

**Planet Ark Power
Submission**

AEMC Consultation

**Distributed Energy Resources Integration
– Updating Regulatory
Arrangements**

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Introduction

Planet Ark Power appreciates the opportunity to respond to the AEMC Consultation Paper on Distributed Energy Resources Integration – Updating Regulatory Requirements.

This consultation paper has been released as a result of AEMC receiving 3 rule change requests from a number of organisations that aim to better facilitate the efficient integration of distributed energy resources (DER) for the grid of the future.

Planet Ark Power is pleased to provide feedback and recommendations on the issues raised by the rule change proponents and provide existing and emerging options and solutions that we believe can better support and promote the National Electricity Objective.



Stephen Robertson
Director – Stakeholder Relations and Strategy
10 September 2020

Who is Planet Ark Power?

Planet Ark Power is a leading Australian renewable energy company focused on providing comprehensive clean energy solutions that help businesses and organisations significantly reduce electricity costs and build a sustainable energy future.

Our microgrid systems enable businesses to access the benefits from the uninterrupted export of energy to the grid, receive revenue streams from frequency response and support network operators to improve network performance and enable a balanced transition to connecting more embedded renewable energy resources.

At our heart, we are an innovative engineering company with a remarkable depth of knowledge and experience in energy and solar power. Our team of electrical and software engineers has decades of experience in the energy industry.

Planet Ark Power was founded to deliver large-scale, commercial rooftop solar installations to create a cleaner, greener distributed energy future. We do this by transforming the economics of commercial rooftop solar with our proprietary technology solution (eleXsys) that overcomes network connection/voltage concerns that have, to date, led to restrictions that impose zero-export of surplus power.

eleXsys was developed in collaboration with our R&D partners at Griffith and Central Queensland Universities and with the support of the Queensland Government's 'Advance Queensland - Ignite Ideas' Fund contributing to the development and commercialisation of eleXsys and its release to the domestic and international markets.

Planet Ark Power is also a foundation participant in the RACE for 2030 CRC consortium.

Context of Planet Ark Power's Submission

Planet Ark Power appreciates the opportunity to respond to the SA Department of Energy & Planet Ark Power's business philosophy is to enable all customers to have the option to adopt cheaper, optimised solar electricity and battery storage solutions (DPV/DER) - unencumbered and equitably.

We believe, all customers (C&I and residential) should be able to benefit from cheaper DPV/DER electricity supply solutions without the risk of their systems being curtailed, other than in a network emergency. This philosophy underpins our customers DPV/DER investment case and avoids situations of "system payback surprises" when unexpected constraints and/or interruptions occur without their knowledge or approval.

When considering any electricity market/rule change, the impact on customers must be front and centre. Additionally, a customer's involvement and interest in day to day energy management should not be an underlying assumption as most are predominately agnostic regarding their electricity supply, preferring a "set and forget" approach with simple, understandable, fair pricing options for the security and reliability of their power supply.

Whilst the electricity system needs to be well-managed through the safe transition to a renewable energy future, it should not do so by penalising existing DPV/DER customers, nor adversely impacting the investment case for new DPV/DER systems. This would be counterintuitive and in conflict with the achieving of our national and state based renewable energy targets – either real or implied.

We believe that there are a number of preferred, alternative market initiatives to enable the safe transition to a renewable energy future, that should be considered before disconnecting any customer's DPV/DER system and which should only be considered as a last resort in a system security emergency.

Planet Ark Power agrees that the intent of this consultation is correct. However, it is recommended that any proposed changes need to consider broader issues to meet the needs of all customers and networks.

We recognise the impact that DER has had on all customers and the entire energy market and system and fully support the principle that customers who are not able to invest in solar should not be burdened with those costs. Current DER impacts have primarily been driven by continued consumer investment in rooftop PV electricity generation.

It should be noted however that, in the longer term, allowing more DER into the network creates greater market competition and will place downward pressure on prices. Assuming these lower prices are passed on to consumers, this will positively impact those unable to install their own solar systems for the variety of known reasons.

