



System strength investigation — final report

System strength is an essential system service for electricity markets. It is necessary to support a secure and stable power system. The provision of system strength is becoming more important given the rapid connection of large numbers of new, non-synchronous generation, as we transition to a low emissions future.

This *Investigation into the system strength frameworks in the NEM* was initiated by the AEMC in March 2020, to consider how to evolve the system strength frameworks to become more agile and flexible, in order to facilitate the transition already underway.

The final report sets out the Commission's view on how the current framework should be evolved in a way that promotes the long term interests of consumers. This is consistent with the ESB's 2025 market design work considering the provision of essential system services, including system strength.

The evolved system strength framework

The Commission has made a series of recommendations to evolve the existing system strength framework, which will help facilitate the power system transition.

We have recommended a *supply* and *demand* approach to evolving the frameworks to deliver the efficient volumes of system strength needed to support effective connection of new generation, and to deliver lower energy costs for consumers. The evolved framework continues to share the costs of system strength between generators and customers and has three core components:

- **Supply side:** We are recommending a coordinated approach to deliver system strength. TNSPs, working with AEMO, will face an obligation to proactively provide system strength needed to maintain security. This will also facilitate the effective connection and operation of expected volumes of new generation, to help keep prices down for consumers. By drawing on the existing planning frameworks and the established system engineering practice of meeting a defined system standard, this coordinated supply side model is designed to deliver efficient volumes of system strength, while managing costs by utilising the existing NEM economic regulatory frameworks.
- **Demand side:** We are recommending to manage the demand for system strength, by incorporating two new technical standards that would apply to all new generators connecting to the power system, such that they use efficient amounts of system strength. This would help to make the best use of this limited and valuable resource, which in turn helps keep costs low for consumers.
- **Effective coordination between the supply and demand sides:** Finally, we are recommending a mechanism to coordinate the demand and supply side arrangements. This will be achieved through a charge on generators who decide to connect and use the system strength supplied by TNSPs. These generator charges will then be used to reduce the total amount that customers pay through their network charges. This mechanism will share the costs of system strength between customers and generators.

The final report sets out our high-level policy directions in relation to the development of an evolved system strength framework. The Commission will build on these policy directions working in collaboration with the ESB, AEMO, AER and industry, as we progress towards making a draft determination for the *Efficient management of system strength on the power system (ERC0300)* rule change request from TransGrid. We will also continue to work with the ESB as part of the broader post 2025 market design program, to deliver the system services needed to transition the power system.

Public consultation on the final report

The Commission is holding a virtual public forum on Thursday, 22 October 2020 in order to seek stakeholder feedback on the direction set out in the final report. Interested stakeholders can register to attend for this on our website.

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