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Our Ref: 11501628
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7 February 2019

Australian Energy Markets Commission
PO Box A2449
Sydney South NSW 1235

RE: REVIEW OF THE REGULATORY FRAMEWORK FOR STAND-ALONE POWER SYSTEMS - PRIORITY 1

To whom it may concern:

Horizon Power is writing in respect of the Australian Energy Markets Commission's (**AEMC**) draft report entitled, *Review of the Regulatory Frameworks for Stand-alone Power Systems – Priority 1*, and the corresponding request for submissions.

Horizon Power commends the AEMC's thoughtfulness and thoroughness in its evaluation of a range of issues related to Distribution Network Service Provider (**DNSP**) - led Stand-Alone Power Systems (**SAPS**). In support of this important national process, the following key recommendations are made:

1. **Proposed Key Principles for evaluating DNSP-led SAPS models.** Horizon Power proposes that delivery models for DNSP-led SAPS should be selected where demonstrated as best able to: a) provide a guaranteed quality of service over the multi-decade lifespan of the SAPS assets; b) enable economically efficient outcomes through both competition in SAPS procurement and guaranteed long-run operational costs; and, c) have regard to individual customer preferences wherever possible.

2. **Proposed Key Objective: Ensuring SAPS provide 'Utility-grade Energy as a Service'.** Horizon Power proposes that AEMC's key objective should be to design a framework that adequately values and guarantees consistent and economically efficient provision of a utility-grade electricity service over the multi-decade operational life of all SAPS assets.

3. **Evaluation of example SAPS service models.** Horizon Power believes that the integrated service delivery model put forward by the AEMC appears to be a better starting point for framework development than the NEM consistency model.

4. **Potential SAPS delivery model modifications and considerations.** Horizon Power proposes that in either of the example models, modifications should be made to ensure the model reflects the above principles (bullet point one) and adequately value long-term utility-grade service. In the case of the NEM consistency model, however, these modifications would essentially neutralize the NEM price signal. Customers affected by the conversion to SAPS should not be able to block a transition but should have a say in elements that affect them. Additionally, if it is necessary to mitigate strong customer opposition in the short-term in order to secure long-term benefits to the NEM overall, affected customers should directly share in some of the financial benefits derived through the reduction in cross-subsidies.

5. **Inadequacy of Regulatory Investment Test for Distribution (RIT-D).** Horizon Power proposes that the RIT-D should be amended or supplemented to address inadequate consideration of SAPS in circumstances where they might be economically viable. This specifically occurs in the following cases: (a) when projects are required to address an urgent and unforeseen network issue, or (b) the estimated project capital cost is less than the RIT-D cost threshold.

6. **Regulation enabling SAPS as a Distribution Service.** Horizon Power proposes that the National Electricity Law (**NEL**) and National Electricity Rules (**NER**) should be amended to enable services provided by means of SAPS assets to be considered 'in-front of the meter' distribution services. Incentive structures should ensure that DNSPs select the most economically efficient utility-grade service choice for customers regardless of ownership model.

A detailed submission is set out in Appendix 1 to this letter for the AEMC's consideration. Additionally, Appendix 2 has been included to provide further context regarding Horizon Power's current SAPS offering to its customers.

Should you wish to discuss any aspect of this submission, please contact Luke Boswarva via email at luke.boswarva@horizonpower.com.au.

Kind Regards,

MARK PATERSON
GENERAL MANAGER CONSUMER ENERGY

Appendices:
1. Submission to the AEMC'S Review of the Regulatory Framework for Stand-alone Power Systems – Priority 1
2. Horizon Power's Micro Power Systems Customer Information Brochure

APPENDIX 1 – SUBMISSION TO AEMC'S REVIEW OF THE REGULATORY FRAMEWORKS FOR STAND-ALONE POWER SYSTEMS – PRIORITY 1

Introduction

Horizon Power is Australia's only fully vertically-integrated utility and is responsible for providing electricity across regional Western Australia. This region represents almost a third of the Australian continent. It is the world's largest and most sparsely populated utility service territory and home to approximately only one customer per 50km^2.

Historically, the only feasible way to electrify such large regional areas at scale involved traditional 'poles and wires' served by centralised gas or diesel-fired generation. As a result, Horizon Power has large sections of remote overhead network that were constructed in the 1960s and 1970s which are now approaching replacement.

