19 OCTOBER 2026

Addressing System Strength Requirements in Queensland from December 2025

Regulatory Investment Test for Transmission

MATERIAL CHANGE IN CIRCUMSTANCES – DRAFT ASSESSMENT



Preface

Powerlink Queensland is a Transmission Network Service Provider (TNSP) that owns, develops, operates and maintains Queensland's high-voltage electricity transmission network. The network transfers bulk power from Queensland generators to electricity distributors Energex and Ergon Energy (part of the Energy Queensland Group), and to a range of directly connected large industrial customers.

Once six months have passed since completion of the analysis for the Regulatory Investment Test for Transmission (RIT-T), Powerlink is required under the National Electricity Rules (NER) to monitor developments that could be material to the outcome and consider whether a material change in circumstances has occurred.

This draft Material Change in Circumstances Assessment (Draft MCC Assessment) has been prepared in accordance with version 254 of the NER and the Australia Energy Regulator's (AER) determination, published 9 September 2026, regarding Powerlink's Notification of a MCC for Powerlink's RIT-T to address system strength requirements in Queensland from December 2025, which was completed in June 2025.

This document presents Powerlink's Draft MCC Assessment and draft statement, including the supporting analysis and justification for whether the preferred option identified in the Project Assessment Conclusions Report (PACR) for the RIT-T remains the preferred option, or if any refinement to its composition is required. This Draft MCC Assessment maintains the principles of the RIT-T and applies the same approach used in the PACR to quantify the identified need. It also incorporates updated planning inputs, costs and timings from recent publications, including the Queensland Energy Roadmap 2025 and the Australian Energy Market Operator's (AEMO's) 2026 Integrated System Plan (ISP), as well as updated project cost information from procurement activities undertaken by Powerlink during 2026.

More information on RIT-T process is available on Powerlink's website.

Disclaimer

While care was taken in preparation of the information in this document, and it is provided in good faith, Powerlink accepts no responsibility or liability (including without limitation, liability to any person by reason of negligence or negligent misstatement) for any loss or damage that may be incurred by any person acting in reliance on this information or assumptions drawn from it, except to the extent that liability under any applicable Queensland or Commonwealth of Australia statute cannot be excluded. Powerlink makes no representation or warranty as to the accuracy, reliability, completeness or suitability for particular purposes, of the information in this document.

Powerlink acknowledges the Traditional Owners and their custodianship of the lands and waters of Queensland and in particular, the lands on which we operate. We pay our respect to their Ancestors, Elders and knowledge holders and recognise their deep history and ongoing connection to Country.

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Executive Summary

Powerlink Queensland (Powerlink) is required under clause 5.16.4 of the National Electricity Rules (NER) to monitor, on an ongoing basis, developments that could be material to the outcome of the Regulatory Investment Test for Transmission (RIT-T) and consider whether a material change in circumstances (MCC) has occurred.

An MCC in a RIT-T includes, but is not limited to:

- a change to the key assumptions used to determine the identified need described in the Project Assessment Conclusions Report (PACR);
- the meeting of any reopening trigger identified in the PACR; or
- a change in circumstances which, in the reasonable opinion of the RIT-T proponent, means that the preferred option identified in the PACR may no longer be the preferred option.

This Draft MCC Assessment has been prepared for the RIT-T conducted by Powerlink between March 2023 and June 2025 to address system strength requirements in Queensland from December 2025 (System Strength RIT-T).

MCC process

In August 2026 Powerlink notified the Australian Energy Regulator (AER) of the MCC for the System Strength RIT-T and changes to key inputs in the PACR analysis. On 9 September 2026 the AER determination approved Powerlink's proposal to undertake analysis on the identified MCC, publish a draft statement and allow 30 business days for public consultation. Following this consultation, Powerlink will prepare and publish a final statement which responds to submissions and identifies any refinement to the preferred option. These actions are to be completed by 9 December 2026.

Nature of material changes identified

Powerlink included eight reopening triggers in the PACR for the System Strength RIT-T. Reopening Trigger 8 referred to credible evidence that change in the retirement dates and/or operational arrangements of coal generating units changes the identified need for system strength requirements, and/or the preferred option in the System Strength RIT-T. Powerlink has assessed that three key events since publication of the PACR have activated this trigger:

- The release of the Queensland Energy Roadmap in October 2025 changed the retirement schedule of coal-fired power stations in Queensland, thereby changing the system strength needs.
- CS Energy publicly announced in September 2025 that it had formally advised the Australian Energy Market Operator (AEMO) of the potential closure of Gladstone Power Station in March 2029, bringing forward the previously advised 2035 closure date (see AEMO Generation Information).
- AEMO's most recent Inputs, Assumptions and Scenarios Report (IASR) and 2026 Integrated System Plan (ISP) which included the most recently announced generator retirement dates across the National Electricity Market (NEM), including significant changes to those used in the PACR analysis.

AER requirements for MCC assessment

In its determination on Powerlink's MCC notification, the AER required Powerlink to undertake an assessment that maintains the principles of the RIT-T framework and applies the same approach to quantifying the need as in the PACR. The assessment must also incorporate updated planning inputs, costs and timings from recent publications such as the Queensland Energy Roadmap and the 2026 ISP, as well as updated information from procurement activities. The AER also expects the MCC assessment to be comparable in depth to a RIT-T analysis,

including consideration of how the MCC affects the identified need, the contribution of coal generating units to meeting that need, and any resulting changes to the preferred option.

Portfolio 2 (Synchronous Condensers) remains the top-ranked option

The analysis undertaken for this Draft MCC Assessment confirms that Portfolio 2 (Synchronous Condensers) remains the top-ranked option, the make-up of which has been refined to reduce the number of synchronous condensers required from nine to five in the 10-year planning horizon. This now consisting of:

- two synchronous condensers in Central Queensland by March 2029;
- two synchronous condensers in Central Queensland by August 2029; and
- one synchronous condenser in Central Queensland by January 2031.

At the time of this Draft MCC Assessment, Powerlink has not committed to installing a fifth synchronous condenser. This preserves the opportunity for committed or anticipated non-network solutions to emerge that could deliver the required service with certainty by January 2031, and would be assessed through a future MCC process or RIT-T.

The refined timing for the remaining four synchronous condensers required in Central Queensland has been assessed as two synchronous condensers by June 2045 and a further two synchronous condensers by June 2047, well beyond the current planning horizon. Powerlink will continue to assess the need for system strength services through the appropriate regulatory consultation pathway closer to the relevant investment need timing.

Portfolio 2 delivers a net economic benefit of $3.380 billion, compared with $3.176 billion for Portfolio 3 (Clutched Gas Turbines), which is ranked second. This means Portfolio 2 provides approximately $204 million greater net economic benefit than the next best option.

Submission requirements and next steps

Powerlink invites submissions and comments from market participants, AEMO, potential non-network providers, and any other interested parties on this Draft MCC Assessment and the draft preferred option, by Monday, **30 November 2026.**

Powerlink will also hold a webinar on Wednesday, 4 November 2026 to discuss the draft findings published in this report. Registrations are available on Powerlink's website.

Submissions should be presented in a written form and should clearly identify the author of the submission, including contact details for subsequent follow-up if required. If parties prefer, they may request to meet with Powerlink ahead of providing a written response.

