15 November 2023

Terry Niemeier
Director – Program and Market Development - Safeguard
NSW Office of Energy and Climate Change
GPO Box 5469
Sydney NSW 2001

Dear Mr Niemeier

RE: Peak Demand Reduction Scheme

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Office of Energy and Climate Change's (OECC) Peak Demand Reduction Scheme (PDRS) draft rule 2 consultation paper.

About Shell Energy in Australia

Shell Energy is Shell's renewables and energy solutions business in Australia, helping its customers to decarbonise and reduce their environmental footprint.

Shell Energy delivers business energy solutions and innovation across a portfolio of electricity, gas, environmental products and energy productivity for commercial and industrial customers, while our residential energy retailing business Powershop, acquired in 2022, serves households and small business customers in Australia.

As the second largest electricity provider to commercial and industrial businesses in Australia[1], Shell Energy offers integrated solutions and market-leading[2] customer satisfaction, built on industry expertise and personalised relationships. The company's generation assets include 662 megawatts of gas-fired peaking power stations in Western Australia and Queensland, supporting the transition to renewables, and the 120 megawatt Gangarri solar energy development in Queensland.

Shell Energy Australia Pty Ltd and its subsidiaries trade as Shell Energy, while Powershop Australia Pty Ltd trades as Powershop. Further information about Shell Energy and our operations can be found on our website here.

General comments

Shell Energy expects to be an active participant in the PDRS both as a liable party as a retailer, and as an accredited certificate provider (ACP). We are therefore interested in ensuring that the PDRS is able to ensure that activities that have the ability to reduce peak demand during key times – the aim of the scheme – are suitably recognised and the costs of compliance are minimised. We consider that the draft rule sets out a starting point for including activities like demand response and the impact of battery energy storage systems (BESS) but only captures a fraction of the potential response. In particular, our concern is that business customers

[1]By load, based on Shell Energy analysis of publicly available data.
[2] Utility Market Intelligence (UMI) survey of large commercial and industrial electricity customers of major electricity retailers, including ERM Power (now known as Shell Energy) by independent research company NTF Group in 2011-2021.

have limited options to be rewarded under the PDRS despite being able to contribute to reducing peak demand already.

The submission which follows outlines our specific concerns, but in summary we believe the PDRS draft rule 2 should:

- Include crediting for BESS at commercial premises;
- Include demand response for activities outside the PDRS;
- Allow for demand response methodologies that can inform AEMO around their potential inclusion in the PDRS.

Changes to existing activities

Shell Energy agrees with the addition of a capacity factor to align the WH1 method with the ESS equivalent method. Further, to provide evidence that customers aren't being taken off controlled load, we consider providing an electricity bill showing off-peak energy consumption from the period 12 months prior to the heat pump installation may be a low-cost method to demonstrate compliance with the scheme rules for this activity.

Finally, given that most changes to these activities relate to calculations, the need for a transitional period is low.

Demand response

Shell Energy supports the proposed Wholesale Annual Response Mechanism (WARM) that supports participants already active in the existing Wholesale Demand Response Mechanism (WDRM). In effect, the WARM would provide a capacity payment to wholesale demand response units (WDRU) with the WDRM itself paying for demand reductions at the wholesale spot price. The consultation paper suggests that the WARM may help to prevent some demand response from leaving the WDRM in the event that wholesale spot prices are insufficient during the summer months.

We agree with the reasoning behind the paper's intent for the WARM. However, we consider it fails to address wider issues with the WDRM that limit participation. At present there is only one methodology which broadly speaking, only allows very predictable load profiles from day to day to participate. Temperature sensitive load, such as HVAC, can be operated flexibly to reduce demand and is predictable and controllable but not on a day-to-day basis which precludes participation in the WDRM. Additional baselines in the WDRM would allow for these kinds of loads to participate in both the WDRM and contribute to the PDRS. There are examples of baseline approaches for these kinds of loads in other demand response markets such as the Californian Independent System Operator's (CAISO) high 3-in-10 approach.

Further, the WDRM is inflexible in that it required a site to have consistent operating hours day to day. A facility such as a shopping centre may have consistent operating hours on a week-to-week basis, but under the WDRM, the fact that operating hours may vary from day to day, with late trading on some days, means it cannot meet the baseline requirements under the WDRM. The WDRM's approach therefore excludes load that could otherwise provide reductions in load at key times.

In our view, the PDRS could operate as a staging ground for alternative demand response methodologies and baselines. The results of these approaches could then inform AEMO with a view to eventually including them within the WDRM. We consider this would offer benefits to both NSW consumers through the PDRS and the NEM more broadly through increased supply of WDRM. We recommend that the NSW Government allow for more demand response baselines to be included in the PDRS.