The issue is what is the most efficient and effective means to allow greater DER into the grid to continue to drive competition in the provision of power and the resultant lower power prices? In parallel, how will this impact existing exporters of energy on DNSP networks and will this differ for future consumers who want to export surplus energy?

In order to create an open market for DER for all - without intended or unintended negative consequences for individual customers or customer groups - distribution networks traditional views on design, planning and operations require new thinking to cater for the one-quarter and rising of Australia's nine million homes and businesses generating DER. In particular, the approach to a mix of behind the meter solutions which do not add to network charges and network DNSP solutions requires a balance to minimise costs and allow greater export of electricity on DNSP Networks.

Whilst networks today are mainly focused on equity concerns, voltage management and increasing penetration of DER across residential, and C&I sectors, any proposed rule changes need to be holistic in nature to meet today's challenges as well as anticipating future challenges that are emerging from the increasing network connection of batteries and electric vehicles. Therefore it is our view that any investment today to overcome issues created during solar producing hours, also need to deal with those created by battery storage and electric vehicles such as sags, swells, export, harmonics and demand management for minimum and peak demand days.

QUESTION 1: APPROACH TO RULE CHANGE ASSESSMENT

1. Is the assessment framework, specifically the criteria outlined above, appropriate for considering the proposed rule changes?

Planet Ark Power believes that a more holistic approach needs to be considered rather than predominately focusing on today's concerns of solar export. We support the principle that low-income households should not be disadvantaged because of other customers' capacities to invest in solar PV/DER now and into the future. If this holistic approach is not embraced, inequities between customers with/without solar PV/DER will remain and exacerbate.

The assessment framework needs to consider the long-term pricing benefits from additional energy export to the grid and how the creation of more lower-cost DER can/will impact all network users.

The framework does note the requirement to consider the 'Robustness to climate change mitigation and adaption risks' which implies a required rapid and ongoing acceleration of DER to enable a carbon neutral energy grid. This must also be taken into consideration when considering the impact of equity on the more vulnerable members of our community.

2. Are there any other relevant considerations that should be included in the assessment framework?

Any approach to modify the regulatory framework needs to include a recognition that:

- a) exported DER energy is only travelling a relatively small distance - in most cases less than 80m;
- b) arrangements that incentivises customers who implement grid-assisting technologies, such as grid-firming inverters should be financially recompensated where their actions negate or minimise grid required upgrades;

- c) many types of customer-side DER can actually improve and stabilise voltages for the entire LV circuit from a single customer – ie all customers benefit and inequities can be removed. Therefore, it is suggested that to achieve more equitable customer outcomes, networks undertake “a market test” for growing DER hosting capacity, improving voltage and managing minimum and peak demand. This needs to involve transparent costings for network connected and non-network connected solutions with independent oversight to determine the most economic outcome for all customers.
- d) impacts to distribution businesses have changed and have moved to the edge with DER, which means that new large investments are not required, but now need to be redirected within their businesses from the larger asset investments to the low voltage network assets.
- e) a totex (capex + opex) approach is best used to assess investments for distribution networks in these arrangements as the mix between capital and operating costs may be different in each location or region. This provides distribution businesses with more flexibility.
- f) adjustments to tariffs need to be carefully introduced and implemented such as:-
 - i. Introducing specific tariffs for vulnerable customers that are identified under a national scheme. This could be done immediately and is preferred over the rule changes being proposed due to existing tariffs continuing to support inequitable customer outcomes for all.
 - ii. Breaking up DUoS to ensure that only the local DER are not being charged the full DUoS as the energy is being consumed in the immediate area (within 80m)
 - iii. Encourage local markets where customers can purchase local energy from customers in their community (trial projects are already under consideration)
 - iv. Encourage local markets where networks can secure access to customer connected equipment and resources to help manage voltages grow hosting capacity or reduce peak demand impacts for networks.
 - v. Under the current amended AS4777 standards, the volume of reactive power (VArS - Volt Amperes) produced by customers further away from a transformer is significantly higher than customers closer to the terminals. As a result, they are disadvantaged over other customers closer to a transformer. Hence, the application of AS4777 today embeds inequitable customer outcomes.