Powerlink will respond to all relevant issues raised in submissions and encourages parties making a submission to focus on the adequacy and transparency of Powerlink's response to the AER's requirements for this MCC assessment, as outlined above.

Proponents of non-network solutions who have previously engaged with Powerlink on their solution(s) may, but are not required to, resubmit their proposal. Proponents of non-network solutions who consider that they are now anticipated or committed should provide evidence as part of their submission.

Powerlink will publish submissions on the Draft MCC Assessment, subject to any claim of confidentiality by the person making the submission. Where confidentiality over part or all of a submission is made, this should be

clearly identified. Powerlink may also explore whether a redacted or non-confidential version of the submission can be made available.

Submissions should be emailed to Powerlink via networkassessments@powerlink.com.au, with 'System Strength RIT-T MCC Submission' in the subject field of the email.

Alternatively, submissions can be mailed to Powerlink, addressed to:

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1 Purpose

Powerlink Queensland (Powerlink) is required under clause 5.16.4 of the National Electricity Rules (NER) to monitor, on an ongoing basis, developments that could be material to the outcome of a Regulatory Investment for Transmission (RIT-T) and consider whether a material change in circumstances (MCC) has occurred.

An MCC in a RIT-T includes but is not limited to:

- a change to the key assumptions used to determine the identified need described in the Project Assessment Conclusions Report (PACR);
- the meeting of any reopening trigger identified in the PACR; or
- a change in circumstances which, in the reasonable opinion of the RIT-T proponent, means that the preferred option identified in the PACR may no longer be the preferred option.

This document has been prepared following Powerlink's identification of an MCC in relation to our Addressing System Strength Requirements in Queensland from December 2025 RIT-T (System Strength RIT-T).

The purpose of this document is to:

- undertake the actions approved by the Australian Energy Regulator (AER) as set out in its determination for Powerlink's Notification of a Material Change in Circumstances for the System Strength RIT-T;
- present Powerlink's draft analysis and findings in relation to how the identified need under the System Strength RIT-T has changed as a result of the MCC, and to present an updated options assessment to identify whether the earlier preferred option in the PACR remains the preferred option;
- seek submissions from registered participants, the Australian Energy Market Operator (AEMO) and interested parties on the preferred option presented and the matters addressed in this draft assessment.

This Draft MCC Assessment also includes a draft statement on the impact of Powerlink's analysis and findings on the make-up and timing of the investments under the preferred option identified in PACR for the System Strength RIT-T.

2 Background

2.1 Understanding system strength

System strength is a measure of the ability of the power system to maintain a stable and reliable voltage waveform, both during steady state operation and in response to a network disturbance, such as a fault or sudden change in generation or load.

There are two distinct forms of system strength which support different system functions and are currently provided by different sources:

- minimum system strength – sufficient three phase fault levels to maintain correct protection operation, power quality and stability of the power system.
- efficient system strength – required to support a stable voltage waveform to support forecasted inverter-based resources (IBR).

The Queensland power system has historically comprised synchronous generation such as coal-fired power stations, gas turbines and hydro-electric plants. These large generators provide system strength (and other

system security services) as an inherent characteristic of their energy dispatch, supporting stable and reliable power system operation.

2.2 System Strength Rule Change

In October 2021, the Australian Energy Market Commission (AEMC) made the Efficient Management of System Strength on the Power System Rule (System Strength Rule) with a number of sequenced obligations as part of an evolved framework for the supply, coordination and demand side of the power system. Under the System Strength Rule:

- Powerlink is the System Strength Service Provider in Queensland and is required to use reasonable endeavours to make system strength services available to AEMO.
- AEMO has responsibility for forecasting power system security services. AEMO's annual Transition Plan for System Security considers the need for power system security and reliability services in Queensland and other regions of the NEM.

Under the RIT-T framework, this Rule Change created an obligation on Powerlink that is described in the NER as a reliability corrective action. This means that Powerlink is required to invest in the provision of system strength services even if there is a negative net economic benefit.

2.3 System Strength RIT-T

The System Strength RIT-T was a step in Powerlink meeting its obligations under the System Strength Rule. Powerlink published the PACR for the System Strength RIT-T on 30 June 2025. Due to the rate of change in the external operating environment, the RIT-T analysis focussed on identifying solutions available within a short to medium planning horizon to determine more immediate system strength requirements through to 2034.

The preferred option identified in the PACR reflected a portfolio of solutions and was considered by Powerlink to be the only credible option available at that time. The preferred option involved:

- nine synchronous condensers across Central and Southern Queensland by June 2034 with an estimated cost of $135 million each, consisting of:
    - tranche 1 – up to three synchronous condensers in Central Queensland by March 2029, two of which were to address the anticipated closure of the Gladstone Power Station.
    - tranche 2 – up to three in Central Queensland and one in Southern Queensland by June 2030.
    - tranche 3 – one in Central Queensland by June 2033 and
    - tranche 4 – one in Central Queensland by June 2034.
- contracting with a range of synchronous units in Southern and Northern Queensland for minimum system strength requirements; and
- contracting for 500 megawatts (MW) grid-forming Battery Energy Storage Systems (BESS) in Southern Queensland, and 1,600MW of grid-forming BESS in Central/Northern Queensland for efficient system strength requirements.

The PACR also stated Powerlink:

- had commenced investing in or contracting with providers for up to three synchronous condensers needed in Central Queensland by March 2029;
- would also invest in or contract with up to three further synchronous condensers needed in Central Queensland by June 2030; and

- did not consider investing in a synchronous condenser in Southern Queensland to be a low regret solution and did not propose to commit to this solution at the time.

2.4 Actions Powerlink has taken following the completion of the PACR

Following the completion of the PACR, Powerlink has commenced delivery of network and non-network solutions within the preferred portfolio option. Specifically, the following activities have been undertaken:

- Powerlink has awarded a contract to a provider for the first four synchronous condensers. In April 2026 Powerlink publicly announced an agreement with Hitachi Energy to supply and install four synchronous condensers to meet system strength requirements in Central Queensland by 2029[1].
- Powerlink has contracted with Pacific Hydro for system security services from its synchronous condenser at Haughton Solar Farm. These services have been made available to AEMO to help meet Northern Queensland's minimum system strength requirements.

Non-network proposals for system strength needs beyond 2029 continue to be evaluated, including technical and commercial assessments to determine whether an asset is fit for purpose, can meet the required level of system strength within the need timing and is a cost-effective solution.

2.5 AER requirements for MCC assessment

On 19 August 2026, Powerlink notified the AER that Reopening Trigger 8 had been met, following credible evidence that changes to the retirement dates and/or operating arrangements for coal generating units changes the identified system strength need, and/or the preferred option in the System Strength RIT-T. Powerlink also advised that changes to key assumptions underpinning the PACR analysis may, subject to further assessment, constitute a MCC.

The notification outlined Powerlink's proposed approach and timeframe for assessing and consulting on the potential MCC. In September 2026, the AER approved an approach requiring Powerlink to:

- undertake an MCC assessment consistent with the principles of the RIT-T, with analysis comparable in depth to a RIT-T and consideration of the impact of the MCC on the identified need, the contribution of coal generating units to meeting that need, and any consequential changes to the preferred option;
- apply the PACR methodology for quantifying the identified need, updated planning inputs, costs and timings assumptions including information from the Queensland Energy Roadmap 2026 ISP, and Powerlink's 2026 procurement activities;
- publish this analysis and a draft MCC statement by 19 October 2026, followed by consultation for at least 30 business days;
- publish the final analysis and MCC statement by 9 December 2026, setting out with supporting analysis and justification, whether the PACR preferred option remains preferred or whether changes to its composition or timing are warranted.