There is also an interaction between the battery and demand response. Facilities with a battery and demand response capabilities are unlikely to be able to participate in the WDRM as the use of a battery on-site may mean that the consumption profile does not allow for an accurate baseline. Based on what is set out in the draft

rule, these facilities may be ineligible to participate in both the WDRM and PDRS despite having the ability to respond to signals to reduce demand at peak times.

We also consider that the PDRS should include retailer-led demand response that is not within the WDRM. We acknowledge that this is likely to require a greater level of information to provide to IPART to justify the allocation of Peak Reduction Certificates (PRC). It would, however, provide greater rewards for demand response activity. Retailers currently activate demand response in a range of ways, especially for commercial and industrial users. As designed currently, the PDRS will only reward demand response dispatched through the WDRM, whereas in practice demand response is dispatched through a variety of services and a variety of ways. For example, some users may be exposed to spot prices which provides an incentive to reduce demand at times of high spot prices (which may correlate with high demand). The structure of the WDRM means that these users are unable to participate in the WDRM and as such would be unable to participate in the PDRS based on the proposed approach. Shell Energy considers the NSW Government should find ways to include demand response from sources other than the WDRM. This will both increase supply of PRCs within the scheme and provide more scope to reduce demand at key times in NSW.

Where there is a need to provide more visibility of the service, we recommend that IPART look to leverage off existing models such as AEMO's Demand Side Participation Information Portal[3] (DSPIP) or the proposed 'Scheduled Lite' mechanism.[4]

In response to the specific consultation questions, Shell Energy agrees with the exclusion of Reliability and Emergency Reserve Trader (RERT) and Long Term Energy Services Agreement (LTESA) loads from participating with the PDRS. LTESA loads have already received government support for providing their demand response into the market. Conversely, RERT loads sit outside the market and will only reduce load if instructed to do so by AEMO. It would be more efficient for these loads to operate 'in-market' and respond to the need to reduce peak demand based on market prices rather than only when required by AEMO for system reliability. RERT loads may also already receive an availability payment, which largely mirrors the approach the creation of PRCs under PDRS intends to support.

Battery Energy Storage Systems

As initial comments on the proposed implementation requirements, Shell Energy agrees with the proposed implementation requirements to:

- install equipment in accordance with *AS5139/2019 Electrical Installations – Safety of battery systems for use with power conversion equipment;*
- require systems to be installed by an accredited party on the Scheme Administrator's approved installer list; and
- for systems to be registered on AEMO's DER register.

The AS5139 standard covers battery safety, installation requirements and access requirements. Compliance with these standards will drive best practice installation and safe operation of battery systems. Compliance with the relevant standards is appropriate to mitigate risks for a battery installation.

We also do not believe that there will be any challenges related to registering batteries on AEMO's DER register.

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[3] We note that the DSPIP is currently only open for submissions for one month per year and as such is not fit for purpose to be used for the PDRS. However, the AEMC has recommended changes which may make this a more suitable platform in the near future.
[4] AEMC, Integrating price responsive resources into the NEM rule change

Shell Energy also considers that the scheme Rule should include commercial battery energy storage systems (BESS). We do not agree with the OECC's justification that it requires higher quality data before determining crediting rates. There are already batteries at commercial premises operating in Frequency Control Ancillary Services (FCAS) markets that have revenue grade meters in order to participate in FCAS markets. In our view, these facilities could participate in the PDRS immediately through providing meter data to IPART. This would expand the pool of certificate providers and reward batteries in commercial facilities that can contribute to reducing peak demand.

This could act as a precursor to developing methodologies for other commercial batteries to participate in the scheme. Shell Energy sees that BESS in commercial premises may be able to contribute significantly to the OECC's stated aims of the PDRS. Operators of BESS who can provide meter data to the OECC would seem to be able to demonstrate their capability to reduce peak demand and as such, should be able to create PRCs.

Residential BESS

The 12-month cadence of certificate creation incentivises effective orchestration of residential BESS on an ongoing basis. While this would likely increase the quality of the systems installed, the financial benefits transferred to the individual consumer would likely to be low given the low financial values of a single residential BESS – a maximum of around 100 PRCs per annum for the largest battery size allowed in the PDRS – and the high transaction costs of small transfers.

Conclusion

Shell Energy supports a number of the new activities added the PDRS for demand response operating under the WDRM and residential BESS. Yet, we consider that the OECC should look for ways to incorporate a range of other demand response activities into the PDRS to better reward the full range of demand response that customers can provide. This should include retailer-led demand response activities, and trialling new methodologies that could, in time, form part of the WDRM.

Further, the potential for batteries in commercial premises to participate in the PDRS needs to be better reflected. In our view, there is no need to wait for a dataset to be made available when there are already BESS operating with revenue-grade meters to allow for participation in FCAS markets.

Yours sincerely

[signed]

Libby Hawker
GM Regulatory Affairs & Compliance