



18 June 2024

██████████
NSW Department of Climate Change, Energy, the Environment and Water
Locked Bag 5022
Parramatta NSW 2124

Dear ██████████

RE: Review of Long Duration Storage

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the NSW Government's Review into Long Duration Storage (LDS) - Part 6 of the Electricity Infrastructure Investment Act 2020 - 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 Australia¹, Shell Energy offers integrated solutions and market-leading² 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 supports the overall aim of the New South Wales Government's 16 GWh target for storage as part of the NSW Energy Roadmap. However, we consider that the requirement of 8 hours of storage imposes a constraint on projects that could lead to higher cost outcomes for little if any improvement to overall reliability.

In our view, it is the total MWh of storage available that is crucial during longer term renewable 'droughts'. Therefore, the 16 GWh target should be retained. By allowing for different durations of storage to contribute

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.



towards that target, the NSW government would increase flexibility for the market to deliver the required capacity at times in a more cost-effective manner.

We consider that having more capacity available (MW) should not be seen as a poor outcome. Indeed, it offers greater optionality to the market to address the needs of NSW in a more flexible way.

We also note that the location of storage facilities also has a critical impact on their ability to contribute to reliability aims. As noted in the 2023 Update to the Electricity Statement of Opportunities (ESOO):

"Connection points in the Sydney and Newcastle areas are shown to have a 100% relative benefit, while those further south, west, and coastal north are shown to have reduced reliability benefits due to periods of congestion on transmission networks at time of New South Wales reliability risk."³

This is of course subject to the development of transmission projects like Humelink and the Hunter Transmission Project which could improve the transfer capacity, and hence reliability benefits offered by storage projects.

We also note AEMO's analysis in the Update to the 2023 ESOO that 4-hour battery energy storage system (BESS) offers a reliability benefit of around 70 per cent, compared to around 95 per cent for an 8-hour BESS.⁴ Although that appears to suggest an 8-hour BESS delivers more in reliability terms, it does not deliver double what a 4-hour BESS could provide, suggesting that the latter could offer better value for money.

We recommend that the NSW Government therefore change the minimum duration of LDS to a minimum of 4 hours. Over time, depending on factors such as demand forecasts, project costs and timeframes there may be a case to revise the minimum duration again. Alternatively, a sub-target for 8-hour storage could be maintained, with the overall 16 GWh target remaining in place.

For more detail on this submission, please contact Ben Pryor, Regulatory Strategy Lead [REDACTED] or [REDACTED].

Yours sincerely

[signed]

Libby Hawker
GM Regulatory Affairs & Compliance

³ AEMO, Update to the 2023 Electricity Statement of Opportunities, May 2024. p31

⁴ AEMO, op cit. p30.