WEBINAR Q&A SUMMARY

Queensland System Strength Planning And Regulatory Investment Webinar

4 November 2026

About this summary

This summary responds to questions raised during the webinar. Similar questions have been combined and lightly edited for clarity. The responses reflect the information presented during the webinar and the assumptions available at 4 November 2026.

Important

The Material Change in Circumstances assessment was in draft at the time of the webinar. Final positions may change after consultation and further assessment.

Location of a fifth system strength service

1	**Does Powerlink have an ideal substation location for the fifth system strength service required in 2031?**

Powerlink has not selected a preferred substation location. The service is needed to respond to changes in synchronous generation in Central Queensland, so a location in or near Central Queensland is preferable. However, Powerlink is also considering whether a more distributed solution slightly further south could meet the technical need. Location matters because system strength does not transfer efficiently over long distances.

Powerlink will assess proposals on whether they can provide the required service at the right location, time and cost. Potential non-network solution providers and other interested parties can provide information through the current public consultation on the draft MCC. Parties may also contact Powerlink at networkassessments@powerlink.com.au if they would like to discuss before making a submission.

Future system strength charges

2	**How could these changes affect system strength charges, including after 2030?**

Powerlink's system strength charges allow connecting generators and loads to procure system strength from Powerlink as the system strength service provider for Queensland. The charges are reset every five years.

Powerlink's pricing team is assessing how the cost of the planned synchronous condensers should be reflected in future charges. Powerlink cannot yet provide a forecast or confirm whether charges would change materially after 2030. The outcome will depend on the approved investment costs, the charging methodology and the amount of system strength service contracted as compared to self-remediated.

Technical specifications and equivalent non-network solutions

3	**What are the indicative size and key technical specifications of the planned synchronous condensers, and what size grid-forming battery could provide an equivalent service?**

The planned synchronous condensers are each notionally rated at 160MVA (noting that its short circuit contribution is important for system strength), with reactive power capability at the connection point of between -100MVAr (inductive) and +150MVAr (capacitive), while providing inertia of around 1400MWs.

The reactive power capability range also considers voltage control needs. The level of inertia stated is not required to meet the system strength need, but has been considered for co-optimisation with system strength to assist with the inertia need across Queensland as coal-fired power stations retire.

Electrical losses will vary depending on how the synchronous condenser is operating. Detailed loss calculations are still being finalised through the design process.

Any non-network proposal would need to demonstrate that it can provide the required system strength at the relevant location, by the required date.

See also the response to question 4.

Grid-forming batteries and the assessment process

4	**On reading the MCC and related documents it appeared that Powerlink came to the conclusion that Minimum system strength can currently only be provided by synchronous sources. Can you please elaborate on how this conclusion was reached?** **Who decides whether a grid forming BESS is a better investment than an additional syncon? Who assesses the capability of Grid Forming BESS and whether it can provide services like 'protection quality' fault current? Also, what is the assessment process?**

Powerlink is responsible for planning and procuring the efficient mix of network and non-network system strength solutions for Queensland. The Australian Energy Market Operator identifies future system strength requirements, while the Australian Energy Regulator assesses whether expenditure Powerlink seeks to recover from customers meets the regulatory requirements.

Grid-forming battery energy storage systems (BESS) can be used, and contracted as needed, to meet efficient system strength needs. Their role in meeting minimum system strength requirements is more complex.

Minimum system strength requires sufficient three-phase fault levels to support the correct operation of protection systems, power quality and power system stability. Grid-forming batteries may contribute to these functions, but their capability needs to be assessed against each requirement. We do not yet have sufficient evidence to rely on grid-forming batteries to provide the necessary protection-quality fault current. However, we are progressing investigations into this area.

Given the critical nature of these services, and consistent with AEMO's 2025 Transition Plan for System Security, Powerlink continues to monitor industry developments and investigate how grid-forming batteries may contribute to future minimum system strength requirements.

AEMO is progressing a Type 2 transitional services trial to test whether grid-forming inverters can provide protection-quality fault current of sufficient magnitude, duration and composition for protection systems to operate correctly under a range of system and fault conditions. This work will help build the evidence base for the role grid-forming batteries could play in meeting future minimum system strength requirements. See: AEMO | Grid-Forming Inverter Protection-Quality Fault Current Trial.

Powerlink has retained flexibility in the timing of future investment to give market participants a reasonable opportunity to develop technically viable and sufficiently certain non-network alternatives.

Committed projects and Australian Energy Market Operator data

5	**Is Powerlink using the Australian Energy Market Operator's National Electricity Market Generation Information spreadsheet to determine which projects are committed?**

Yes. Powerlink is using the inputs and assumptions from the Australian Energy Market Operator's 2026 Integrated System Plan, including its treatment of committed generation projects. Powerlink is also using the Australian Energy Market Operator's Inputs, Assumptions and Scenarios Report for relevant future project costs. This provides a transparent and publicly available basis for the assessment and reflects the requirement to use the latest Australian Energy Market Operator information where appropriate.

Cost treatment for a non-network gas turbine

6	**Who would provide and fund a non-network gas turbine service, and has the procurement cost been included in Portfolios 1 and 2?**

A non-network system strength service would be provided by the relevant asset owner under an agreement with Powerlink. Powerlink would pay the provider for the incremental or other agreed costs of making that service available. This cost is then assessed by the AER annually through the network support pass-through mechanism and would ultimately be borne by customers through transmission use of service charges.

The portfolios assessed in the draft Material Change in Circumstances assessment do not currently model a contracted non-network service for the fifth requirement. Portfolio 1 includes the full cost of constructing a clutched gas-fired generator, because there is no committed connection project that can be assumed, as per rules requirements. Portfolio 2 includes construction of a synchronous condenser.

If a credible non-network solution becomes available, Powerlink would assess it against the identified system strength need and compare its economic costs and market benefits with other credible options. The preferred option would be the solution that meets the need and delivers the greatest net economic benefit under the RIT-T framework.

Potential change to Gladstone Power Station's closure timing

7	**Is Gladstone Power Station guaranteed to close in 2029, and what would happen if it remained open?**

The announced position is that Gladstone Power Station could close March 2029, but the closure is not guaranteed. The owner may decide to operate the power station beyond that date and would advise the market if its intentions change. Powerlink must ensure the power system is ready for the earliest advised closure date.

Consequences of not meeting system strength obligations

8	**What are the regulatory and operational consequences if Powerlink does not meet its system strength obligations?**

If sufficient system strength is not available, the Australian Energy Market Operator may first issue directions to available participants and/or curtail output of inverter-based generation. If there is no effective service to direct, or inverter-based generation curtailments are not sufficient to address the system strength issues, there is a risk that AEMO will take last resort operational actions such as de-energising critical power system assets or shedding customer load to maintain power system security. The circumstances would also be subject to investigation and public reporting.

The more immediate concern is the impact on Queensland customers and the power system. Insufficient system strength constrain lower-cost generation, increase wholesale electricity costs and, in the most serious circumstances, interrupt electricity supply.

Learn more: AEMO | A2 Network Requirements Appendix to the Transition Plan for System Security

Further information

For further information, refer to the webinar presentation and the draft Material Change in Circumstances assessment, or contact Powerlink Queensland through the consultation channels provided on our website.