2.6 Non-network options

As outlined in the PACR for the System Strength RIT-T, Powerlink received around 50 (confidential) proposals in response to the Project Assessment Draft Report (PADR), of which around three-quarters were for BESS and the remainder for synchronous solutions. As outlined below, minimum system strength can currently only be provided by synchronous sources.

[1] Refer to Powerlink's website.

The status of non-network solutions, including whether they are committed, anticipated or modelled, is a key input to the RIT-T assessment. Since completing the RIT-T, Powerlink has continued to engage with potential proponents of minimum system strength services. The RIT-T defines a committed project as meeting all, and an anticipated project as being in the process of meeting at least three, of the following criteria:

- *Land* – the proponent has purchased/settled/acquired land (or commenced legal proceedings to acquire land) for the purposes of construction;
- *Contracts* – contracts for supply and construction of the major components of the necessary plant and equipment (such as generators, turbines, boilers, transmission towers, conductors, terminal station equipment) have been finalised and executed, including any provisions for cancellation payments;
- *Planning* – the proponent has obtained all required planning consents, construction approvals and licenses, including completion and acceptance of any necessary environmental impact statement;
- *Finance* – the necessary financing arrangements, including any debt plans, have been finalised and contracts executed; and
- *Construction* – construction has either commenced or a firm commencement date has been set.[2]

As of 12 October 2026, no non-network solutions have reached a level of commitment that would alter the preferred option identified in this Draft MCC Assessment.

3 RIT-T principles

Powerlink's MCC notification indicated that the assessment would maintain the principles of the RIT-T and provide transparency to customers, stakeholders and the NEM. This Draft MCC Assessment focusses on Queensland's system strength requirements over the 2025–2034 decision-relevant planning horizon, during which near-term investment decision must be made and planning inputs are sufficiently certain. To ensure these decisions are informed by the longer-term needs of the power system, Powerlink has assessed the portfolio options over an economic analysis period to 2050. This enables Powerlink to identify the portfolio that meets system strength requirements at the lowest overall cost over the longer term while determining the investments required within the near-term planning horizon.

The Draft MCC Assessment updates the technical and economic analysis undertaken for the System Strength RIT-T to reflect the latest available assumptions and information. It provides a transparent comparison of the updated identified need and options assessment with the analysis presented in the PACR. Powerlink considers this approach consistent with the principles applicable to RIT-T projects that are not actionable ISP projects under clause 5.15A.2 of the NER.

4 Description of material change in circumstances

4.1 Powerlink has assessed Reopening Trigger 8

Reopening Trigger 8 in the PACR identified credible evidence of changes to the retirement dates or operational arrangements of coal generating units changing the identified need for system strength and/or the preferred option under the System Strength RIT-T.

Powerlink has assessed that three key developments since publication of the PACR have activated this trigger:

[2] AER, *Regulatory Investment Test for Transmission*, November 2024, page 10 (glossary).

- the release of the Queensland Energy Roadmap in October 2025, which changed the retirement schedule of power stations in Queensland, thereby changing the system strength needs;
- CS Energy advising AEMO of the potential closure of Gladstone Power Station in March 2029 (previously 2035) in September 2025 (see AEMO Generation Information); and
- AEMO's most recent Inputs, Assumptions and Scenarios Report (IASR) and 2026 Integrated System Plan (ISP) in June 2026.

The Queensland Energy Roadmap confirmed that the closure of Callide B Power Station would be deferred from 2028 to 2031, while CS Energy subsequently advised AEMO of the potential closure of Gladstone Power Station in March 2029. Together with the updated coal retirement assumptions reflected in AEMO's 2026 ISP, these developments provide credible evidence of changes to coal generator retirement dates that may affect the identified system strength need and the timing and composition of the preferred option. Powerlink therefore considers that the reopening mechanism for Reopening Trigger 8 has been activated.

Table 1 compares the coal generator closure dates announced to AEMO by the asset owners or operators in July 2026 with the assumptions applied in the RIT-T analysis that informed the timing and composition of the PACR preferred option.

Table 1 Comparison of assumed coal generator retirement dates relevant to the preferred option between the PACR and MCC

Generator	Region	PACR retirement assumption (1)	Announced Closure Dates (2)	Change from PACR	Relevance to preferred option
Gladstone Power Station	Central Queensland	1 unit – 2027/28 3 units – 2029/30 5 units – 2030/31 6 units – 2031/32	All units – Mar 2029	Earlier retirement	Drives the urgent near-term need for synchronous condensers in Central Queensland by 2029.
Callide B	Central Queensland	All units – 2027/28	All units - 2031	Later retirement	The aggregate number of retired Central Queensland units is unchanged; therefore, the need for Tranches 1 and 2 remains unchanged.
Stanwell	Central Queensland	1 unit – 2027/28 2 units – 2028/29 4 units – 2032/33	1 unit – 2043 2 units – 2044 3 units – 2045 4 units – 2046	Later retirement	Affects longer-term system strength assumptions and supports reassessment of the timing, location and quantity of later synchronous condenser tranches as part of this MCC.
Callide C	Central Queensland	All units – 2033/34	All units – 2200	Later retirement	Affects longer-term system strength assumptions and supports reassessment of the timing, location and quantity of later system strength service tranches as part of this MCC.

Generator	Region	PACR retirement assumption (1)	Announced Closure Dates (2)	Change from PACR	Relevance to preferred option
Tarong Power Station	Southern Queensland	2 units – 2030/31 3 units – 2032/33 4 units – 2033/34	2 units - 2036 4 units - 2037	Later retirement	Affects longer-term system strength assumptions and supports reassessment of the timing, location and quantity of later system strength service tranches for Southern Queensland as part of this MCC.

(1) Coal generator retirement dates were consistent across all options as stated in the 2024 ISP and IASR.
(2) Generating Unit Expected Closure Year – July 2026 – AEMO (AEMO | Generation information)

The announced closure of Gladstone Power Station has a significant impact on the availability of system strength in the Central Queensland region. The investment need for the associated synchronous condensers for system strength in Central Queensland was captured in the System Strength RIT-T and is currently being progressed by Powerlink.

The extension of the Callide B Power Station's closure from 2028 to 2031 is expected to increase the availability of system strength in Central Queensland relative to the assumptions used in the RIT-T PACR. However, this change only partially offsets the earlier retirement of all Gladstone Power Station units.

Figure 1 and Figure 3 provide the outcomes of AEMO's 2026 ISP Step Change coal unit availability, which were used in the modelling for the MCC. They show the expected number of available coal units from the ISP Step Change scenario's total Queensland coal capacity split into Central and Southern Queensland using the order of announced coal retirement dates. The 2026 ISP explains that the ISP Optimal Development Pathway may model coal plants retired earlier than announced closure years based on various inputs including assumed future fuel and operating costs, emission policy constraints and greater competition from other generation in the wholesale market. As a result, the modelled coal capacity has a progressive reduction in Central Queensland. Powerlink's assessment has accounted for the resultant reduction in system strength that follows. Figure 1 compares the number of coal units expected to remain in service in Central Queensland under the 2024 and 2026 ISP Step Change scenarios.