With the maturing of several new energy technologies, Horizon Power anticipates that many hundreds of remote electricity customers within its service territory will be more efficiently and reliably served by a utility-grade SAPS solution than by a network connection.

Due to its vertically-integrated structure and light-handed regulatory model, Horizon Power has the ability today to transition customers to a 'non-network' alternative such as SAPS. Consequently, Horizon Power has already trialled several different SAPS vendors' solutions and presently has nine units in operation. Rather than perpetuating technology trials, Horizon Power's strategic imperative is creating and embedding:

A complete electric utility service offering for remote customers that does not require a 'poles and wires' connection.

By definition, utilities manage extremely large portfolios of assets and therefore must leverage long lifecycle efficiencies, deep economies of scale, and minimise 'truck rolls'. Key learnings from Horizon Power's market testing and technology trials have, however, shown that the SAPS supply chain has not traditionally delivered an integrated, replicable solution that is ready for utilities to deploy at scale.

Cognisant of the above utility characteristics, Horizon Power has recognised that economic models, incentives and procurement processes for SAPS must pursue and prioritise solutions that are utility-ready and function as a holistic, scalable and integrated system, typically delineated by the following characteristics:

1. All architectures designed and technologies selected for multi-decade longevity and lifecycle efficiencies.

2. Scalable fleet-management to remotely manage thousands of systems.

3. Full compliance with critical infrastructure cyber-security requirements.

4. Integration 'end-to-end' across utility back-office systems and processes.

Horizon Power is now implementing this fully-integrated solution as a new asset class and has commenced the process of decommissioning and removal of large sections of aging network in its service territory. Given the diversity of technology quality and lifespan commonly referred to as SAPS, in its own territory Horizon Power refers to utility-grade SAPS as Micro Power Systems (**MPS**).

Focus of Horizon Power's submission

Horizon Power is encouraged by the AEMC's proactive approach to the draft report, '*Review of the Regulatory Frameworks for Stand-alone Power Systems – Priority 1'*. Given its own favourable -- but at times challenging experience -- in deploying SAPS solutions, Horizon Power wishes to support this national process and will focus its submission on the following areas:

1. Proposed Key Principles for evaluating utility-led SAPS models.

2. Proposed Key Objective: Ensuring SAPS provide 'Utility-grade Energy as a Service'.

3. Evaluation of example SAPS service models.

4. Potential SAPS delivery model modifications and considerations.

5. Inadequacy of Regulatory Investment Test for Distribution (**RIT-D**).

6. Regulation enabling SAPS as a Distribution Service.

1. Proposed Key Principles for evaluating DNSP-led SAPS models.

Horizon Power proposes the following as a Key Principle for evaluating and selecting DNSP-led SAPS models:

Delivery models for DNSP-led SAPS should be selected where demonstrated as best able to:

1. provide a guaranteed quality of service over the multi-decade lifespan SAPS assets;

2. enable economically efficient outcomes through both competition in SAPS procurement and guaranteed long-run operational costs; and,

3. have regard to individual customer preferences wherever possible.

Horizon Power further suggests that giving effect to the above involves several supporting principles and operational goals that should be employed in the evaluation of SAPS models to ensure a 'balanced scorecard' of outcomes.

The supporting principles are as follows:

1. SAPS solutions deliver a guaranteed quality of service over the assets' full lifecycle.

2. SAPS solutions function as a holistic, scalable and integrated system capable of driving economies of scale in a utility context.

3. Delivers cost efficiencies for the system in the near, medium and long-term.

4. Market signals sent to consumers, retailers, DNSPs and generators are accurate and cost-reflective, and to the extent possible, reduce cross-subsidies.

5. Implementation should be done in a customer-centric manner, and as seamlessly for customers as possible.

6. Approaches provide opportunities for a fair and competitive playing field amongst all market participants in order to deliver continued efficiency gains.

The operational goals include:

1. Individual SAPS decisions are a low burden for regulators.

2. Ongoing planning and selection processes are nimble and track technology advances and cost declines.

3. Infrastructure selections lowers risk of liabilities (e.g. bush fires ignited by fallen power lines).

4. Avoidance of outages, improved reliability and avoided indirect customer costs should be accounted for in determining the most economically efficient outcome.

5. Other factors being equal, selected solutions reduce emissions, or account for any future amendment to the National Electricity Objective (**NEO**) to explicitly consider emissions.