Customers further away from the transformer receive a poorer economic outcome (ROI) for any solar PV/DER investment than those customers nearer a transformer - through no fault of their own - simply because of where their residence is connected to the network. Solar PV/DER installers do not inform customers of this fact, and arguably, most do not understand the situation at point of purchase.

Customers producing VArS are not rewarded in any way for their production and do not gain a feed-in-tariff (FiT) revenue for the exported energy. However, they are providing a service by improving voltage stability for networks. Therefore, it is recommended that any new tariffs include customer recompense for the provision of reactive energy, or the networks need to pursue secondary voltage control on their LV networks. This

secondary voltage control can be provided connected on network or customer assets.

- vi. Whilst the networks need reactive support, the NEM needs to also maximise the amount of real energy available. Secondary voltage control can overcome the network issues whilst also supporting the NEM requirements for real energy.
- vii. Introduce provisions for data and information to be shared with networks from smart meters which will assist with planning, design, and operations of distribution networks. This will avoid duplication of assets on customer premises for secondary measurement devices.
- viii. Introduce provisions for customers / DER installers to publish data to an industry gateway to grow the knowledge of distribution networks. This could be as simple as NMI, time, voltage (per phase), VArS (per phase), site load and export. Many devices could publish information to these gateways whether it is the inverter directly, solar analytics device, watt watchers etc. This removes the need for further network investment in telemetry. In fact, this information is richer than the current distribution transformer monitors that several DNSP's utilise.
- ix. Recognise that networks can apply smoothing or "after diversity" factors to any individual customer or group of customers, provided information is of a form that is in line with their current practices and processes for calculating customer loads or peak demand.
- x. Ensure the knowledge of distribution networks on currently available technologies that can provide secondary voltage support at low cost. Devices such as our eleXsys dSTATCOM is a 4-phase device that provides real time balancing, real time volt/var support, peak and minimum demand support and removes sags and swells. It also removes harmonics to overcome the issues of degrading transformer lives whilst still passing power line carrier signals (ripple control) for load control. All of this can be achieved with a single eleXsys for each distribution transformer circuit to achieve equitable outcomes for all consumers.
- xi. Rule changes should meet the needs of networks 24 hours a day and not just the immediate focus of solar generating hours. Networks will experience similar problems when electric vehicles are introduced. Hence, to meet the needs of today and into the future, efficient investment in 24hr stabilisation solutions for low voltage networks will be required. Again, there are many customer and network-side solutions that can already provide these solutions. In addition, networks also needed to consider equitable customer-side solutions to meet these needs - which are available from many types of DERs.
- xii. Finally, any proposals need to understand customers motivations and behaviours and how they will engage and participate. As the AEMC has previously surveyed, customers have little trust in the current industry and customers' view the new proposals of requiring connection interfaces to every DER, the introduction of dynamic connection agreements and export limits, as barriers to market, which furthers their distrust

The lessons of "Power of Choice" need to be taken into consideration, eg, smart metering and time-of-use tariffs. Take up rates of previous programs have been very low which is evidence that they did not meet customer needs. Any solutions proposed by the AEMC need to be simple, least cost, engaging and build / improve trust with

customers.

Without these elements being considered in a rule change, the standard “sell” from DER solar and battery providers will be for customers to become more self-sufficient, to enable island supply instead of disconnecting the solar and to treat the grid solely as a backup. If these situations occur then in the process of inhibiting solar, they will also be reducing customer loads connected to the network, which will in turn produce outcomes that drive down network utilisation with the effect of pushing more costs to disadvantaged customers (tariffs recovered via less connected customers). These outcomes will defeat the intent of this rule change and hence we encourage very careful consideration before any rule changes are made to avoid such unintended consequences.