Figure 1 Coal capacity comparison between 2024 ISP (RIT-T) and 2026 ISP (MCC) CQ

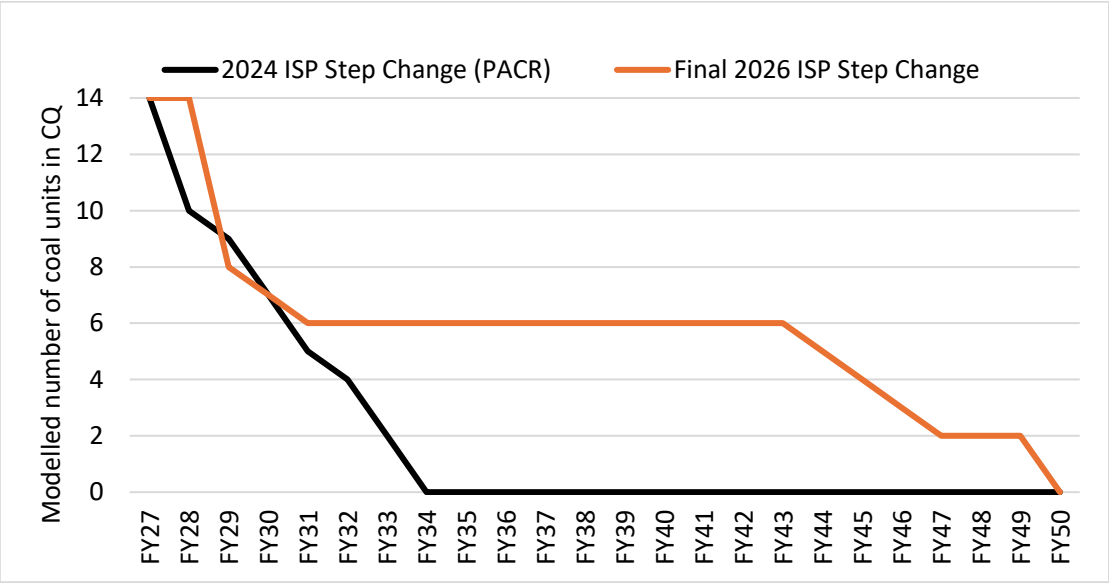
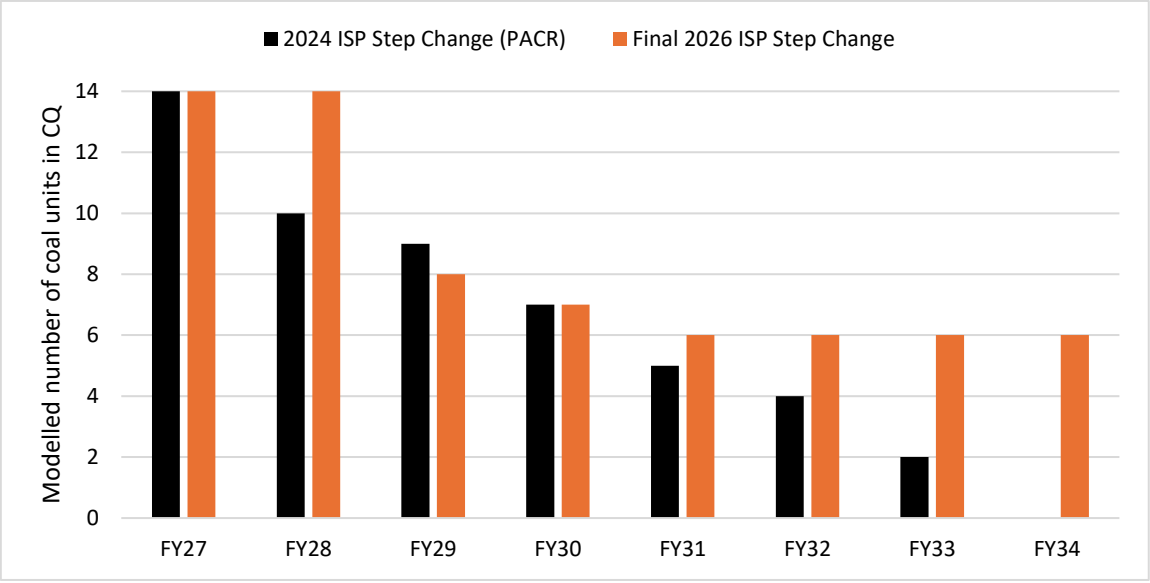


Figure 1 shows that by the end of Financial Year 2034, the 2024 ISP Step Change was projecting there would be no coal generation remaining in Central Queensland, while the 2026 ISP Step Change scenario shows six units remaining.

Figure 2 shows a subset of this data, focusing on the period between FY27 and FY34 which is the investment horizon for this Draft MCC Assessment.

Figure 2 Coal capacity comparison in CQ between 2024 ISP (RIT-T) and 2026 ISP (MCC)



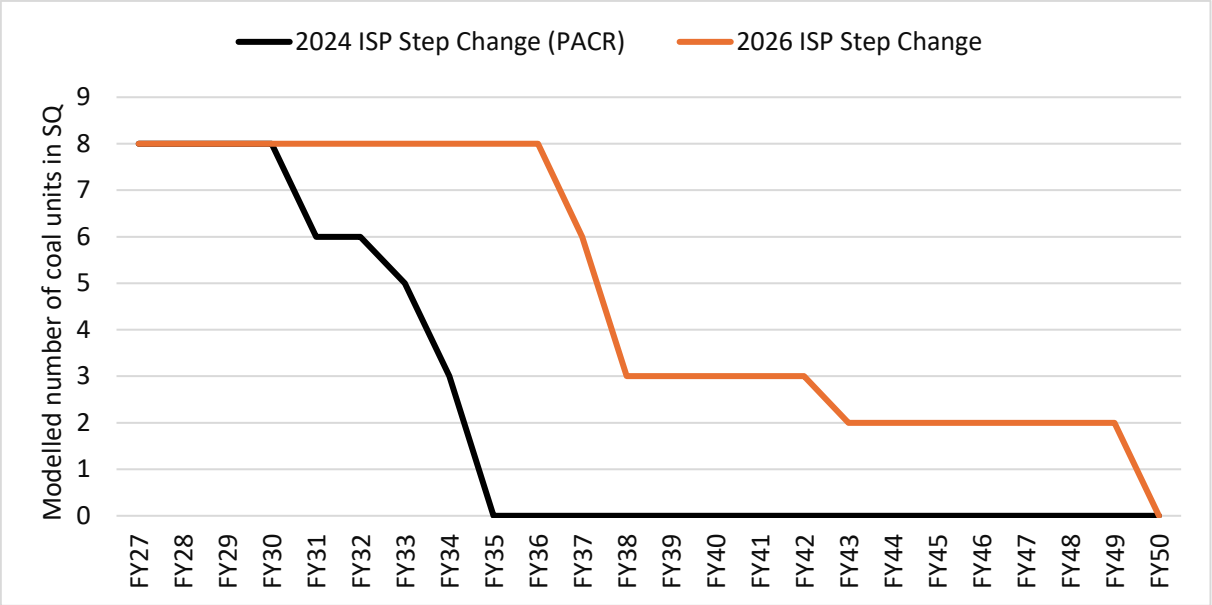
As outlined in

Figure 2, seven in-service coal units are projected in both Step Change scenarios by 2030. This indicates that aggregate synchronous generation availability in Central Queensland remains broadly consistent with the near-term system strength requirements identified in the PACR between 2029 and 2031.

