

Request for system strength services in Queensland to address Fault Level Shortfall at Ross – Update

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REQUEST FOR SYSTEM STRENGTH SERVICES IN QUEENSLAND TO ADDRESS FAULT LEVEL SHORTFALL AT ROSS – DECEMBER 2020 UPDATE

On 9 April 2020, AEMO published a report '[Notice of Queensland System Strength Requirements and Ross Fault Level Shortfall](#)' to the National Electricity Market (NEM) under Clause 5.20C.2(c) of the National Electricity Rules (NER). The report declares an immediate fault level shortfall at the Ross 275kV node, includes other pertinent technical information and advises that system strength services should be in place to meet this shortfall by 31 August 2021. Under the Notice, the system strength shortfall is forecast by AEMO to continue beyond 2024-25.

Powerlink commenced an Expression of Interest (EOI) process for both short and long term solutions to address the Queensland Fault Level Shortfall at Ross in April 2020 and submissions closed on 13 May 2020.

Powerlink received a very strong response to the EOI offering a range of system strength support services to address the fault level shortfall at Ross and have been working closely with AEMO and proponents on the proposed remediation approach.

In June 2020 AEMO approved the approach for the short-term solution under NER clause 5.20C.4(e), up until the end of December 2020. As a result, Powerlink entered into a short-term agreement with CleanCo Queensland to provide system strength services through utilising its assets in Far North Queensland.

In August 2020, and based on the submissions received, AEMO confirmed that the inverter tuning, as modelled, could reduce the overall system strength requirement at Ross. This confirmation was subject to final exchange of modelling and other details, and noted that a night time solution was also required. Consequently Powerlink entered into an agreement with Daydream, Hamilton, Hayman and Whitsunday Solar Farms in North Queensland to validate the expected positive benefits of inverter tuning during the daytime. This work is still ongoing.

Powerlink has also been working with renewable generators and AEMO on changes to the settings of other relevant controllers. Modelling indicates that these changes could significantly reduce the overall system strength requirement at Ross.

While Powerlink is encouraged by the positive modelling results, it is noted that to date the results are based on tests conducted under system normal conditions. More robust analysis to account for extreme system conditions and considerations of uncertainty and variability of generation and load profile is required to confirm that the system strength shortfall can be positively addressed in full as a result of implementing these solutions.

Powerlink is currently conducting its due diligence and stress testing the setting changes under various scenarios in order to confirm with and obtain AEMO's approval that utilising these solutions will address the longer term system strength shortfall requirement.

Powerlink is confident that a solution to the shortfall will be implemented before 31 August 2021 and expects to publish a final report in the first half of 2021. AEMO also noted in their [2020 System Strength Report](#) (refer to page 25) on how early modelling indicates the shortfall is addressed.