Not only should these core principles and goals be used to evaluate the service delivery model framework options, but they should be embedded into a systematic, transparent comparison process that allows for consideration of both conventional and alternative options, including SAPS.

2. Proposed Key Objective: Ensuring SAPS provide 'Utility-grade Energy as a Service'.

Horizon Power proposes that AEMC's key objective should be to design a framework that values and guarantees the consistent and economically efficient provision of a utility-grade electricity service throughout the multi-decade operational life of each SAPS asset.

Holistically, this will require frameworks and models capable of giving practical effect to the concepts summarised in the above Key Principles. Based upon extensive field experience, Horizon Power notes that the creation of utility-ready SAPS solutions are far more complex than simply purchasing individual retail SAPS units. While AEMC correctly indicates that SAPS trials have demonstrated an improvement in reliability versus aging rural grid connections, Horizon Power cautions that such trials have occurred over limited durations and when the SAPS equipment was new. As such, they are an inadequate test of long-term reliability and service quality.

In practice, as the equipment ages the reliability of individual components will degrade and require both regular servicing and periodic change-out to preserve reliability levels. As one of the highest cost elements of each SAPS installation, the energy storage chemistries and management systems selected will impose very different degradation profiles and SAPS operational lifespans. In short, not all energy storage are created equal and simply selecting the solution with the lowest upfront cost will result in very different long-run economic outcomes.

Given these considerations, Horizon Power proposes that SAPS delivery models should not be viewed only, or even mainly, through the lens of initial technology procurement. Given the relative immaturity of utility-deployed SAPS technologies, their application in very remote locations, and often in harsh climates, Horizon Power proposes that significant weight should be given to 'paid-on-performance' models that guarantee and condition remuneration upon the reliable delivery of a utility-grade service over long operational timeframes.

In addition, beyond initial cost comparisons, it is recommended that evaluation frameworks should also validate SAPS providers' ability to provide sufficient performance guarantees, and have sufficient capitalisation and organisational longevity to underwrite multi-year service commitments.

3. Evaluation of example SAPS service models

AEMC's two strawman proposals serve as an excellent starting point to test the above principals and consider the potential strengths and weaknesses of a range of delivery approaches. Horizon Power considered these approaches through the lens of the principles outlined above and provides the following feedback:

NEM Consistency Model

Of the two strawman proposals, the NEM consistency model appears to be more customer-centric given it would allow for seamless continuation of customer protections and preservation of the traditional retailer relationship.

However, Horizon Power agrees with the AEMC that the NEM consistency model is likely to result in a solution that isn't the most economically efficient nor consistently sends the right market signals. While customers transitioned to a SAPS should "continue to receive distribution charges equivalent to the cross-subsidised price they currently pay," having generation costs that are uncorrelated with nodal pricing in the NEM (or customer bills) is likely to result in significant challenges for retailers managing generation costs.

The AEMC indicated its evaluation made use of a simplifying assumption that "The SAPS customer(s) face(s) the same cost of electricity supply as if they are still grid connected." Horizon Power agrees with the premise that a SAPS should not be implemented if by doing so the customer was required to move to a tariff structure that made them worse off financially. However, it is worth noting that applying the spot price to SAPS generation is unlikely, in most cases, to yield a return that is greater than the cost to supply the SAPS generation – in most cases in the short to medium term (and regardless of how the cost stack is apportioned), the return received by the SAPS provider(s) under regulated and uniform tariff structures is still unlikely to cover the cost to supply these customers. Furthermore, where wholesale, capacity and ancillary service generation is procured on the basis of the NEM but served on the basis of a SAPS solution, inefficient market

outcomes and potentially duplication of services (i.e. duplicate investment) may be the result.

Ring-fencing guidelines within the NEM consistency model may weaken integration of the SAPS components. While this typically wouldn't be an issue in the main network due to the substitutability of generation resources, generation and network support services are much less substitutable in the context of SAPS. Weak integration combined with customers receiving the wrong economic signals could in fact jeopardise the reliability of such SAPS.

Further, the NEM consistency model may not yield the best outcome in terms of a fair and competitive playing field; rather, the lack of a unified SAPS sales opportunity combined with market signals not tied to actual grid conditions may be viewed by market participants as not worth the risk, lowering interest from the market.

For all of these reasons, Horizon Power believes the NEM consistency model is the weaker of the two strawman proposals for assuring that a long-term utility-grade service is provided meeting the principles outlined above.

