



## **Peak Demand Reduction Scheme -Rule Change 2 Consultation Paper**

### **About myenergi**

myenergi is a manufacturer of energy smart technology targeted at the domestic sector. Our mission is to promote energy independence through a range of innovative, eco smart products, manufactured and designed in the UK. We also currently operate in Germany, Benelux, Ireland and Australia.

myenergi, founded in 2016, is renowned for producing the world's first solar-compatible EV charger – zappi. We also offer an innovative solar diverter and a smart home battery, which can all be connected to create an unrivalled home energy ecosystem, allowing consumers to control their energy in the way that works best for them. We are helping to pioneer a simple transition to renewable energy, through helping to create truly eco-smart homes. In 2023, myenergi shipped our 500,000<sup>th</sup> device.

### **Response**

myenergi is pleased that the activities outlined in the Peak Demand Reduction Scheme are expanding to introduce peak demand shifting and peak demand response. We are especially interested in the demand shifting and demand response activities that can be provided by a battery storage system. We are also interested in the opportunities that other energy smart appliances, such as electric vehicle charging equipment and solar power diverters, can offer the Peak Demand Reduction Scheme in the future.

myenergi have access to vast amounts of data, with the majority from a regulated market, and in direct response to live turn-down events due to system capacity challenges.

We welcome the opportunity to share the data we have with the PDRS designers, in response to the design and implementation of future rule changes, including opportunities that can be provided by electric vehicle chargers and solar power diverters. We look forward to discussing how the technical challenges of implementing these technologies into the PDRS can be addressed.

NSW Government have stated that they look forward to collaborating with industry through targeted research and stakeholder engagement, and myenergi welcomes the opportunity to engage with them regarding the future of the PDRS.

**Please note that we have only answered questions relevant to myenergi.**

**Q) Do you need a transitional period to prepare for the new demand response requirements?**



Introducing any new requirements for technologies will require adequate time for industry to implement these changes. Whilst myenergi products already have smart capabilities and are able to provide demand response, we understand that the technical requirements and standards may differ depending on the grid and load requirements of each state.

We disagree with the statement that ‘industry is not yet ready for [demand response capability]’ as we strongly believe that demand response services will play an integral role in balancing the grid as the number of connected assets grow in Australia, especially during periods of high energy demand, and to capture excess on-site generation during periods of high output from on-roof solar.

The transitional period needed to prepare for new demand response requirements in air conditioning units, and other energy smart appliances needs to balance with ensuring there is no consumer detriment caused by the lack of demand response capabilities available in the market. Consumers should be provided with the opportunity to engage with demand response activities, therefore, there will need to be a point in the near future where the consumer can be confident that the technology they are installing (whether this be an air conditioning unit, electric vehicle charger, or battery storage system etc) will include inbuilt demand response capabilities.

Overall, industry would need to see greater detail on the potential length of the period between the specific demand response requirements being published, and these requirements coming into force, and what the requirements will actually involve before assessing whether a transitional period will be required.

### **BESS1**

myenergi launched the libbi, a modular battery storage system, earlier this year. We are interested in the changes to the PDRS scheme that will provide an incentive, via a discount, to install a new behind the meter residential energy storage system in a property to enable consumers to contribute to demand response and demand shifting capacity.

#### **Q) Are the implementation requirements sufficient to drive best practice installation of batteries?**

The implementation requirements for BESS1 seem mostly sensible and will help drive best practice installation of battery storage systems. We agree that the upfront cost of a battery storage system can be a barrier to uptake of this technology, therefore, providing a discounted installation as incentive for a consumer will encourage the installation of this technology.

Currently, only households with a solar PV system are eligible to qualify for the BESS1 incentive. We question whether this criteria will result in an unnecessary and

unreasonable barrier for consumers. We understand that there are already a high volume of consumers who already have a solar PV system, therefore, we cannot foresee it being a common occurrence for a battery storage system to be installed at a property that does not have solar, however, there will be some properties that are not eligible for solar due to poor quality rooftops, or excessive shading. There may also be affordability issues.

