



# Calculation of system strength quantity

**The Australian Energy Market Commission (Commission) has made a more preferable draft rule to change the way system strength quantity (SSQ) component of the system strength charge is calculated, to promote efficient provision of system strength as the power system transitions.**

The Commission has made a draft rule that changes the way the SSQ component of the system strength charge is calculated. Under the draft rule the SSQ would more accurately reflect the system strength impact of a new connection or alteration at a connection point, and would be equivalent to the 'general system strength impact' that a connection applicant would otherwise need to remediate.

This draft rule was made in response to a proposal submitted by the Australian Energy Market Operator (AEMO).

## Our draft rule promotes efficient investment in system strength

As the electricity sector decarbonises, significant investment in new generation is required. A substantial volume of this generation is forecast to be lower-cost, inverter-connected generation such as batteries, wind and solar. Connection of this generation will necessitate investment in system strength to ensure the secure operation of the power system.

Efficient decisions by connection applicants about whether to invest capital to self-remediate their plant's general system strength impact; or pay the system strength charge for centrally provided system strength services, will lead to lower-cost provision of system strength across the power system and better outcomes for electricity consumers.

Connection applicants need equivalent options to be able to make efficient decisions. Our draft rule makes the two options available under the system strength framework - to remediate or pay the charge - equivalent as they were originally intended. This would enable the efficiencies of the system strength framework to be realised.

## The system strength framework provides two options for connection applicants to address their system strength impact

The system strength framework in the National Electricity Rules (NER or rules) requires a new or altered connection (typically a generator or large load) to mitigate its system strength impact through remediation (for example by installing a synchronous condenser or grid forming battery) or by paying a charge to a system strength service provider (SSSP) typically, the local transmission network service provider (TNSP).

If the applicant chooses self-remediation, a full system strength impact assessment must be undertaken in accordance with AEMO's System strength impact assessment guidelines (SSIAG) to work out the system strength impact of the connection. If a connection applicant chooses to pay the system strength charge, the SSQ is used as the proxy for working out the system strength impact of the connection.

AEMO identified, during its public consultation process to develop the SSIAG, that the SSQ component of the system strength charge overstates the system strength impact of a connecting plant for applicants electing to pay the system strength charge. As a result, the two options - remediation and paying the charge - are not equivalent, which may:

- deter connection applicants from paying the charge in favour of self-remediation
- reduce efficiencies from central procurement of system strength
- result in unnecessary costs being passed onto consumers.

## Our draft rule would require AEMO to determine a methodology to calculate SSQ in consultation with stakeholders

The draft rule addresses the issues raised by AEMO by changing the way SSQ is calculated for connection applicants electing to pay the system strength charge. Specifically, the draft rule:

- removes the SSQ calculation from the Rules and replaces it with a requirement for AEMO to determine a methodology for calculating SSQ
- includes new policy principles in the Rules to guide AEMO's development of the SSQ methodology and provide a level of certainty for stakeholders
- clarifies the process of moving from an indicative to a final SSQ, noting that the final SSQ remains in place unless the connected plant is altered
- includes transitional arrangements so that the new arrangements would be available for connection applicants mid-way through a process and for those who have already elected to pay the charge.

The draft rule, would trigger an update to AEMO's SSIAG in consultation with stakeholders. The updated SSIAG must be published by 30 June 2024 with the new arrangements commencing on **1 July 2024**.

AEMO's intention is to propose for consultation the use of a minimum stability coefficient of 1.2 in the SSQ so it can be broadly comparable to the calculation of the system strength impact used for self-remediation.

## We are seeking feedback on the draft rule with submissions due by 18 January 2024

The draft rule has been made using a fast track rule making process in recognition of the consultation already carried out by AEMO during the development of its SSIAG. The fast track process allows the AEMC to proceed directly to publishing a draft determination and draft rule. We are seeking feedback on this draft rule and encourage stakeholders to lodge a submission by **18 January 2024**.

The Commission notes that the draft rule may significantly affect the value of SSQ and impact the total charge paid by connection applicants that have elected to pay. AEMO and the Australian Energy Regulator (AER) have introduced an interim solution to facilitate the progress of connection applications during the rule change process underpinned by:

- an AEMO guidance paper proposing a revised SSQ calculation,<sup>1</sup> and
- communication from the AER to NSPs that it won't take action for non-compliance if AEMO's proposed methodology is followed. The AER will re-evaluate its stance on compliance once, and if, the AEMC issues the final rule change determination.<sup>2</sup>

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<sup>1</sup> AEMO, *Calculating system strength quantities in the NEM*, May 2023, available [here](#)

<sup>2</sup> AER, *Letter of comfort to system strength service providers*, 5 September 2023, available [here](#)