23 September 2021
Mr Tom Meares
Australian Energy Market Commission
GP Box 2603
Sydney NSW 2001

Dear Mr Meares,

Thank you for the opportunity to make a submission to the Australian Energy Market Commissions' 2021 consultation paper regarding redevelopment of the Short Term Projected Assessment of System Adequacy (ST PASA) process. While we broadly agree with the proposed changes, we suggest the Commission broaden the scope for input data the Australian Energy Market Operator (AEMO) must make publicly available as part of a revised ST PASA system.

Discussion pertaining to data availability within the consultation paper focuses on ST PASA inputs and outputs, and seeks feedback from stakeholders regarding other information AEMO should be required to publish. We believe the process by which inputs are transformed into outputs is particularly important, and suggest elements of the modelling methodology used by ST PASA also be made publicly available.

A notable feature of the proposed rule change is the use of a nodal network model within the revised ST PASA process. We suggest the Commission include information describing network topology within the scope of model inputs AEMO is required to publish, along with the mathematical formulation used by ST PASA. Given AEMO is requesting more flexibility with respect to the design and ongoing development of ST PASA, it is important the process by which system adequacy forecasts are determined is transparent, and can be interrogated by stakeholders. Requiring AEMO to publish this information provides an important oversight mechanism should a principles-based approach be adopted for ongoing development of ST PASA.

Disseminating model information and network data would also allow stakeholders to develop more accurate energy system models, and assist with decision making processes. This is particularly relevant as the rapid integration of variable renewable energy (VRE) sources has led to tighter coupling between energy and weather systems, necessitating the development of new modelling methodologies. Within this context, the distribution of system outcomes, obtained by simulating system operation under different operating scenarios, provides important information that can be used when making long run investment and short term operational decisions.

The existing and proposed ST PASA process only examines a small number of counterfactual scenarios. By making the ST PASA model and associated network data publicly available stakeholders would be able to integrate accurate network information within their own modelling frameworks, and customise analyses for their own use cases. This is particularly relevant for Amber as we autonomously control several types of distributed energy resources

(DER) for our customers. Detailed model information and network data would help us better understand how changing system conditions are likely to affect network congestion and wholesale prices, and assist us with the development of DER operating protocols. Other stakeholders are also likely to benefit, in particular those considering large-scale VRE investments. The ability to run simulations using an accurate network model could assist these stakeholders with site selection, and avoid network congestion issues that may compromise a project's financial viability.

We note that AEMO argues increased transparency arising from a revised ST PASA process would be a key benefit of the proposed rule change; our recommendation that model information be included within the set of required inputs is simply an extension of this argument. Providing access to network information and a sufficiently detailed mathematical description of ST PASA would enable stakeholders to more easily identify underlying drivers of ST PASA outputs, which could better inform long term investment and short run operational decisions. This is clearly aligned with the National Electricity Objective as increased access to high-quality information is likely to lead to more informed investment decisions, which is in the long-run interests of consumers.

The benefits of making ST PASA model information publicly available are likely to far outweigh the costs. The data and documentation we suggest be made publicly available would almost certainly exist for AEMO's own internal purposes, and would simply need to be made available via AEMO's website. We believe increased transparency of the modelling framework could be a low-cost way in which to ensure oversight of the modelling process, and would foster the innovation of new tools which are likely to play an important role within future decision making processes.

Should you have any questions or comments regarding this submission please contact Aleksis Xenophon at aleksis.xenophon@amber.com.au.

Kind regards,

Chris Thompson
Co-CEO