The objective of the PDRS scheme is to demonstrate how various technologies can shift demand from peak hours (2:30PM-8:30PM.) A battery system can still contribute to demand shifting by charging during off-peak times and exporting during periods of high demand, even if there is no solar PV system installed at the property. Although we understand that currently, there is not as much financial incentive to charge a battery off-peak, as there is not much of a price difference between peak/ off-peak energy prices, retailers may start to offer more dynamic energy pricing in the future which will make battery storage a much more attractive proposition for those who are yet to install solar PV.

**Q) What additional steps can we take to mitigate fire and other safety risks from batteries supported through the scheme?**

Only allowing battery storage systems that are on the Clean Energy Council's Approved Battery List to be installed through the scheme is a sensible way to mitigate fire and other safety risks.

Ensuring that the installer of the battery storage systems is suitably qualified is also imperative to prevent risk, and mandating that the installer must be a member of an accredited scheme operator, and provide evidence of this to the scheme administrator will also mitigate fire and other safety risks.

**Q) Will there be any challenges meeting the requirement for batteries to be registered on AEMO's DER register?**

The process of registering a battery storage system on AEMO's DER register seems complex, with a lot of information required. As the registration of the battery is required before a certificate is created, we do not think that this requirement will be missed, as there is adequate incentive to ensure that it is done. However, there may be a challenge in ensuring that the information inputted into the registration system is accurate. We do agree with the requirement for batteries to be registered on the DER register, as this will provide Network Service Providers with visibility of assets connected to the grid, allowing them to manage the grid.

**Q) Are there additional requirements you recommend we add to ensure consumers get the best outcomes?**

myenergi questions the requirement of the co-payment. We understand that the co-payment of \$200 is to encourage consumer engagement with the products that

they are getting installed, however, this may result in a financial barrier for those on lower incomes.

We believe that there are other methods of ensuring that good quality products are being installed in consumer homes, such as the Clean Energy Council's Approved Battery List, and that introducing a co-payment is not necessarily the best option to encourage consumer engagement with product selection.

## **BESS2**

### **Q) Do you support the data assumptions and proposed calculation method for certificates for activity BESS2?**

The calculation method for activity BESS2 seems fit for purpose whilst there are still technical barriers preventing a baseline calculation through metered data. We understand that there is a low amount of smart metering currently available in NSW, resulting in difficulties in assessing whether demand response participation has occurred in residential properties, therefore a standard calculation method based on data assumptions is used to create PRCs.

myenergi has participated in similar demand response trials in the UK, including the National Grid ESO's Demand Flexibility Service 22/23. Baseline data was created by assessing the consumers usage over a set period, and then calculating the actual reduction during the demand response event. We understand that the PDRS does not require any meter data to calculate demand reduction. However, we believe that this is something that should be explored in the future. Enabling sub-metering to calculate demand response will provide richer, more accurate data, in the absence of smart meters.

### **Q) Are there additional requirements you recommend we add to BESS2 to ensure consumers get the best outcomes?**

Within the consultation, there is a criteria that an aggregator needs to be able to demonstrate control of equipment for residential demand response, although this was in reference to activity HVAC3 (residential air conditioners) and not specifically battery storage systems. We understand that there may be further definition of how this requirement can be met in the method guides when these are published.

As stated previously, we understand that due to the lack of smart metering, that third party control has to be evidenced to prove that demand response has taken place. However, myenergi has concerns that allowing inappropriate third party control could represent a product risk as the demand response aggregator will not have insight on warranties, battery health, or battery cycling parameters for battery storage. If heating systems are eventually included within the demand response



activities represented within this scheme, third party control could put important operating regimes at risk, such as legionella.

With this being stated, we are pleased that the term 'Demand Response Aggregator' has been used to allow more flexibility within the scheme, instead of mandating that a demand response aggregator needs to be an Accredited Certificate Provider or energy retailer. Allowing smaller players into the demand response market will result in increased innovation in the market, especially for businesses such as myenergi who are manufacturing devices to connect and create a fully integrated home energy management system. This will also reduce consumer detriment for the reasons stated above relating to inappropriate third party control.

**Q) Can you see any potential issues with the 12-month cadence of certification creation for each NMI?**

As consumers can decide to cancel or opt out of demand response services at any point, myenergi agrees that a 12-month cadence of certification creation for each National Metering Identifier (NMI) is sensible, due to the unpredictable nature of consumer participation. We understand that it is important to keep consumers engaged with this service, and believe a simple 'opt in' request via an app, or text would be sufficient, to prevent consumer fatigue.