QUESTION 2: DEFINITIONAL ISSUES

1. Should export services be recognised as part of the network services provided by DNSPs to customers?

We agree that these services should be recognised, as without a DNSP’s involvement, no exports can occur. However, we recommend the AEMC consider a holistic approach as outlined in our response to Question 1, to provide equitable outcomes for all customers and avoid unintended consequences that defeat the intent of the proposed rule change.

The approach should be one of seeking to maximise export to the energy grid to encourage competition to put downward pressure on electricity prices. Restricting DER export which discourages competition will result in encouraging grid independency from customers with the means to do so and therefore negatively impact those users of the grid who do not have access to DER.

2. Are the proposed definition changes necessary and appropriate to enable export services to be recognised as part of the services provided by DNSPs to customers?

Yes, please refer to the holistic approach as outlined in Question 1.

3. Are there any unintended consequences that could arise from SAPN's proposed amendments to definitions?

Yes. One unintended consequence will be that charges for export will lead to significant increases in battery storage by those customers who can afford them. This will increase independency from the grid, thereby increasing the costs of power for those unable to invest in DER and remain connected to the grid.

As an alternative to implementing charges for exporting surplus DER into the grid, incentives such as via strong tariff price signals for customers to stay on the grid should be considered. This is particularly so where investment in behind-the-meter solutions result in improving grid stability.

There must also be clear guidelines as to how retailers represent any charges on a customer’s bill. For network services to be transparent they need to be passed through rather than adjusted by the retail organisations. For example, the fixed network charges (daily fee) on a

customer's bill maybe shown as \$1, or \$1.07 or \$1.10 by different retailers. Also, retailers may have a higher margin for energy on off-peak services.

These issues often defeat the reason why networks use cost reflective pricing and not enable a competitive market for low voltage services by third parties to emerge.

4. Are there more appropriate approaches to enable export services to be recognised under the framework that are not considered above?

Please refer to previous answers. We further recommend considering an approach to positively incentivise behind-the-meter solutions which can assist in increasing the DER carrying capacity of the DNSP network.

5. Are there any other issues related to definitions that the Commission should consider?

We recommend that the AEMC takes an end-to-end systems approach to this issue rather than assessing it within the narrow parameters of limiting export services to fix the immediate DER challenges currently experienced by network utilities.

Proposed rule changes should reflect on the experience from the “Power of Choice”, smart meters and demand management programs. Grid operators should be encouraged to engage customers, inviting participation to address emerging challenges, whilst also offering simplicity and transparency to enable customers to understand any changes and help the industry overcome the trust void that currently exists.

Regulators should also ensure that they are aware of new methods and technologies that can be employed to meet these network management holistic problems due to increasing solar/DER penetrations levels. An example is our eleXsys® dSTATCOM technology. It has been designed to be simple, assist networks manage increased hosting of solar PV/DER and be agnostic to customers, which enables them to get on with their lives without experiencing further complexities or barriers being introduced. (More details on eleXsys® capabilities and its application are found in appendix A)

Additionally, the AEMC may wish to consider how networks will manage their LV networks as the distribution utility model moves to a two-sided market to encourage more participation and competition. We encourage the AEMC to consider how low voltage networks can be opened up to competition where new, suitably qualified and authorised third parties, provide capabilities that promote and enable the future world of solar, batteries and electric vehicles, whilst also providing services to distribution networks for voltage regulation, power quality and reliability.

As this LV service is a “last mile” service on the distribution network, the AEMC should consider drawing on how “last mile” services were delivered in the design of the NBN with the introduction of a competitive approach being ADSL. The national carrier opened up the last mile of their network to enable competition for customers and enabling new third parties to install their own technologies. This is referred to as Unconditioned Local Loop Service (ULLS).

As the AEMC is looking into a new two-sided market, we believe it is necessary to understand how local customer value can be obtained from the low voltage network. For example a third party may install our eleXsys® technology on the low voltage network, which enables customers to trade energy with each other on the network, whilst also providing a service back to the network by stabilising voltages and improving power quality.