Integrated Service Delivery Model

In general, the integrated service delivery model seems to be a better starting point for achieving the principles outlined above, provided it is ultimately designed to value delivery of a long-term utility grade solution rather than simply lowest upfront cost. Such a goal should be explicitly built into the ultimate solution selection and procurement framework.

The integrated service delivery model's objective of sending market signals aligned to the needs of the local SAPS is likely to yield a more competitive, economically efficient outcome in most cases. This is because traditional distribution services can be integrated with market signals ensuring adequate (but not duplicative) generation capacity resources are procured, and that generation services and generator-provided ancillary services necessary to ensure reliability will be valued appropriately within the SAPS.

In most cases, Horizon Power believes this is likely to yield a more competitive result as well reduce risk to service providers. It is also likely to result in a more cost-efficient outcome for customers as services procured will be tailored to the specific needs of the SAPS. Further, market signals can, more easily, be designed to value long term reliability of the SAPS.

The most significant challenge of the integrated service delivery model is the potential for customer confusion and disruption. Forcing customers to change retail tariffs, potentially along with retailers too, under the unmodified integrated service delivery model could be frustrating to customers and may cause substantial backlash.

4. Potential SAPS delivery model modifications and considerations

As noted above, Horizon Power has proposed several concepts in the form of Key Principles and a Key Objective. Some approaches that could be taken to provide a seamless customer experience consistent with pursuing these would potentially include the following elements:

- In considering the service classification between generation and network services provided by the SAPS, well-documented cross subsidies to SAPS end users are delivered in States with uniform tariff policies. In considering how to classify services (in short, considering whether DNSPs should be able to recover beyond the network tariff), it is relevant to note that under a revenue cap, the impact of additional revenue recovery for SAPS customers would be to reduce these inherent cross-subsidies, ultimately benefitting all customers. Customers transferring to SAPS could be entitled to some form of short-term incentive, perhaps a share of the reduction in cross-subsidies, in order to improve customer acceptance.

- Providing a role for customers in choosing their service delivery model through the form of a base offering with an opt-out option to a different delivery model if enough members of a community make such a choice.

- Removing the merchant element from SAPS generation units, either through implementation of a long-term 'SAPS local capacity' market product that is paired with must offer obligations on the SAPS (or some other form of marketised control of the units). The local capacity market product could cover fixed costs of generator units with a pass through of marginal generation costs plus a regulated rate of return.

- Perhaps a more straightforward approach would contemplate a requirement that all SAPS generation and balancing to be covered via long-term Power Purchase Agreements (**PPAs**) and/or tolling agreements, ensuring adequate capacity (and neutralising NEM price signals if the NEM consistency model is followed).

- Another approach if the NEM consistency model is pursued, could be to create balancing accounts for contracted retailers and generators to account for the difference between revenue collected from customers and the cost of network and generation charges incurred by the SAPS. This balancing account would protect retailers and generators against settlement losses due to the difference in SAPS generation costs versus NEM settlement costs, and dampen the uncorrelated price signals being sent by the NEM. These balancing account transfers could be capped at the cost that would have been incurred if the SAPS customers had remained connected to the grid (in order to ensure the rest of the network cost structure is no worse off than it otherwise would have been).

5. Inadequacy of Regulatory Investment Test for Distribution (RIT-D)

As AEMC notes in its paper, SAPS may be an economically attractive option in circumstances not currently subject to RIT-D. Horizon Power agrees that RIT-D's exclusion criteria result in inadequate consideration of SAPS in circumstances where they might be economically viable. This specifically occurs in the following cases: (a) when projects are required to address an urgent and unforeseen network issue, or (b) the estimated project capital cost is less than the RIT-D cost threshold.

These two exclusions may, without good cause, limit the ability of SAPS to meet its full potential to contribute to the NEO of promoting efficient investment in, and in efficient operation and use of, electricity services. Horizon Power supports further exploration of the best means to address these exclusions, either through reform of RIT-D itself or through the creation of a parallel set of "Minimum SAPS evaluation requirements" where RIT-D is not applicable.