Figure 3 provides an equivalent comparison for Southern Queensland between the generator availability assumptions used in the PACR and the updated assumptions reflected in AEMO's 2026 ISP, including the progressive reduction in available Southern Queensland units between 2036/37 and 2037/38.

It indicates that the cumulative number of coal units available in Southern Queensland now remains constant at eight units under the 2026 ISP until FY34, deferring the need for a Southern Queensland synchronous condenser until 2037/38, beyond the 10-year planning horizon of the System Strength RIT-T.

Figure 3 Coal capacity comparison in Southern Queensland between 2024 ISP (RIT-T) and 2026 ISP (MCC)



Powerlink considers the changes to coal generator retirement dates in Queensland constitute an MCC that may affect the location, quantity, timing and scale of investment required under the RIT-T preferred option, particularly for the remaining synchronous condensers beyond those required to address the immediate system strength need in Central Queensland.

4.2 The Queensland Energy Roadmap

The Queensland Energy Roadmap, released on 10 October 2025, confirmed the closure date of the Callide B Power Station would be deferred from 2028 to 2031. While this is expected to increase the availability of system strength in Central Queensland relative to the assumptions used in the PACR, there may still be periods before 2031 when generating units across the fleet are not available and not contributing system strength.

The potential closure of Gladstone Power Station in March 2029 also has a significant impact on the availability of system strength in Central Queensland. Powerlink has been progressing the Gladstone Priority Transmission Investment project under the *Energy (Infrastructure Facilitation) Act 2024* to maintain system security and reliability to the region, with the associated synchronous condensers captured through the System Strength RIT-T.

AEMO's 2026 ISP also reflects the updated coal retirement assumptions, including the later retirement of Tarong Power Station, and the retirement of Callide B in 2031.

Having regard to these developments, Powerlink considers that the near-term requirement for synchronous condensers in Central Queensland remains critical and has not materially changed, given the need for these services by 2029/30. Powerlink has continued to engage with proponents of potential non-network solutions, however, other than the non-network solutions already included in the preferred option, no committed or anticipated non-network solutions available in Central Queensland that would offset the need for the required synchronous condensers.

4.3 Powerlink has identified other changes in key assumptions

Powerlink has also assessed changes to other key assumptions underpinning the PACR analysis that may affect the identified need and/or the timing and composition of the preferred option.

4.3.1 Release of the 2026 Integrated System Plan

Powerlink's System Strength RIT-T analysis applied the coal generation retirement assumptions from AEMO's 2024 ISP for Southern and Central Queensland, which assumed all Queensland coal generation would retire by 2035. AEMO's 2026 ISP Step Change scenario reflects revised retirement timings for the Tarong, Gladstone and Callide B power stations. Powerlink's assessment of these changes indicates that the updated retirement assumptions alter the timing of the system strength need in Southern Queensland relative to the PACR analysis (refer to Section 4.3.1.1).

4.3.1.1 Change in Southern Queensland portfolio need

As highlighted in Figure 3, AEMO's 2026 ISP Step Change scenario assumes a later retirement of Tarong Power Station than the assumptions applied in the PACR. As Tarong units are material contributors to local fault levels, their later retirement extends the availability of minimum system strength in Southern Queensland.

The revised timing therefore defers the need for additional to commit to additional minimum system strength solutions in Southern Queensland beyond the near-term planning horizon. It does not remove the underlying need for replacement system strength service, but changes when those services are expected to be required. Powerlink will continue to monitor the retirement timing, operation availability and dispatch of Tarong and other synchronous units, as changes to these factors may bring forward the need for alternative solutions.

Accordingly, Powerlink's portfolio approach preserves flexibility to consider synchronous and other technically suitable non-network solutions as the need emerges, while avoiding premature investment where existing synchronous generation is expected to continue providing minimum system strength. This enables near-term investment to remain focused on areas where system strength need is more immediate, while retaining flexibility to respond to changing conditions in Southern Queensland.

4.3.2 Updated costing and technical specification as a result of procurement activities

4.3.2.1 Increase in cost of synchronous condensers

Since publication of the PACR on 30 June 2025, Powerlink has progressed procurement activities for the near-term synchronous condenser requirements. In April 2026, Powerlink announced an agreement with Hitachi Energy to supply and install four synchronous condensers in Central Queensland by 2029, reflecting the need to have system strength services available in response to the potential retirement of Gladstone Power Station. Powerlink also commenced procurement for the associated balance of plant works.

Procurement activities have provided updated project-specific cost information, indicating costs of approximately $185 million per synchronous condenser, compared with $135 million per unit cost assumption applied in the PACR. While this increase remains below the 75% reopening threshold identified in the PACR, its magnitude is material to the cost-benefit analysis and has therefore been incorporated into this Draft MCC Assessment.

Powerlink's updated assessment confirms that the increase in synchronous condenser costs does not change the selection of Portfolio 2 (Synchronous Condensers) as the preferred option.

5 Modelling approach and assumptions

5.1.1 Base Case

Powerlink has undertaken its economic assessment by defining a base case where no intervention is undertaken. That is, the forecast synchronous units are retired, and there is no investment in new sources of system strength.

Key Points

- The approach to specifying the base case has not changed from the original RIT-T.
- Consistent with the RIT-T requirements, the assessment undertaken in the Draft MCC Assessment compares the costs and benefits of each portfolio to a 'do nothing' base case. The base case is the (hypothetical) projected case if no action is taken.
- For this Draft MCC Assessment, the assumed absence of a credible option would result in significant levels of involuntary load shedding to end-use customers during periods of insufficient system strength.
- While involuntary load shedding is not a situation Powerlink plans to encounter, and the NER obligations and this Draft MCC Assessment have been initiated specifically to avoid them, the assessment is required under the RIT-T to consider this base case as a common point of reference when estimating the net benefits of each portfolio.
- The estimated cost of addressing the identified system strength need is substantially lower than the estimate of unserved energy. Powerlink has therefore capped the inclusion of involuntary load shedding costs at 2031. This avoids overstating longer-term avoided unserved energy benefits that would not materially affect the ranking of credible options, while still recognising the near-term reliability and system security risks that the portfolio options are intended to address.[3]

The base case for this Draft MCC Assessment has been developed in line with the RIT-T framework and established planning principles for Queensland's power system. In this state of the world, no credible option is implemented to address system strength gaps, and BAU activities continue. The base case assumes compliance with key regulatory obligations and follows the stipulation that prevents Powerlink from planning for constraints or AEMO directions in operational timeframes.

In the absence of credible or operational solutions, the estimation of involuntary load shedding considers the following assumptions:

- the network is intact, meaning no significant network failures or planned outages were applied;
- to ensure power system security and safety (requiring fast and reliable fault clearance by protection systems); and

[3] The capped avoided involuntary load shedding under the base case from insufficient system strength is estimated to be at least $4 billion for each portfolio (and the capping approach is outlined in section 5.1.5).

- minimum synchronous fault levels were calculated for each forecast dispatch interval for the most onerous credible contingency for each system strength node and compared with their respective minimum post-contingent fault level threshold.

