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Mr John Pierce AO
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Via electronic lodgement

Dear John

Consultation Paper: Investigation into Intervention Mechanisms and System Strength in the NEM (Ref EPR0070)

AusNet Services welcomes the opportunity to make this submission into the Commission's consultation on investigation into Intervention Mechanisms and System Strength in the NEM.

We have observed the increasing requirement for directions and market interventions to manage system strength, and the associated costs to consumers. The significant use of interventions to maintain power system security does not appear consistent with the intended use of the intervention framework as an emergency measure. Practice suggests that the framework to address system strength issues is not anticipating system needs nor providing timely cost effective solutions.

AusNet Services supports the review of the framework. In particular, there is a need for the framework to provide for improved forecasting of deteriorating fault level, including in conjunction with constraints that might be imposed by other system variables such as inertia. Proactive identification should have the objective of being able to deliver solutions for system strength in time to reduce or eliminate the need for sustained and expensive intervention whilst the long-term solution is established. Forecasting should be accompanied by actual specification of need, and provision for verification testing as critical thresholds are approached.

We also note a further complication in the regime, and potential misconception that the "do no harm" rules for generator connections will maintain system strength across the network. Generator connections need only consider the impact of the connection but does not account for other significant changes in the system such as reduction in availability of synchronous generation, removal of significant loads from the system and growth in generation from residential solar. AEMO and TNSPs cannot rely on this requirement or the assets installed by generators to manage system strength across the network.

System strength shortfalls are already present in the Victorian network under many abnormal system conditions, and will become more significant. AusNet Services strongly advocates for urgent changes to the system strength approach in order to avoid similar high cost interventions being required in Victoria due to an inability of the framework to deliver solutions on time.

The methodology and criteria for determining a shortfall in system strength are too conservative and not sufficiently forward looking. The NTNDP[1] notes that:

> "during system normal, the Victorian grid typically meets the minimum system strength requirements at the defined fault level nodes. ISP projections show that the expected minimum number of synchronous units online already reaches the minimum operating requirement."

The review provides the opportunity to clarify what is intended to satisfy the term "minimum" system strength and inertia, which is the basis for assessment. A fulsome understanding of the implications of shortfalls under various operating scenarios, still focusing on minimal acceptable levels is necessary to reveal what improvement is economic and the residual risk.

No shortfall has yet been declared in Victoria despite it being clear that significant issues will soon emerge. The use of qualifiers such as "during system normal" and "typically meets the minimum" acknowledges that situations already exist where minimum levels are not met. The framework should ensure that reasonable operating scenarios are included in the assessment, such as recognising the practicalities of running network and generation assets where outages are required for maintenance, project work and new connections and in each of these situations the system is not "normal".

The generation mix is rapidly transforming to include more asynchronous generators, and there is little doubt that system strength will be impacted. South Australia provides the case study to inform a comparison of costs of extended interventions with costs to provide long term solutions for system strength. The uncertainty in forecasting emerging system strength issues relates to the timing and size of the problem, there is a high level of certainty that these issues will emerge, therefore delaying action due to uncertainty in forecasts, guarantees a more costly outcome for customers. The bring-forward cost of delivering system strength solutions a year or two earlier than optimally modelled would ensure availability in time, is a likely no-regrets approach and should be compared to the cost of interventions and directions to allow sensible customer focused decisions.

Please contact Kelvin Gebert, our Manager Regulatory Frameworks, if we can assist with any queries in relation to this submission.

Yours sincerely,

Tom Hallam
General Manager Regulation and Network Strategy

[1] Jacqui – where from, which year. Can you insert the footnote please