QUESTION 3: PROPOSED CHANGES TO DEFINITIONS

1. **Are the proposed approaches to the classification of export services necessary and appropriate?**
2. **Are there more appropriate approaches to enable DNSP expenditure on export services to be economically regulated that are not discussed above?**
3. **Are there any other issues related to service classification that the Commission should consider?**

We have no comments to make re Question 3.

QUESTION 4: OBLIGATIONS ON DNSPS

1. **Should the NER (National Electricity Rules) be amended to impose obligations on DNSPs to provide export services as proposed?**

Yes. Please refer to the holistic approach as outlined in Question 1 especially as the services needed to stabilise the low voltage network and grow solar hosting capacity can be met by customer-side solutions.

2. **Would it be appropriate to impose obligations on DNSPs to consider network planning solutions in relation to DER integration?**

Yes. We suggest this should be a requirement and should be open and transparent with a low market test threshold of \$10,000. This threshold covers the costs of an appliance to mitigate the power quality issues, harmonics and hosting concerns of a low voltage network

- a. **Is there a need for the introduction of specific arrangements to guide network planning and investment decisions around additional DER hosting capacity?**

Yes. The planning, including incentives and charges should include the review of the longer-term impact of having the adverse outcome of driving customers to disconnect from the grid.

- b. **Do you consider that a net market benefit test is a useful way to guide DNSP network planning and investment for export services?**

Yes. Please refer to the holistic approach as outlined in Question 1.

3. **Should a principle for the allocation of export capacity in the NER be introduced? If so, what principle should be included?**

Yes. A considered approach to allocation of export capacity which takes into consideration the technology solutions a customer is using to export to the grid should be included. A customer benefiting the grid should be compensated or provided with incentives and a greater export allowance.

QUESTION 5: EFFICIENCY INCENTIVES

1. If ‘distribution services’ expressly include export services, are there any regulatory barriers to adapting existing incentive schemes to export services?

There are measures on distribution utilities to provide energy to customer loads such as VCR, SAIDI, SAIFI and power quality technical standards and incentives such as DMIA that will need to be adjusted to cater for the proposed “export services”. For example, a utility that leverage the DMIA incentive for a demand management initiative should also be able to leverage that for an export service.

The immediate need within this consultation to enable expert services is primarily focused on overcoming the solar PV issues. Based on our long utility experience here and in the UK, the same impacts that this consultation is trying to overcome will also be required in non-solar producing hours for home/business based vehicle charging and future smart home energy management systems.

We suggest that any technical solutions that are implemented are not purely focused on solar but are focused on a holistic solution that manages the low voltage networks 24 hrs a day and meets the evolving impacts of customer edge technologies.

2. Should the STPIS (Service Target Performance Incentive Scheme) be extended to export services or is a new incentive scheme required?

We recommend that regular (5-year) reviews should be undertaken to consider challenges from increasing adoption of EV charging and batteries on future grid requirements, along with the acceleration of DER on the STPIS. Regular reviews of the STPIS should ensure ongoing flexibility and relevance in a changing energy market.

3. If the STPIS or a new incentive scheme is to apply to export services:

a. What are the practical challenges of designing relevant performance measures and collecting robust data? Can these challenges be overcome over time?

Should export services be poorly managed then this will have a flow on effect for load and demand services on the same network and may adversely affect the STPIS measures such as SAIDI. For example, as you move further away from a distribution transformer the voltage will rise during solar producing hours. If this voltage rises above the standard, customer inverters may trip off meaning that the export services incur a ‘SAIDI’ event for the customer. Therefore, STPIS measures should be applied to export services.

b. Should the details of the scheme be prescribed in the NER or is it appropriate for the AER to design the scheme?

Any prescribed changes to the NER need to consider the holistic items covered in our response to Question 1.

c. Are there any additional factors the AER should be required to take into account (eg, under NER clause 6.6.2 relating to the STPIS)?

Any prescribed changes to STPIS need to consider the holistic items covered in our response to Question 1.