Exclusion 1 – Addressing an urgent and unforeseen network issue. A standard assumption within the industry is that like-to-like infrastructure rebuilds might be the most expeditious approach in cases of urgent need. However, Horizon Power's experience has demonstrated this is not always the case. In 2015, Horizon Power responded, in part, to a lightening-ignited bushfire that destroyed 342 wooden poles in the Esperance region by replacing a section of the network that supplied five customers with SAPS alternatives. Notwithstanding that at the time Horizon Power had limited experience in deploying SAPS, it was able to deploy and commission these SAPS within a shorter period than it would have taken to carry out a traditional pole replacement approach. In this instance, implementation of SAPS was at a greater cost than a poles-and-wires solution; however, material non-monetary benefits were realised by way of reduced time to reconnect customers, significantly improved reliability and quality of supply, and avoidance of grid-ignited bushfire risk. Additionally, Horizon Power notes that if a similar SAPS replacement were to be required again (i.e. at the fringe of grid) it would be at a lower net present cost than a poles-and-wires solution due to efficiencies gained since that time.

Further, through more transparent and longer-horizon planning processes, DNSPs can develop distribution plans and standard offer contracting mechanisms that will, in all likelihood, substantially reduce the amount of additional planning required if a SAPS alternative were to be selected in cases of urgent need, making them an even more timely and efficient solution.

Exclusion 2 – Capital Cost threshold. This exception fails to acknowledge that for many remote areas, replacement of individual spans of network may be considered by discrete business cases, or depending on the asset management strategy, may be bundled into geography-based programs of work. In some circumstances, replacement capital expenditure for individual spans of network may not meet the minimum RIT-D threshold, however a wider frame of view of the cost to serve each network-connected customer may yield very different results. Horizon Power notes that the RIT-D cost threshold is very high

relative other parts of the world. For example, in New York, similar thresholds are set at (i) USD $1 million for large “non-wires alternatives” with more robust selection processes, and (ii) USD $300,000 for smaller “non-wires alternatives” projects with streamlined approval and contracting processes.

Additionally, as noted by the AEMC on page 44 of its report, the consideration of net market benefits, and costs, will be fundamentally different for a SAPS solution relative to a network replacement. This is because the SAPS solution provides, in situ, the full suite of wholesale generation, capacity and ancillary services normally provided by those respective markets (where applicable), whilst typically only being cost benchmarked against the network service replacement cost. A wider assessment of the avoided cost of the respective generation services would likely increase the application of SAPS as a viable alternative to traditional service. Of course, with this comes the requirement to consider the impact on the efficiencies of the markets that will ultimately be displaced, however, the scale of displacement would likely be minimal. Similarly, the role of retailers in procuring these services is also no longer relevant, and as such the displaced portions of the cost stack will require appropriate treatment in the revenue model for DNSP-deployed SAPS.

6. Economic regulation of DNSP-operated SAPS as distribution services

Horizon Power supports the AEMC’s view that the National Electricity Law (NEL) and National Electricity Rules (NER) should be amended to enable services provided by means of SAPS assets to be considered ‘in-front of the meter’ distribution services.

Further, Horizon Power believes that the regulatory environment should be neutral as to whether SAPS are DNSP or third-party owned. The regulatory structure and DNSP incentives should be structured to be neutral on the ownership model. That is, DNSPs should not be economically penalised for selecting a third-party owned utility-grade SAPS offering if it is most cost-effective to do so. As noted earlier, the supply chain and market for SAPS is not yet fully mature, and restricting business models or failing to align incentive structures for DNSPs may unnecessarily hinder maturation of the market.

The AEMC’s overarching objectives should be to ensure the most economically efficient long-term outcome of SAPS as a utility-grade service. In order to achieve that objective, Horizon Power encourages models that enable the evaluation of SAPS versus traditional ‘poles and wires’ solutions in a long term, open and stakeholder-transparent planning process.

Horizon Power also supports a resource selection process that fairly evaluates DNSP-led turnkey procurements versus third-party ‘SAPS as a service’ models on an apples-to-apples basis. This would maximise economic efficiencies by allowing a competitive process to determine not just the most cost-effective technical solution, but the most cost-effective business model. For example, it’s conceivable that a third-party model might be

able to provide monetisable customer-side benefits that a DNSP would be precluded from providing, offsetting costs normally incurred to the network.

Additionally, while a regulatory distinction may exist between distribution and generation equipment within a DNSP-operated SAPS, Horizon Power supports the Australian Energy Regulator (AER) retaining the flexibility to grant waivers on a case-by-case basis should it determine the competitive market would not provide the provision of generation and balancing service, such as in the case where, as AEMC points out on p. 90 of the Draft Report, “SAPS support services may continue to exhibit natural monopoly characteristics in remote areas, even over the long term.” Alternatively, the AER could allow a more blanket approach allowing DNSPs to own generation in SAPS provided it is leased back by the DNSP to retailer(s) serving the community’s load.

