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Forecasting and Planning Team
Australian Energy Market Operator
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Submitted via: forecasting.planning@aemo.com.au



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Re: Electricity Forecasting Methodology consultation

Dear Mr Turley,

Jemena welcomes the opportunity to respond to the consultation on the Australian Energy Market Operator's (AEMO) *Electricity Forecasting Methodology*. As an owner and operator of a diverse portfolio of energy assets throughout the northern and east coasts of Australia, Jemena is uniquely positioned to provide a comprehensive response across the various energy networks that will be required to get Australia to net-zero by 2050.

Jemena owns and operates a diverse portfolio of energy assets throughout northern and east coast Australia. With more than \$12 billion of major gas and electricity infrastructure, we deliver energy to millions of households, institutions, and industries every day.

Our assets include the Jemena Gas Network in New South Wales, the Jemena Electricity Network in northwest Melbourne and gas transmission pipelines such as the Eastern Gas Pipeline, Darling Downs Pipeline, Queensland Gas Pipeline and the Northern Gas Pipeline. In addition, our group includes Zinfra, an energy services business, which provides project management, construction, operations and maintenance services for the electricity and gas sectors.

For this reason, we are uniquely placed to understand the planning and operating of the energy system 'as a whole', and how the electricity and gas sectors can support the objective of delivering low carbon, reliable and resource efficient energy services, at least possible cost for society.

Jemena welcomes the opportunity to provide its unique insights to AEMO as part of this consultation. As the methodology and the forecasts produced are key inputs into a number of AEMO's reliability processes, it is important AEMO considers the most up to date and comprehensive information. Jemena is particularly keen on supporting AEMO in better understanding future data centre load growth, where we are seeing a significant rise in interest on our electricity distribution network in Victoria. As part of this, we would like to invite AEMO to a confidential briefing on the future of our network and the role data centres are increasingly playing in this planning.

Key points

- Data centre growth is a rapidly accelerating area of load growth for the Jemena Electricity Network. Jemena is encouraged by AEMO's decision to explore splitting out this area of load as part of its electricity forecasting methodology consultation.
- Due to key nuances with data centres that are not witnessed in other areas of industrial load, Jemena recommends a careful and consultative approach be taken to information gathering and input and assumption formulation. Jemena would welcome the opportunity to brief AEMO on these and other key trends it is seeing in data centre load growth on its electricity distribution network.

For more information regarding Jemena's submission or to arrange a discussion please contact Joeb Northey, Policy Manager via joeb.northey@jemena.com.au.

Yours sincerely,

Karl Edwards

A/g Executive General Manager of Networks, Karl Edwards

Appendix A Consultation questions

Large industrial load consumption forecasting

Question	Jemena's response
<p>Do you have any views on whether the existing commitment criteria for large industrial loads inclusion in the single scenario forecast should be expanded to include a similar level of certainty as the 'anticipated' generator developments?</p>	<p>Given the significant increase in large loads from Commercial and Industrial customers, particularly data centres, it would be prudent to consider expanding the approach and putting more consideration in the 'anticipated' developments.</p> <p>Data centres, like generators, have long lead times, often 2-3 years before the project is fully committed. However, they also require certainty that following construction and commissioning, the capacity in the network, as well as the electricity supply / generation, is sufficient to meet their needs and the needs of their customers. Data centres work on the principle that they cannot sell what they do not have. Therefore, they must be able to demonstrate to their customers that they have the capacity and generation available to meet the operational needs of the site. Failing this, the data centre operator would be unable to secure customers, which then impacts on their investment decisions and timing. This context highlights the importance of transparent and robust forecasts of generation and load in AEMO's modelling for industry, and especially new data centres.</p>

Business mass market consumption forecasting

Question	Jemena's response
<p>Should AEMO create a separate customer segmentation for data centres, removing them from the large industrial load and business mass market segments? Would the preferred approach apply a survey-driven forecast, observations from international trends, or another technique?</p>	<p>Large Industrial Loads is a broad category which can cover a breadth of industries and different load patterns. Jemena supports having data centres separated as its own separate customer segment. Data centres, while considered large industrial loads, has characteristics warranting them being considered separately.</p> <p>Data centres have very flat, stable load profiles through the day. The load growth profiles are also different, with large step changes over time. Additionally, the magnitude of the load requirements appear to be significantly larger than what has been seen with other large industrial and business mass market segments previously.</p> <p>In terms of approach to data gathering, it would be worth considering a combination of approaches. Survey driven would be highly valuable to get the granular details. It is worth noting that confidentiality is extremely important for data centres as their growth plans are often their competitive advantage and considered commercial-in-confidence. When undertaking the surveys, care and focus needs to be given to this to ensure developers and operators are comfortable sharing the right level of detail that facilitates meaningful analysis and forecasting.</p> <p>Long term international trends would be useful as a reference point, however, considerations of difference in the regulatory and market environment in Australia should also be considered.</p> <p>Engagement with the Network Service Providers (NSP) across the NEM would also be helpful in getting the granular details of the load growth forecasts and overlay of the network augmentation requirements and timing required to meet the customer's network connections requirements. Jemena would like to extend an invitation to provide a confidential briefing to AEMO on its future planning regarding data centre load growth on its distribution network.</p>