- d. Do export service standards (to meet customer expectations) need to be established to set a performance 'baseline' for the incentive scheme?**

Yes, and they need to consider the holistic items in response to Question 1.

QUESTION 6: PRICING (of Export Services) ARRANGEMENTS

- 1. Should DNSPs have the option to propose to the AER charges for export services?**

The DNSP may need to collect export charges or a fee for required grid support for increasing DER to fund network upgrades. This may be through energy retailers who are measuring and charging customer use. However, we believe the better and more equitable solution is that any charges or fees should not be imposed for customers who have invested in on-the-grid and behind-the-grid solutions and the integration of incentive programs?

- 2. What are the potential benefits and costs of enabling export charges?**

We believe, this would be more efficient for a retailer to calculate and collect and would allow them to finance aggregation programs for grid firming solutions.

- 3. If customers can already negotiate 'deeper' connection agreements, is a 'supplementary' connection arrangement required to allocate DER-related costs – as proposed by TEC/ACOSS?**

Please refer to the holistic items covered in our response to Question 1.

- 4. If NER clause 6.1.4 is removed, and DNSPs are able to develop tariffs for export services:**

- a. What are the implementation issues?**

Please refer to the holistic items covered in our response to Question 1.

In the NEM distribution and retail utilities have all struggled to introduce tariffs that attract customers to participate and signup for new structures. There are many reasons for this being the current rules on “cost reflective pricing” as opposed to outcomes based measures and the processes to engage, communicate, inform and encourage customers to move from the standard offers in the market. Any proposed changes for tariffs need to consider these items in how they can be delivered and not just designed.

- b. Should the existing tariff structure statement process and pricing principles apply? For example, is a principle required to guide DNSP decisions on cost allocation between consumption and export services – as proposed by SAPN?**

We believe that pricing principles need to be based on “outcome measures” rather than cost reflective measures. For example, a network outcome should be utilisation of a network, or a defined percentage of hosting capability for DER. These measures would

drive very different pricing principles. Principles also need to include customer targets for adoption and allow for customer engagement, and communications processes.

c. Are transitional or 'grandfathering' arrangements needed and, if so, should they be prescribed in the NER?

Comment: Yes. We recommend transitional arrangements to allow existing customers to assess and choose paths for either accepting charges, not exporting or moving more off the grid.

5. Should the regulatory framework better recognise the benefits DER services provide to DNSPs? For example, does SAPN's proposal to allow for negative prices address the issue?

DER enablers that also provide grid firming or stabilising services should be recognised and compensated accordingly particularly where the integration of these solutions result in foregone spending in infrastructure upgrades by DNSPs.

6. Should these reforms only apply to small customers?

No, these reforms should also apply to industrial and commercial customers that to date have largely been restricted from providing DER into adjacent networks. As above, where these customers can provide grid firming or stabilising solutions then they should have their export restrictions removed and be compensated where they provide verifiable, low cost support services to the adjacent network.