Market modelling inputs and assumptions such as generator retirement schedules, as well as associated forced and planned outage rates, are of material importance to the prevalence of minimum fault level violations and, consequently, the estimated involuntary load shedding. As such, AEMO's generator retirement schedules were incorporated from the retirement outcomes of the AEMO's 2026 ISP Step Change Scenario, while forced and planned outage rates were based on the 2026 IASR generator reliability and maintenance settings.

Minimum post-contingent fault level thresholds were set by the AEMO's 2025 Transition Plan for System Security report.

The value for involuntary load shedding has been updated since the PACR. It is valued at the AER's Value of Customer Reliability (VCR) and has been updated based on the value published in AEMO's 2026 IASR. A value of $26,165 was used for Queensland per megawatt hour (MWh) in 2025 dollars for native demand.

AEMO has a suite of operational tools to mitigate involuntary load shedding due to insufficient system strength, such as:

- reversing planned outages;
- constraining IBR plant;
- constraining non-scheduled generators;
- rooftop PV emergency backstop controls; and
- directing non-dispatched synchronous generators.

Given that these tools are not considered in the base case approach, the base case outcomes present a conservative estimate of potential involuntary load shedding brought about the inability to meet system strength requirements. This base case forms the foundation for assessing the need for additional system strength solutions and serves as a reference point to measure the potential benefits of various credible options in addressing system strength deficiencies.

Section 5.1.5 outlines how the benefit from avoiding involuntary load shedding under the base case from there being insufficient system strength has been estimated in this report. Importantly, the avoided involuntary load shedding from insufficient system strength does not affect the ranking of credible options assessed in this Draft MCC Assessment.

5.1.2 Coal unit retirement dates

AEMO's Final 2026 ISP Step Change scenario generator retirement schedule was adopted by Powerlink as an input assumption to the modelling. Powerlink utilised the 2024 ISP Step Change scenario in the System Strength RIT-T, and so there is no change to the approach Powerlink has undertaken, but we have used the latest data. The number of generator units remaining can be seen in Figures 1 to 3.

5.1.3 Cost assumptions from the 2025-26 IASR

The cost assumptions applied in this Draft MCC Assessment have been updated since the PACR, and are derived from AEMO's 2025-26 IASR and supporting input workbooks, providing an independently developed and internally consistent cost basis required for market modelling and portfolio comparison. These assumptions are used to estimate the costs of generic future technologies included in the portfolio options, particularly where Powerlink has not yet selected a specific proponent, project, site or commercial arrangement. The assumptions are:

- capital cost assumptions for generic generation and storage technologies, including grid-forming BESS, open-cycle gas turbines, pumped hydro energy storage (PHES) and other technologies have been taken from AEMO's IASR;
- fixed and variable operating and maintenance cost assumptions for these generic technologies, where relevant to the economic assessment;
- technology performance assumptions that affect cost modelling, including asset life, auxiliary load, efficiency, availability, forced outage rates and planned maintenance requirements;
- cost escalation and real cost trajectories over the assessment period, including technology learning rates or cost changes reflected in AEMO's input assumptions;
- fuel cost and emissions assumptions used in market modelling, including assumptions relevant to gas generation, coal generation and the emissions intensity of dispatch outcomes; and
- financial and economic parameters used to convert future costs and benefits into present value terms, including discounting and scenario-based assumptions aligned with the ISP framework.

For portfolio options that include non-network or future technology solutions, IASR-derived costs provide a consistent basis for comparing alternatives without prejudging which proponent or project may ultimately be selected. This is particularly relevant for grid-forming BESS, clutched gas turbine capability and PHES, where the assessment uses generic technology blocks to represent future system strength services. Although BESS is not currently considered technically feasible for minimum system strength services, Powerlink anticipate that the ability of grid-forming BESS to contribute protection-quality fault current could be technically feasible in the future. As a result, grid-forming BESS has been assumed as a possible source of minimum system strength for requirements beyond this beyond 2035. This is discussed in further detail in Section 6.4.

Where project-specific cost information is available, Powerlink has applied that information in preference to generic IASR values. This includes updated procurement information for Central Queensland synchronous condensers, including the contracted supply and installation costs and the associated balance of plant costs where available. This approach ensures the assessment reflects current market conditions for committed or near-term network investments, while retaining IASR assumptions for future, generic or uncertain solution components.

5.1.4 Modelled market benefits from the portfolio options

The RIT-T requires categories of market benefits to be calculated by comparing the state of the world in the base case where no action is undertaken, with the state of the world with each of the credible portfolio options in place, separately.[4] The state of the world is essentially a description of the NEM outcomes expected in each case, and includes the type, quantity and timing of future generation and storage investment as well as unrelated future transmission investment.

Wholesale market modelling has been undertaken to evaluate the following seven categories of market benefit consistent with the RIT-T guidelines for this Draft MCC Assessment including changes in:

- involuntary load curtailment;
- costs for other parties in the NEM;
- fuel consumption in the NEM arising through different patterns of generation dispatch;
- Australia's greenhouse gas emissions;

[4] See AER, *Regulatory Investment Test for Transmission*, November 2024, paragraph 24; AER, *Application Guidelines, Regulatory Investment Test for Transmission*, November 2024, pages 32-35 for a definition and discussion of states of the world in a RIT-T.

- unrelated network expenditure;
- voluntary load curtailment; and
- network losses.

Drawing on the hourly market modelling dispatch data, Powerlink also undertook two post-processing modelling exercises to capture two additional sources of market benefit in the assessment:

- the avoided involuntary load shedding under the base case from there being insufficient system strength under the base case; and
- the impact of synchronous condenser losses on Australia's greenhouse gas emissions and NEM fuel costs.

Both of these effects were not captured in the wholesale market modelling.

Only two of the market benefit categories estimated were found to be material in the modelling. Specifically:

- the post-processing assessment of avoided unserved energy estimates that all options avoid at least $4 billion (in present value terms) of unserved energy; and
- the wholesale market modelling undertaken by Powerlink found that the portfolios provide between $58 million and $729 million (in present value terms) of benefits from avoiding or deferring capital and operating costs of generation and storage in the NEM due to the options being in place.

It should be noted that, while technically the post-processing assessment of avoided unserved energy is not material under the Draft MCC Assessment (since it is the same for all portfolios), it is a significant source of market benefit for this Draft MCC Assessment and should be considered material from the perspective of Queensland electricity customers.

Powerlink used a wholesale market modelling approach similar to the approach used in the ISP and that adopted by the modelling done for the PACR to estimate the market benefits associated with each credible option included in this Draft MCC Assessment.[5] The details and sources of inputs used in this Draft MCC Assessment and those used in PACR can be found in Appendix A. While the following section provides further detail on the wholesale market modelling approach taken to estimating the market benefits, it is also discussed in greater detail in the market modelling report, available on the System Strength RIT-T page of Powerlink's website.

5.1.5 Post-processing modelling to estimate two sources of market benefit

The approach to the two post-processing modelling exercises undertaken by Powerlink is outlined in the sections below.

Avoided involuntary load shedding under the base case from there being insufficient system strength

Under the base case where no action is taken to meet Queensland's system strength requirements, there would be significant involuntary load shedding that results from the retirement of coal generation.

In this hypothetical future, it is expected that AEMO would use operational tools to minimise market impacts. However, the AEMC outlined in its System Strength Rule change that these operational tools are not to be assumed at this planning stage. That is, AEMO directions should not be relied upon by Powerlink to meet its system strength obligations.