Regardless of the approach taken to procurement, incentive structures should ensure that DNSPs select the most economically efficient utility-grade service choice for customers regardless of ownership model. Many such examples of ‘performance-based ratemaking’ exist in other applications that could serve as guidance for similar incentive structures for SAPS.

Micro Power Systems

Safe and reliable energy for rural families and businesses

HORIZON POWER

energy for life

Living in rural WA, we are faced with unique challenges.

At Horizon Power, we're making sure access to safe and reliable power isn't one of them.

Horizon Power is offering selected customers in the greater Esperance region an advanced stand-alone power system. This will provide more reliable electricity than some areas of the traditional poles and wires network - and reduce bushfire risks – at no extra cost to customers.

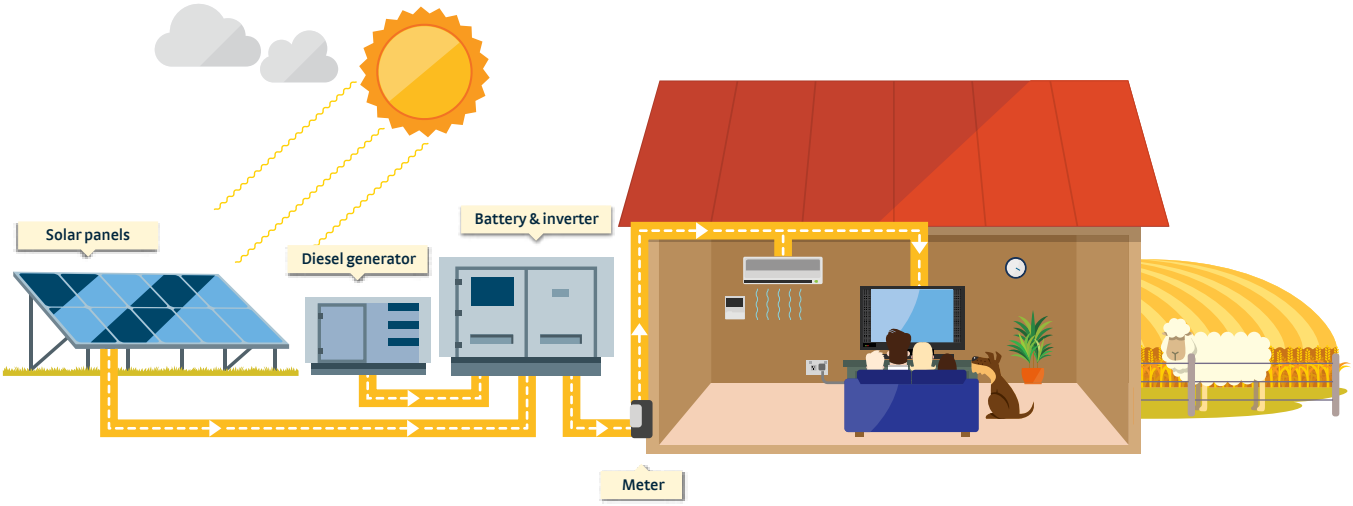
After almost three years of successfully trialling stand-alone power systems, Horizon Power is offering selected Esperance customers a safe and more reliable source of electricity. Micro Power Systems (MPS) are the next generation of advanced technology specially designed for Horizon Power. MPS units provide rural customers with much more reliable electricity than old power lines which run through bushland and are easily damaged by storms, floods and wildlife.

MPS units use solar and battery technology to generate and store electricity without the need to be connected to the overhead electricity network. Using solar panels, batteries, inverters and a back-up diesel generator, the system supplies continuous power 24 hours a day, regardless of the weather. Horizon Power has identified sections of its network in the greater Esperance region where, using this MPS technology, we can provide customers with safer and more reliable power than the traditional poles and wires network. In addition to the many benefits to you, Horizon Power will also be able to reduce the cost of delivering energy by installing these systems instead of rebuilding more costly poles and wires.

Your property could transition to a MPS solution.

The solution

The MPS energy management system is configured to maximise energy generation from renewable sources.



Solar panels are the main source of power. They generate electricity when the sun is out.

Batteries provide power at night and when the sun isn't shining for long periods of time.

The low noise back up generator will kick in, on occasions when more power is needed than what the solar panels and batteries can provide.