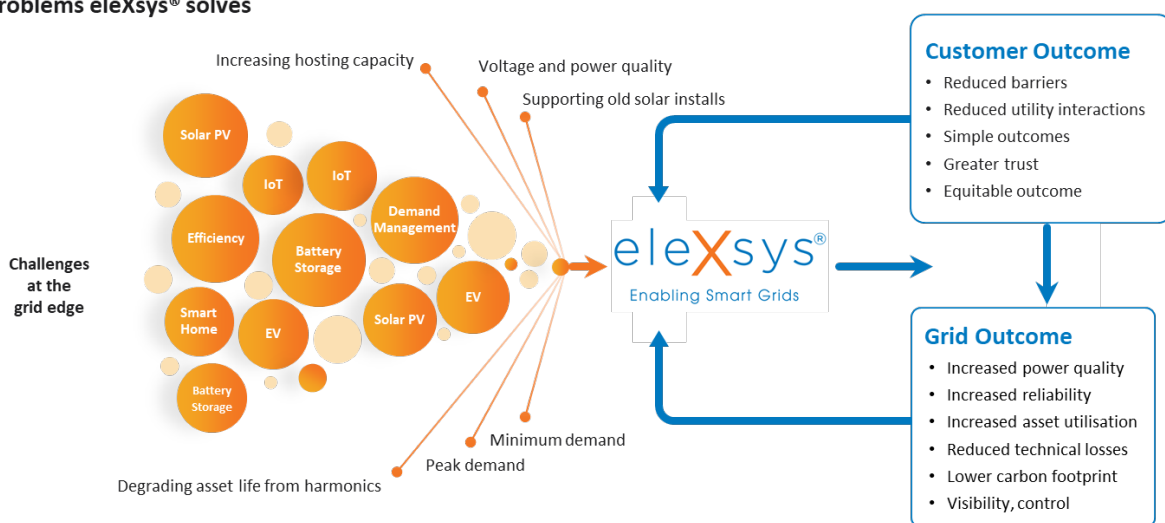
Appendix A: The IKEA eleXsys® Microgrid (Adelaide SA)

Summary

The IKEA eleXsys Microgrid is a practical demonstration of how commercial-scale DPV/DER solutions can be connected to electricity grids without causing voltage instability and therefore need not be curtailed by network operators (unless in an emergency).

This project also demonstrates that technology solutions are now available that can provide grid firming services that also increase the capacity of existing network infrastructure to accept and distribute multiple times more DER without the need for expensive equipment upgrades that drive up energy costs for consumers.

Problems eleXsys® solves



- The IKEA eleXsys Microgrid - currently under construction, involves the installation of 1.2MW rooftop solar array supported by a 3.4MWh battery at IKEA's retail outlet in Adelaide.
- The \$6.7m project has been supported by the South Australian Government (\$1.95m) sourced from the Grid Scale Renewable Technology Fund.
- The Project showcases the capability of Planet Ark Power's unique and internationally awarded eleXsys technology platform that allows the export of surplus energy into the grid without causing network voltage instability and without the need for network equipment or infrastructure upgrades.
- eleXsys will be integrated with a DERMS providing network real time visibility to the SAPN
- It is Planet Ark Power's intention that this will be the standard for larger DPV and battery storage microgrid installations.
- The IKEA eleXsys Microgrid will represent one of, if not, the largest single-site, grid connected Virtual Power Plants (VPP) in Australia.

- eleXsys® has solved the problem of DER curtailment by networks by managing network stability from behind-the-meter, guaranteeing the export of surplus clean energy and allowing much larger rooftop solar systems to be installed across commercial and industrial buildings.
- Without Planet Ark Power's unique solution, the IKEA eleXsys Microgrid project would not be economically viable. eleXsys enables investors to be certain of future revenue streams with the capacity to manage export and stay within the required voltage levels set by the local network operator - SAPN.
- The 1.2MW rooftop solar system will generate 1.4MWh (est.) of clean energy per annum. It is estimated 81% of energy will be consumed on-site by IKEA via a power purchase agreement with the remaining solar generation stored in the batteries for FCAS and Spot Trading into the local SAPN grid.
- IKEA will enjoy an estimated 30% reduction in energy costs, making eleXsys® solar power cheaper than grid power. The battery-stored energy will be sold daily to the grid to support peak demand across the SAPN grid.
- By managing voltage and guaranteeing export of surplus energy, eleXsys provides consistent, forecastable revenue and savings over the 20-year project life.
- By guaranteeing the ability to export energy without curtailment, Planet Ark Power's eleXsys reduces financial risk, provides bankability and creates a new asset class: *eleXsys Microgrids*, which are commercial rooftop solar farms + VPP batteries.
- Whilst the IKEA eleXsys Microgrid project received financial support from the South Australian Government, as a result of ongoing reductions in the cost of commercial-scale batteries and the avoidance of one-off R&D and design costs, future grid-connected microgrids similar in scale to the IKEA eleXsys microgrid are now a reality without the need for on-going government financial support.