[5] The Draft MCC Assessment in line with the RIT-T requirements, requires that in estimating the magnitude of market benefits, a market dispatch modelling methodology must be used, unless the TNSP can provide reasons why this methodology is not relevant. See AER, *Regulatory Investment Test for Transmission*, November 2024, paragraph 15(b).

If the minimum level of system strength is not met, voltage control and protection systems may not operate as intended, creating risks to public safety, power system security and potentially widespread outages. The analysis continues to assume that AEMO would take the necessary actions to maintain the power system in a safe and secure operating state, including disconnecting of parts of the network when required, to manage these risks.

Summary of unserved energy calculation

Powerlink has estimated avoided unserved energy by identifying periods in the base case where system strength is insufficient to meet minimum post-contingent fault level requirements. These exposure periods are then combined with the relevant Gladstone region load assumed to be at risk of shedding, the network elements that could be affected by a fault, the probability of simultaneous outages, the assumed return-to-service duration and the VCR to estimate the expected economic cost of involuntary load shedding.

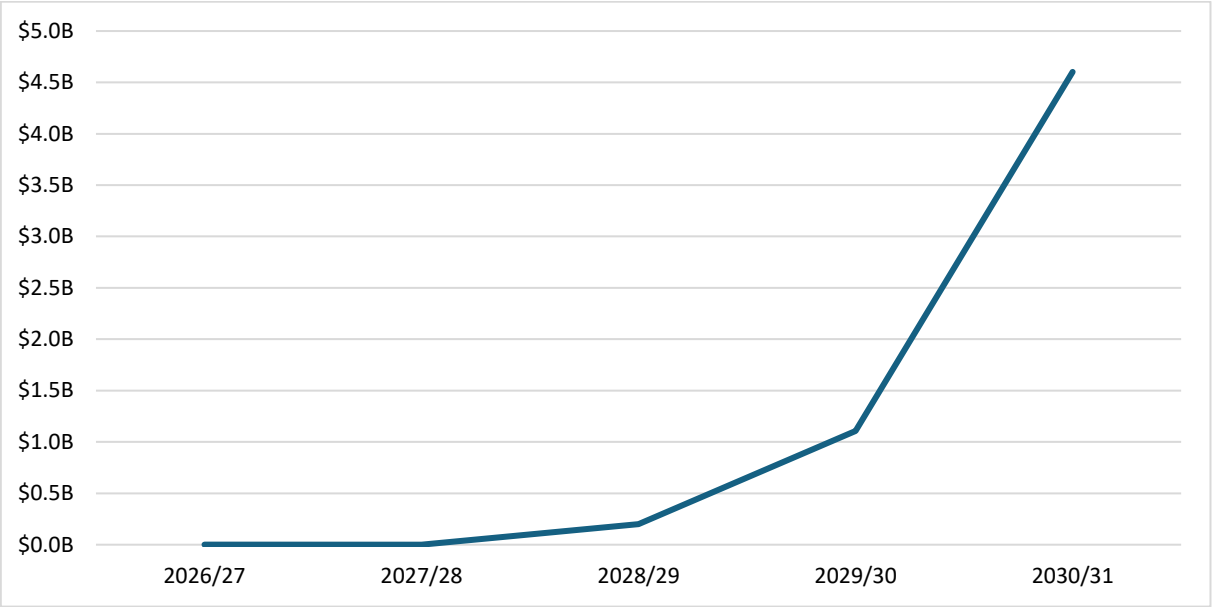
The calculation is intended to demonstrate the material near-term need for system strength services under a scenario where Powerlink does not invest to replace the retiring sources of system strength. The calculation only includes load in the relevant Gladstone region assumed to be shed from insufficient system strength, rather than wider Queensland load.

This is a conservative approach because it limits the avoided unserved energy estimate to the load most directly exposed to the identified system strength risk. While the potential consequences of insufficient system strength could be significant, Powerlink has capped the inclusion of involuntary load shedding costs to the period ending in 2031. This avoids overstating longer-term avoided unserved energy benefits that would not materially affect the ranking of credible options, while still recognising the near-term reliability and security risk that the portfolio options are designed to address.

A summary of the exponentially increasing expected involuntary load shedding costs (in undiscounted 2025/26 dollars) under the base case, until 2031, is shown in Figure 4.[6]

[6] While the base case level of valued unserved energy is very high, it would not be proportionate for Powerlink to try to estimate it with any greater degree of accuracy as it does not have a material impact on the analysis since all options avoid this unserved energy equally.

Figure 4 Value of involuntary load curtailment under base case (undiscounted $2025/26)



5.1.6 Annualised capital cost

Since publishing the PACR for the System Strength RIT-T, Powerlink has aligned its approach to annualising and discounting costs with AEMO's ISP methodology. This converts capital investment into an equivalent annual cashflow, enabling consistent comparison of assets with different economic lives and commissioning dates. Powerlink has adopted this approach in this assessment to align with AEMO's assumptions.

The cashflow calculation applies the technology-specific real pre-tax Weighted Average Cost of Capital (WACC) estimates from AEMO's 2025-26 IASR. Specifically:

- 3% for regulated WACC;
- 8% for BESS WACC;
- 9% for large open-cycle gas turbine WACC; and
- 8.5% for 24-hour PHES WACC.

This differs from the PACR net market benefits assessment, which capitalised costs based on when they were incurred to deliver the solution. Powerlink has also completed the net present value (NPV) assessment following the same methodology as the PACR to enable a like-for-like comparison. This assessment showed the ranking of portfolio options is the same across both methodologies. See Appendix B.

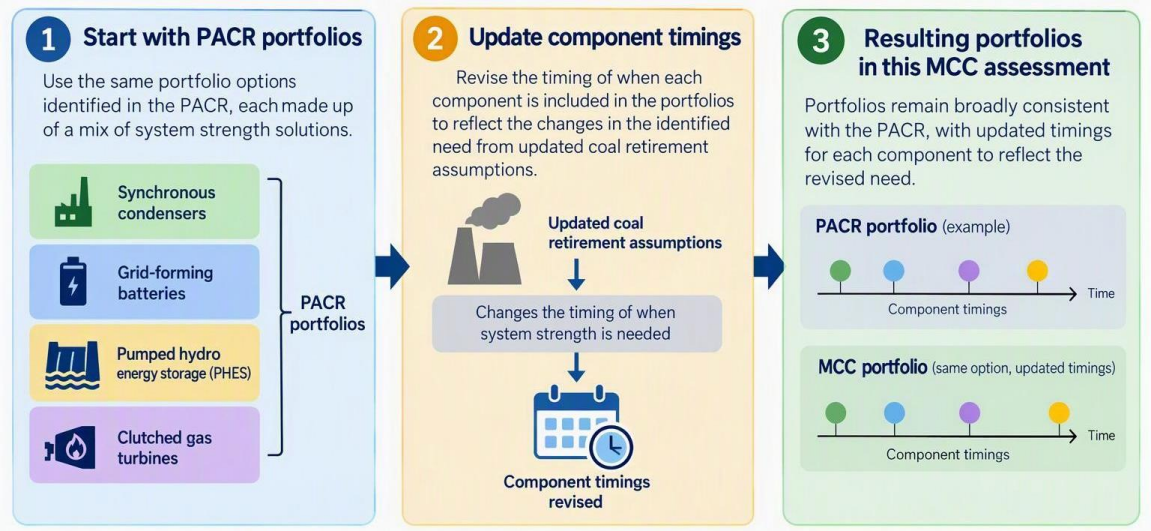
5.1.7 Discount rate

Powerlink has applied a central discount rate of 7% real, pre-tax, consistent with the commercial discount rate in AEMO's 2026 IASR.