Delivering reliable clean power to your property.

How you can benefit from a Micro Power System

There is no additional cost to you
You will pay the same unit price for electricity as you would if you remained connected to the overhead power network.

Maintenance is taken care of
Management of the system including all maintenance services are fully provided by Horizon Power at no cost to you.

Designed for you
The MPS is designed specifically to meet your individual energy requirements.

Safe, reliable power
The MPS provides more reliable power supply because it is less affected by outages caused by line maintenance and weather events such as floods, wildlife and bushfires.

Reduced risk with no poles and wires
The removal of poles and wires eliminates the risk of injury and damage to people, network and property, caused by farming activities and reduces bushfire risk. There is also a significant reduction in the need for Horizon Power crews to access farmland to patrol power lines that traverse your property.

Benefit from clean energy
The MPS offers an energy efficient solution harnessing the latest renewable energy technology and reduces greenhouse gas emissions.

Long term peace of mind
The MPS is designed to last, with inverters, batteries and solar panels lasting around 8, 10 and 25 years respectively. When components need replacing, Horizon Power will replace them at no cost to you.

The process

Your property has been identified as a property that could transition to a MPS solution.

- When all customers in a certain area are supplied with a MPS, we can then remove the poles and long wires that connect you and your neighbours' properties to power. We encourage you to discuss this opportunity with Horizon Power's local Retail and Community Manager.
- Once you have confirmed an interest in transitioning to a MPS, Horizon Power will provide you with a customer agreement which guarantees the same level of service, reliability and tariff you had while connected to the overhead network. You will need to sign this if you would like us to go ahead with the MPS.
- We will then conduct an energy audit, using data gathered from the advanced meter at your property, combined with the information you provide to us, to better understand your power usage to design a MPS solution that is tailored to your specific requirements.
- With your permission, our Horizon Power team will conduct a site inspection at your property to identify potential locations for the MPS and gather information to finalise a design and layout that meets your needs.
- You will be provided with the final location, layout, and confirmation of your specific requirements for your final approval.
- Once approved, we will work with you to arrange access to your property for installation and to connect the power supply to your home.
- Removal of the poles and wires will allow a safer, more productive use of your property.
- After that, everything is monitored remotely, including the diesel required for the back-up generator, by the Horizon Power team.

We will work with you every step of the way. Our goal is to make this process as easy as possible so your transition to a MPS is seamless.

SIGN CUSTOMER AGREEMENT

ENERGY AUDIT

DESIGN AND INSTALLATION

REMOVAL OF OLD ASSETS

RECEIVE RELIABLE POWER

Frequently asked questions

The system

How does it work?

The solar panels create electricity during daylight hours. If you aren't using as much electricity as the solar cells are generating, the excess electricity will charge the battery until it is full. When the sun goes down and the solar panels can't generate electricity, the battery provides power to your home. The diesel generator will provide backup power if you need more energy than what is generated by the solar panels and stored by the batteries. This combination ensures your power is uninterrupted rain, hail or shine.

Who can get a MPS?

At this point in time only selected properties will be given the opportunity to have a MPS installed. Other properties may be considered where it makes economic sense for Horizon Power to install a MPS and remove the overhead connection.

What's the cost?

There is no cost for the MPS. All costs associated with design, installation and maintenance are covered by Horizon Power. You will continue to be billed for your electricity usage, in line with the tariffs and fees set for Horizon Power.

Who owns the MPS?

The MPS is owned and operated by Horizon Power.

Does installation of a MPS require participation from all customers on the line?

On the most part, yes. However this really depends on your location along the power line. If you are the customer at the end of the line, you most likely will be able to transition to a MPS regardless of whether other customers on the line wish to participate. However, if there are other customers between you and the end of the spur line who do not wish to participate, it is unlikely you will be able to transition to a MPS.

Is the MPS safe?

The MPS will meet the relevant Australian Standards for its components and installation (for example, AS 3000, AS 4509.1: 2009), including environmental regulations for diesel storage. These systems do not emit any higher electric and magnetic fields (EMF) than common household appliances such as microwave ovens and any EMF emissions will be undetectable within the home.

The operations

Is the reliability of the electricity expected to improve with the MPS compared with the overhead network connection?

Yes. MPS is not affected by severe weather or wildlife in the same way the overhead network is.

How often will the back-up diesel generator run?

