18 January 2024

John Kim
Reliability Panel
Australian Energy Market Commission
Level 15, 60 Castlereagh St
Sydney NSW 2000

Dear Mr Kim

RE: Review into the form of the reliability standard and Administered Price Cap

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Reliability Panel's directions paper on the review into the form of the reliability standard and the Administered Price Cap (APC).

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 appreciates the modelling and analysis the Reliability Panel has undertaken in producing the directions paper and the underlying analysis. We recognise that the Panel has had to make adjustments to the input assumptions in its modelling compared to firm dispatchable generation outputs from the 2022 Integrated System Plan (ISP) to ensure that there were sufficient events with unserved energy (USE) to be able to draw conclusions about what a resource constrained, high variable renewable energy (VRE) and primarily VRE-charged storage power system may look like. We note absent these adjustments little if any USE is forecast.

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[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.

We also recognise that this review complements the Australian Energy Regulator's (AER) Value of Customer Reliability (VCR) review which will take place in 2024. The results of that review will provide valuable data to the Reliability Panel which it can also use in conjunction with improved modelling to consider whether a shift in the form of the standard is necessary.

Based on the modelling results presented, Shell Energy sees little evidence to clearly demonstrate that a change to the reliability standard is needed. The profile of USE presented does not appear to be markedly different from the existing market. Changing the resource mix to one more dominated by wind and solar generation only highlights that the real driver of USE is the volume of firm, dispatchable capacity in the market.

Therefore, we ask the Reliability Panel to consider whether a change in the reliability standard would either encourage more firm, dispatchable capacity to enter the market or delay the exit of existing scheduled generation. Further, would the additional costs justify the marginal improvement in reliability delivered to customers given the historically strong levels of reliability in the NEM? Shell Energy does not consider this to be likely based on the modelling presented.

We have concerns that providing a different form of the reliability standard may lead to a scenario where consumers face extra costs for a relatively small, if any, increase in the overall consumer reliability experience. These costs could emerge from requiring reliability settings such as the market price cap (MPC) and/or cumulative price threshold (CPT) to be set at an extremely high level to drive the required investment in new capacity, increased procurement of Reliability and Emergency Reserve Trader (RERT), or regular triggering of the Retailer Reliability Obligation (RRO).

Modelling results

The modelling suggests that in a high VRE future, where storage systems are primarily dependent on output from VRE generators for energy stored and the level of firm dispatchable generation is low, USE events may last longer and involve more MWh of load shedding, be spread over the day rather than just the evening peak, shift to winter rather than summer and be increasingly driven by weather outcomes.

Shell Energy does not consider that any of these results are surprising. Indeed, one would certainly expect that in an electricity grid dominated by weather-dependent supply – solar and wind – with storage charging dependent on times of excess VRE supply, times of low wind and solar generation would create the greatest challenges from both a system reliability and operability perspective. It is also unclear to Shell Energy if the forecast set out in the base case is the realistic future world in which the NEM will operate.

What this does suggest, based on our interpretation of the modelling, is that the level of USE is highly susceptible to the level of firm, dispatchable capacity in the system. The sensitivity analysis undertaken as part of the modelling supports this view, given that sensitivities with additional storage (sensitivity 2b), virtual power plants (VPPs) (sensitivity 3b) providing dispatchable demand response, and additional firm dispatchable generation capacity (sensitivities 5a and 5b) have the greatest effect on the depth and duration of USE compared to the chosen base case. In particular, dispatchable generation in sensitivities 5a and 5b not only positively impacts USE outcomes from their own output at time of high demand, these also positively impact output from storage dependent resources which then have the ability to replenish storage levels to firm levels from these dispatchable generation resources. This sensitivity modelling in our view clearly indicates in an adequately resourced NEM during extended very low wind and solar output (dark doldrum) events, the risk of USE remains low and aligned with current reliability assessments.

We have also identified that there is a substantial difference in the modelling inputs for and the outputs from the 2022 ISP which was used as the basis[3] for the modelling for this review, and the draft 2024 ISP outputs which were released in December 2023. The Draft 2024 ISP has substantially more firm dispatchable capacity in the system – more than an additional 6,000 MW by 2029-30 – than the 2022 ISP. Given this, and the dual benefits from additional dispatchable generation resources noted above, we recommend the Reliability Panel discusses the implications from these different ISP outputs in future modelling work for this review.

