutions. • Additionally, the RIT-D requires assessment of the most cost effective options. • Regulation should not act as a barrier to the deployment of such a system. • The NER should be amended to allow DNSP owned stand-alone energy systems to be included in the regulated asset base and the distribution service should be regulated as a standard control service.
<i>What elements of the national framework are potentially applicable to stand-alone energy systems?</i>	<ul style="list-style-type: none"> • Aspects of the regulatory framework specifying: <ul style="list-style-type: none"> ○ principles and guidelines covering network connection; ○ the process that needs to be followed in entering into an agreement for a service; ○ reasonable expectations around the level and standard of the service; ○ an appropriate negotiation framework; ○ notification requirements for outages for planned work and ○ aspects of the NERL which apply to vulnerable and life support customers are potentially applicable to stand-alone energy systems.
<i>Are the existing connection frameworks adequate for stand-alone energy systems?</i>	<ul style="list-style-type: none"> • The existing Chapter 5A Connections Framework was designed for DNSP and is adequate for application in DNSP owned stand-alone energy systems, although this is not strictly envisaged in the NER, which may cause regulatory difficulties.

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	<ul style="list-style-type: none"> • Chapter 5A of the NER refers to the distribution system, which needs to be connected to another transmission or distribution system. • The existing Chapter 5A Connections Framework is not suitable for third party owned stand-alone energy systems, due to commercial drivers. • A question that arises is: “If the network is really “stand-alone” then does it actually have <i>any</i> nexus with connection frameworks?”
<i>In what circumstances should or could a stand-alone system become subject to economic regulation?</i>	<ul style="list-style-type: none"> • To the extent that there is a demonstrated failure in the current arrangements and where the cost of regulation does not outweigh any likely benefit, the DNSP led model would be regulated in much the same way as other distribution systems are regulated. • It may be desirable for a safety net where any distribution service components of the stand-alone energy system could be subsumed by the surrounding network, but this may not be in the interests of the broader customer base, hence not aligned to the NEO, and the DNSP should not be obliged to take on the obligation. • The ENA has a preference for commercial fallback options rather than economic regulation.
<i>How should a regime for economic regulation – if any – be structured to address stand-alone systems?</i>	<ul style="list-style-type: none"> • Economic regulation is only relevant in the distribution led model and should be managed by the current regulatory framework of AER approving operational and capital expenditure.
<i>Should price regulation extend to the entire cost of energy services for customers of stand-alone systems?</i>	<ul style="list-style-type: none"> • No. The ENA does not support the extension of price regulation to customers of non-DNSP owned stand-alone energy systems. The price paid for the electricity must be based on a commercial arrangement between the provider of the system and the consumer.
<i>Should stand-alone systems that have a grid connection be treated as embedded networks for metering and settlement purposes?</i>	<ul style="list-style-type: none"> • Yes, grid connected stand-alone energy systems should be treated as embedded networks for metering and settlement purposes. • The grid connected stand-alone energy system will rely on the parent metering with the retailer for the exempt network being responsible for all wholesale settlement and upstream network charges. • Note that in Queensland there are very few embedded networks. • In the distributor led model, with an individual stand-alone energy system supplying sole customers, market settlements would only require a consumption meter and a generation meter, and would not need to be treated as embedded networks are.

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<i>In what circumstances should a decision to establish a stand-alone system be regulated? Who by? And what justification should be provided to the regulator?</i>	<ul style="list-style-type: none"> • The Consultation Paper notes that a DNSP might conclude that a stand-alone energy system is the most efficient supply option, including via a RIT-D, however unless a jurisdictional scheme facilitates it, the NERs do not allow the service to be classified and the costs to be recovered via regulated revenue. This regulatory issue is the focus of Western Power's rule change proposal to the AEMC.
<i>What principles should be adopted in determining the need for and nature of any new regulatory arrangements that will apply to stand-alone energy systems?</i>	<ul style="list-style-type: none"> • The National Electricity Objective. • The ability of DNSPs to recover network establishment and maintenance costs associated with the requirement to provide network services in given areas.
<i>What would be the appropriate balance between a strong reporting and compliance regime and a flexible regulatory framework?</i>	<ul style="list-style-type: none"> • The ENA supports the development of a flexible regulatory framework, such as that utilised by the Essential Services Commission of South Australia (ESCOSA) that can be tailored to fit each sites different requirements.
<i>Of the various issues raised in this paper, which areas and potential market failures have the highest risks and should be prioritised in terms of regulatory interventions and reforms?</i>	<ul style="list-style-type: none"> • Clear jurisdictional energy safety regulation is critical. • Establishing a clear policy on consumer protections is very important. • Ensuring that DNSP led solutions are not constrained by the regulatory framework (e.g. the NER), as this may constrain potential early, innovative stand-alone energy system deployment case studies.