The only issue we may foresee with the annual certification creation, is that a consumer cannot sign up to another activity of the same nature via their NMI for 12 months. Although this probably would be a rare occurrence, we think that exceptions should be made case-by-case if a consumer is unsatisfied with their demand response aggregator. Preventing a consumer from switching demand response aggregators if they are unhappy, or have raised a complaint, may prevent a consumer from joining the service in the future.

**Future Rule Changes**

**Q) For any of the activities we are continuing to look at, can you provide any relevant information on baseline demand/discharge, demand response or shifting, and other key operational characteristics that the NSW Government could use for rule development?**

**Electric Vehicle Charging Equipment**

myenergi is pleased that the NSW Government are considering the potential that electric vehicle charging can offer in the future PDRS.

The switch to electric vehicles is going to require a lot more electricity to be delivered through homes, and through the surrounding energy distribution networks, and we agree that EV's and EV charging will become one of the largest contributors to peak demand post 2030. However, we also believe that electric



vehicles and chargers will become increasingly important parts of the distributed energy landscape.

In Winter 22/23, myenergi participated in the National Grid ESO's Demand Flexibility Service. This service proved that far from being a hindrance on the electricity system, electric vehicles are ready to deliver huge benefits in terms of the flexible capacity when they shift charging demand to avoid grid constraints.

myenergi recognises that the standards for minimum requirements in EV chargers are still being set at federal level, and that demand response is not yet a mandated requirement for an EV charger unlike in the UK, where this is required as set in the Electric Vehicles (Smart Charge Points) Regulations 2021. However, we believe that EV chargers offer a lot of opportunities for demand response, and are keen to explore this further within the PDRS scheme.

As stated previously, myenergi have access to vast amounts of data within a regulated market, and in direct response to live, turn-down events where system capacity has been challenged. We would welcome the opportunity to share this data with the PDRS designers.

### **Behavioural Demand Response**

myenergi has successfully participated in behavioural demand response in the UK, through the National Grid ESO's Demand Flexibility Service. We understand the challenges to introduce this into the scheme, especially as this currently involves communication from a retailer to reduce demand (either via text or email) with no way to accurately verify that demand reduction has taken place, due to the lack of smart meters.

myenergi also agree that allowing a third party aggregator to access device controls may present challenges, especially in relation to consumer detriment and product risk.

However, myenergi is very interested in behavioural demand response, and believe that as consumers become more engaged with their energy systems, this will become a viable option for demand response capabilities during peak times.

### **Solar Power Diverters**

An activity that has not been included in the list of future rule developments is solar power diverters. Using a solar power diverter to heat water is a huge opportunity for peak demand reduction, and allows a consumer to fully take advantage of their solar PV system.



Solar power diverters are used to divert excess solar generation back to a heating system, rather than exporting to the grid. They can also be used to heat electric underfloor heating or other resistive loads. Using a solar power diverter is a cost effective way to heat hot water as it uses excess solar generation instead of a fossil fuel boiler. The consumer also saves energy and reduces their carbon emissions.

Within the PDRS consultation, pool pumps have been identified as an opportunity for demand response but technical and financial barriers have been stated as key reasons for not including this technology, and it is believed that this technology would not contribute to the goals of the PDRS. myenergi disagrees with this view, and believes that multi-functional power diverters should be reconsidered for inclusion within all relevant DSR schemes including the PDRS.

myenergi's power diverter 'eddi' has the ability (using relays) to control devices such as pool pumps, in addition to hot water tanks, and other resistive loads. The eddi also has the capability of reducing grid export by utilising self-consumption, and is already demand side response ready, and is currently providing DSR services in the UK, by participating in turn-up and turn-down events. The eddi can even be used for load balancing and placed in a frequency response mode.

For a technology to be considered to be part of the PDRS, it will need to demonstrate how it can shift demand, and how this can be measured, which we believe solar power diverters are capable of doing so. Again, we would like to reiterate that myenergi has a vast amount of data, and would welcome the opportunity to assist the NSW Government's future plans for the PDRS, as we believe that the more load that can be reliably shifted through this scheme, the better.