



7 May 2020

Mr John Pierce AO
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Lodged Via AEMC Website: <https://www.aemc.gov.au/market-reviews-advice/investigation-system-strength-frameworks-nem>

Dear Mr Pierce,

INVESTIGATION INTO SYSTEM STRENGTH FRAMEWORKS IN THE NATIONAL ELECTRICITY MARKET (EPR0076): DISCUSSION PAPER

The Clean Energy Investor Group (**CEIG**) represents a substantial group of renewable energy developers and investors, with a major focus on institutional investors. The CEIG welcomes the opportunity to provide comments on the Australian Energy Market Commission's (**AEMC's**) Discussion Paper on its investigation into system strength frameworks in the National Electricity Market (**NEM**).

Initially focussed on Marginal Loss Factors, the CEIG formed to advocate for developers and institutional investors in renewable energy generation projects who continue to face increasing costs, delays and barriers-to-entry caused by increasing risks and uncertainty during construction and operations, as the NEM transitions to lowest-cost renewable energy solutions. When viewed in the context of the requirement for 44GW of new utility-scale renewable energy and storage capacity in the NEM by 2040¹, it is likely that a sizeable portion of the new generation capacity to enable this transition will be developed and funded by the members of the CEIG.

We support the AEMC's investigation into system strength in the NEM. We make the following observations and expect to participate more fulsomely in the formal system strength consultation and rule change processes anticipated over the coming year.

Key Issues of the Minimum System Strength framework

The current process in place where the Australian Energy Market Operator (**AEMO**) declares a fault level shortfall (at times, after the fact) requiring the relevant Transmission Network Service Provider (**TNSP**) to then procure system strength services results in a reactive, lengthy, piecemeal and more-costly rectification process, including market interventions by AEMO. A more proactive, strategic and

¹ AEMO Draft 2020 Integrated System Plan Central Scenario



planned approach to system strength service provision will see cost and time savings, limited interventions by AEMO and ultimately result in lower electricity prices for consumers.

Key Issues of the 'do no harm' framework

The 'do no harm' framework as it is currently interpreted and applied is creating material risks, costs, time delays and significant barriers to connection for new generators. The significant level of stakeholders, scenarios and PSCAD modelling iterations required in a dynamic environment (that is, while other new connections are also being assessed in region) is resulting in significant uncertainty and demonstrable extra costs.

Increased costs and delays occurring as a result of the onerous modelling and connection assessment exercise have caused contagion and huge losses across the construction industry, with a number of contractors failing or leaving the Australian market. This reduction in the number of available contractors will reduce competition, increase project construction prices and ultimately electricity prices for consumers. For newer projects, this connection uncertainty and risk is also being re-allocated to investors in projects which will increase returns required by investors and ultimately, electricity prices for consumers.

Where costly remediation equipment (eg a synchronous condenser) is required to be installed by a single generator, impacts on project feasibility are material, notwithstanding the benefits provided by the equipment to the broader system. Further, where synchronous condensers are not network operated, extra power system operational complexity results. To this end, CEIG supports a transparent, holistic, co-ordinated approach to the procurement and operation of system strength services to deliver a more efficient outcome (noting that there are different approaches to co-ordination). As above, a more proactive, strategic and planned approach to system strength service provision will see cost and time savings and ultimately result in lower electricity prices for consumers.

Definition of System Strength

We agree with the AEMC that the current regulatory definition of system strength approximates a measure of system strength and does not provide a complete definition of the multifaceted electrical elements contributing to system strength. We support the AEMC further investigating with power system experts and industry, a recast definition with appropriate metrics to ensure clarity for market participants. We caution however that any new definition seeks to simplify this element of the connection process rather than making it more onerous.

Evolving System Strength Frameworks

With the above observations in mind, we believe the system strength frameworks need to evolve, with the process reflecting on the inefficiencies and increased costs resulting from the current frameworks. We support the 'Plan, Procure, Price and Pay' approach to considering the merits of an



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effective framework. We look forward to engaging on what we consider to be the appropriate delivery/co-ordination framework later in the process.

Thank you for instigating this important investigation and providing industry an opportunity to participate. The CEIG looks forward to working with the AEMC throughout the following consultation and rule change processes. Please contact me if you would like to discuss any elements of this submission.

Yours sincerely,

A handwritten signature in black ink, which appears to read "Katie Barnett". The signature is fluid and cursive.

Katie Barnett
Clean Energy Investor Group