Further, we note that the Reliability Panel's analysis does not appear to include the potential impacts of increased non-VPP demand response. We recommend that the Panel include both VPP and non-VPP demand response in any additional modelling undertaken to observe the potential for demand-side resources to reduce the depth and duration of USE. Given that the sensitivities with VPPs significantly reduced the depth and duration of USE in the modelling, we consider that including non-VPP demand response in additional modelling demonstrates its potential to contribute to reliability outcomes.

Given the potential impact of extended periods of low wind and solar output, or dark doldrum events, Shell Energy considers the additional modelling planned by the Reliability Panel must systematically determine via a transparent process the probability of such events of various duration occurring. We recommend the Reliability Panel engage further with stakeholders in refining and communicating this process.

In Shell Energy's view, the modelling clearly indicates that it is essential that there is sufficient flexible and dispatchable capacity in the market. That is, generation that can generate electricity on demand rather than relying on wind and solar or charging storage resources through 'time-shifting' excess wind and solar generation. Changing the form of the reliability standard is unlikely to influence this. What is critical is that the reliability settings, supported by improved accuracy in reliability assessment modelling provide the necessary transparent economic signals for new capacity to enter the market when required.

Based on the modelling outcomes, Shell Energy does not see a case for changing the form of the reliability standard. While the nature of USE may shift, this is not clear from the modelling and is completely dependent on the future supply side and demand response resource mix.

Form of the APC

The Reliability Panel makes two recommendations for the form of the APC: leaving it unchanged or indexing it to APC. Shell Energy prefers a technology neutral approach to setting the APC to provide adequate incentives for all supply side resources to continue to offer for dispatch during an administered pricing period (APP). We therefore support the Reliability Panel's decision not to pursue an approach that would index the APC to fuel prices or a trigger-based process to reset the APC.

As we have previously proposed to the Reliability Panel and the AEMC, Shell Energy from a technology neutral approach recommends setting the APC as a percentage of the market price cap (MPC). Given the MPC is adjusted annually by CPI, we recognise that it is almost identical to indexing the APC by CPI. However, we consider that there are advantages in that it could also shift when there are step changes in the MPC.

Historically, the Reliability Panel and the AEMC have taken a technology linked approach in setting the APC at approximately the fuel costs for gas powered generators. Given the forecast increases in supply provision from energy storage resources in the future NEM, Shell Energy questions if this historical approach remains valid. Explicitly linking the APC to the MPC recognises the fact that the APC is in effect a discounted MPC that applies following a period of high spot price volatility to mitigate systemic market failure risk. In our view, the APC is a

[3] While the 2022 ISP outputs were used as the basis for the modelling, inputs were then modified to substantially reduce the level of firm dispatchable generation resources available to the system to allow assessment of a range of USE outcomes.

pricing risk management tool which should act to manage risk for prudent market participants, and it should not be based solely on ensuring cost recovery for a particular supply side resource which may then act to discourage other participants from continued market participation. The key question here would be to determine the appropriate level of discount applied to the MPC in setting the APC, to adequately manage market price risk at times of market stress such that incentives are retained for efficient market dispatch offers by all participants.

Conclusion

The Reliability Panel has produced an informative paper and accompanying modelling results to guide stakeholders in the review of the form of the reliability standard. However, Shell Energy has not seen any evidence to justify a need to change the form of the reliability standard. In our view, there is a substantial risk that changing the form of the reliability standard could impose higher costs on consumers for little meaningful improvement in the overall consumer reliability experience. As the reliability standard informs the reliability settings, RERT procurement and triggering the RRO, a change to the standard could necessitate a higher MPC/CPT, greater amounts and/or increased frequency of RERT procurement or more frequent RRO triggers, all of which would impose higher than necessary costs on consumers.

On the form of the APC, Shell Energy recommends that the level of the APC be expressed as a percentage of the MPC. This is largely equivalent to indexing the APC to CPI as the MPC is already indexed to CPI. It would mean that in the event of a step change to the MPC as a result of a rule change, to maintain the economic investment signal, the APC would also increase by an equivalent percentage. We consider that such a change would be an improvement to the historical process for setting of the APC, be technology neutral and better maintain the economic signals for future investment.

For more detail on this submission, please contact Ben Pryor, Regulatory Affairs Policy Advisor (0437 305 547 or ben.pryor@shellenergy.com.au).

Yours sincerely

[signed]

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