5 February 2024

Part of Energy Queensland

Mr Daniel Westerman
Chief Executive Officer
Australian Energy Market Operator
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Melbourne VIC 3001

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Dear Mr Westerman

Ergon Energy Network and Energex submission to the 2023 Forecast Improvement Plan consultation

Ergon Energy Corporation Limited (Ergon Energy Network) and Energex Limited (Energex), both distribution network service providers (DNSPs) operating in Queensland, welcome the opportunity to provide feedback to the Australian Energy Market Operator (AEMO) in response to its *2023 Forecast Improvement Plan consultation*.

We support AEMO's efforts to continually monitor, analyse and improve electricity forecasting during an extended period of significant technological and market change in the National Electricity Market (NEM), and Australia's society and economy more broadly.

Building on the information gathered through the Project Symphony and Project Edge industry collaborations, as outlined in Section 8.3.1 of the *Forecast Improvement Plan*, we believe there is a case for a further forecasting project specific to electric vehicles (EVs) and battery storage. Given the fast rate of change of these technologies and their rapidly accelerating uptake, this project could examine:

- the interdependencies between forecasts of rooftop solar PV systems, behind-the-meter batteries and EVs;
- the extent to which EV batteries may be repurposed to function as home batteries, potentially increasing the installed capacity of home energy storage systems earlier that anticipated;
- the relationship between EV charging pattern forecasts and maximum 10% probability of exceedance (POE) forecasts, 50% POE forecasts and in particular minimum 90% POE forecasts;
- the extent to which growth in EV numbers correlates with growth in EV-related demand, plus diversification of that demand as a result of the use of EV chargers in different locations, such as at homes compared to carparks at workplaces, public transport hubs and shopping centres; and
- how the use of Artificial Intelligence (AI) could improve energy storage and EV-related forecasting, and AI's role in the smart management of charging and discharging.

Similarly, we welcome the inclusion of a methodology for collecting and forecasting random outage parameters in the updated *Electricity Statement of Opportunities* (ESOO) *and Reliability Forecast Methodology Document*, as outlined in Section 8.1 of the *Forecast Improvement Plan*. Pending its assessment in next year's *Forecast Accuracy Report*, we suggest that from a DNSP perspective—and likely other participants in the NEM—there would be benefit in considering the inclusion of:

- Energy Not Supplied, both planned and unplanned, at a more granular forecasting level covering availability of supply, size of the reliability gap and intervals, and impacted loads; and
- the impacts of weather and climate related events on the short and long term forecasting of reliability gaps, given that cyclones, bushfires, severe storms, floods and heat waves have impacts on demand and lost energy well beyond Major Event Days.

We also note AEMO's efforts to incorporate wholesale demand response into demand side participation forecasts, as outlined in Section 8.3.5 of the *Forecast Improvement Plan*. Ergon Energy Network and Energex are developing capabilities in Dynamic Operating Envelopes, and we are interested in understanding whether these would be described as sitting within wholesale demand response or the broader demand side participation category.

While separate to the *Forecast Improvement Plan*, we take this opportunity to comment on two aspects of the broader *Forecast Accuracy Report*:

1. In *Table 3: Key scenarios and sensitivities used in the 2022 ESOO* the current and projected mix of generation sources is presented as a series of comparisons against historical ESOOs. To improve benchmarking of the scenarios, it would be informative to document how the current mix of generation is tracking against expectations in the scenarios and how recent events may relate to the likelihood of being on the path towards a particular scenario.
2. In *Table 4: Connections forecast for 2022-23 and actuals for 2022-23*, the terms 'connections' and 'customers' are used interchangeably. We note the importance to maintain the distinction between the two terms. For example, in embedded networks such as residential apartment blocks, one connection to the distribution network may serve multiple customers.

Should AEMO require additional information or wish to discuss any aspect of this submission, please contact me on 0409 239 883, or Andrew Bozin on 0436 447 814.

Yours sincerely

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