The back-up generator will run automatically when required, based on your energy usage and the availability of solar and battery energy. Some people with MPS will rarely need to use their back-up generators. For others, the generator may kick in a few times a week and run for up to a few hours to recharge the batteries if you need more energy than what is generated by the solar panels and stored by the batteries.

Will I be able to hear it, or smell diesel?

The back-up diesel generator will emit audible noise when operating, but these will be lower than the relevant State regulations for the intended use. It will produce emissions at levels similar to diesel vehicles on the road. In order to comply with noise and emission regulations, the diesel generator is manufactured with a low-noise enclosure and it will be installed at the required minimum distance from your home.

What if it's overcast for long periods of time?

Don't worry – you'll still have power. The battery will be sized to ensure it can meet your energy needs for a typical 24 hour period without any solar input. If it's overcast for a long period of time, the backup generator will kick in to recharge the batteries.

Will the system cope if I need substantially more power?

If after the system is designed and installed you need substantially more power and an upgrade to your supply, a capacity increase can be quoted by Horizon Power but will be at your own cost.

How much power will it produce?

If you are currently on a 10kVA transformer connection, the system you can expect to receive will have a 20kVA back-up diesel generator and 11kW solar battery system. A solar battery system of this size has the capacity to supply up to 14kW for 30 minutes or up to 16kW for 5 minutes before starting the 20kVA backup generator if a longer period is required. This means approximately 40% more power than an overhead connection with a 10kVA transformer.

The maintenance

What happens after you've installed the MPS? Am I left to fend for myself?

No, not at all. You remain a Horizon Power customer and our Esperance team will continue to support you with the backing of the rest of our business. Once the MPS is installed and operational, we will monitor the system remotely, including the diesel levels in the back-up generator, to ensure your lights stay on.

What happens if my MPS stops working?
In the same way you report a fault if your power goes out now, report it to the fault line on 13 23 51. A 24/7 fault management service will be provided just like all other Horizon Power customers.

What happens if the generator runs low on diesel? Will it be refilled for me or do I need to arrange the diesel and pay for it myself?
Our local Horizon Power team will take care of this for you. We will be remotely monitoring the diesel tank in the generator and if it is running low, our local Esperance team will be dispatched to refill it.

The location

What will my MPS consist of and how big is it? How much area will it take up on my property?
The MPS is modular and can be sized to suit your requirements. We will work with you to determine the optimal configuration of the MPS to maximise solar and battery storage and minimise generator run times.

The fenced area required for the MPS will be approximately 300 square metres. The solar panels are ground-mounted and the inverters and batteries will be located inside a pod to protect them from weather.

The average number of panels is 32 and is usually stacked in two rows, with 16 per row. However different configurations can be applied. We will consult you as to the most suitable arrangements for your property.

Where will the MPS be situated on my property? How close will it be to my house?
We will work with you to identify the most suitable location for the MPS, taking into consideration a number of factors. Most importantly, we should avoid any shady areas to ensure we get the most from the solar panels.

How does access to the MPS work? Will Horizon Power own that part of my property?
No, you will remain the owner of all land on your property, we just own the MPS unit. During the process, we will work with you to develop more formalised land access and land management arrangements for your specific MPS requirements and location.

Can my livestock graze around the MPS or does it need to be fenced?
For safety reasons, the MPS will be securely fenced. Ideally, it is preferable to install the MPS in an area on your property free of livestock.

What do our customers say?

"We were one of the first customers in Western Australia to be connected to a micro power system and we have no regrets about our decision. We have been supplied with a state of the art system, made up of a bank of solar panels, lithium batteries stored in an air-conditioned pod, and a back-up diesel generator. We are no longer affected by power outages from storms or lightening that affect other farmers from time to time. Throughout the very long and cold winter in Esperance, the solar panels and batteries have supplied sufficient power for our home and farm.

We are now completely self-sufficient, but with the advantage of having Horizon Power on hand to maintain and service our system.

Horizon Power worked closely with us to ensure we were consulted every step of the way and if we needed, were just a phone call away. It is very comforting to have a local office for support and know that someone will be dispatched immediately if there is a problem. I have no hesitation in recommending a micro power system to my fellow farmers in the region."

John and Val Locke, beef farmers
Merivale east of Esperance in Western Australia

Contact us
We will work with you every step of the way during your transition to a MPS. If you have any questions please contact:

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Visit **www.horizonpower.com.au/MPS** today.

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