6 Portfolios formation methodology

This section outlines the methodology used to define the composition of each system strength portfolio option in this Draft MCC Assessment. The portfolios remain broadly consistent with those identified in the PACR, with component timings revised to reflect changes in the identified need arising from updated coal generator retirement assumptions. A process diagram explaining this methodology is presented below in Figure 5.

Figure 5 Process diagram for portfolio formation methodology



6.1 Portfolios of credible options

Powerlink has developed five credible portfolios options for this Draft MCC Assessment. At the time of the PACR, Portfolio 2 (Synchronous Condensers) was the only credible option, with the 2024 ISP Step Change scenario assuming all Central Queensland coal units would retire by FY2034. Under the updated 2026 ISP Step Change scenario, some Central Queensland coal units remain in service beyond FY2034, deferring the timing of later system strength requirements.

As shown in Table 2, all portfolios include common solutions to meet minimum and efficient system strength requirements in Northern and Southern Queensland, consistent with the PACR. The table also identifies the contracted solutions progressed since the PACR, including four Central Queensland synchronous condensers to be supplied and installed by Hitachi Energy, and system security services from Pacific Hydro's synchronous condenser at Haughton Solar Farm to support Northern Queensland's minimum system strength requirements.

Table 2 Components common to all five portfolios NQ, SQ and Efficient components

Requirements	Solutions
Minimum fault level	Non-network contracts with existing, expected and potential future gas and hydro projects in Southern. Powerlink's solution to the system strength shortfall declared by AEMO (in 2021) at the Gin Gin system strength node (being a non-network solution for the installation of a clutch at the Townsville Power Station). A non-network contract with an existing (small) synchronous condenser in Northern Queensland. Installation of four network synchronous condenser by 2030.
Efficient stable voltage waveform	Each portfolio includes the same quantity (2.15 GW) of grid forming BESS.

As highlighted in Table 3 below, all portfolio options include a minimum of four synchronous condensers as part of Tranche 1. Within the 2030 timeframe, four Central Queensland synchronous condensers are the only credible solution capable of being delivered with sufficient certainty to meet the potential Gladstone Power Station retirement timeframe and maintain system strength requirements. Alternative system strength technologies, including grid-forming BESS, clutched gas turbines or PHES-based solutions, either do not yet have the required technical certainty, commitment status or delivery maturity to reliably substitute for this near-term requirement. Therefore, the four Tranche 1 synchronous condensers are treated as common across all portfolios, with the portfolio differentiation occurring mainly in later tranches and in the mix of technologies used to meet longer-term system strength requirements.

Table 3 Breakdown of portfolios by tranches for Central Queensland component

Portfolio	Tranches 1 & 2	Tranches 3 & 4
1 (Balanced Technology)	• Four new synchronous condensers in Central Queensland. • One new clutched gas turbine in Central Queensland	• Three new synchronous condensers in Central Queensland • One new clutched gas turbine in Central Queensland
1A (Balanced Technology: BESS in Minimum)	• Four new synchronous condensers in Central Queensland. • One new clutched gas turbine in Central Queensland	• Two new synchronous condensers in Central Queensland • One new clutched gas turbine in Central Queensland • One (large) grid-forming BESS in Central Queensland.
2 (Synchronous Condensers)	• Five new synchronous condensers in Central Queensland	• Four new synchronous condensers in Central Queensland
3 (Clutched Gas Turbines)	• Four new synchronous condensers in Central Queensland. • One new clutched gas turbine in Central Queensland	• Three new clutched gas turbines in Central Queensland
4 (Pumped Hydro Energy Storage)	• Five new synchronous condensers in Central Queensland	• Two new clutched gas turbines in Central Queensland • Three new PHES units in Central Queensland

Powerlink developed a Balanced Technology portfolio (Portfolio 1) that included investing in or contracting with a range of different technologies for meeting the minimum system strength requirements, such as existing synchronous generation (including hydro generators), adding clutches to existing and future gas generating units, and synchronous condensers. As outlined in Table 4, four additional portfolios each assumed a greater use of a particular technology for meeting the minimum requirements. The outcome of the portfolio formation process was that the portfolios differed in terms of the following solutions for meeting the minimum fault level requirements.

Table 4 Key differences between the five portfolios

Portfolio	Solutions for minimum requirements
1 (Balanced Technology)	Seven new synchronous condensers in Central Queensland. Two future clutched gas turbines in Central Queensland.
1A (Balanced Technology: BESS in Minimum)	Six new synchronous condensers + one (large) grid-forming BESS in Central Queensland. Two future clutched gas turbines in Central Queensland.
2 (Synchronous Condensers)	Nine new synchronous condensers in Central Queensland.
3 (Clutched Gas Turbines)	Five new synchronous condensers in Central Queensland. Four future clutched gas turbines in Central Queensland.
4 (Pumped Hydro Energy Storage)	Five new synchronous condensers in Central Queensland. Two future clutched gas turbines in Central Queensland. Three planned pumped hydro energy storage units in Central Queensland.

As outlined in the system strength rule change, Powerlink is required to use reasonable endeavours to make system strength services available to AEMO. In December 2024, AEMO published its Network Support and Control Ancillary Services (NSCAS) procedure. They specified that they would declare a system strength gap when the forecast level of system strength across a year was below 99.87%. In the System Strength RIT-T, Powerlink indicated that AEMO's approach aligned with the reasonable endeavours standard and adopted this approach in considering the credible options to address system strength requirements from December 2025. In its determination on Powerlink's notification of an MCC for the System Strength RIT-T, the AER required Powerlink to use the same approach to quantify the need as in the PACR. Accordingly, Powerlink has retained the 99.87% metric to update the portfolios of solutions to address system strength requirements for this Draft MCC Assessment.

Powerlink also notes the AER's recent advice that the declared gaps in AEMO's annual system strength reports, rather than the 99.87% metric used in AEMO's NSCAS procedure, apply to System Strength Service Providers.[7] Through established joint planning processes, Powerlink regularly engages with AEMO on its annual forecasts of system strength requirements for Queensland. Powerlink will continue to take into account AEMO's forecasts in the annual planning review, include the required information in our Transmission Annual Planning Report (TAPR) and, where required, undertake the appropriate regulatory consultation pathway.[8]

Each of the portfolios met both the minimum and efficient system strength requirements. The approach of having portfolios assume a greater use of a particular technology for meeting the minimum requirements enables the Draft MCC Assessment to test the relative expected economic benefits of, and interactions between, the different technologies that are able to assist with meeting the minimum system strength requirements. Figures 6 to 10 show the timing and composition of each portfolio option, in particular, Central Queensland as this region is where portfolios vary.

[7] AER, *Transgrid – Meeting System Strength Requirements in New South Wales*, December 2025, page 19.
[8] NER, clauses 5.12.1 and 5.12.2.

Figure 6 Portfolio 1 Balanced Technology Timing and Composition

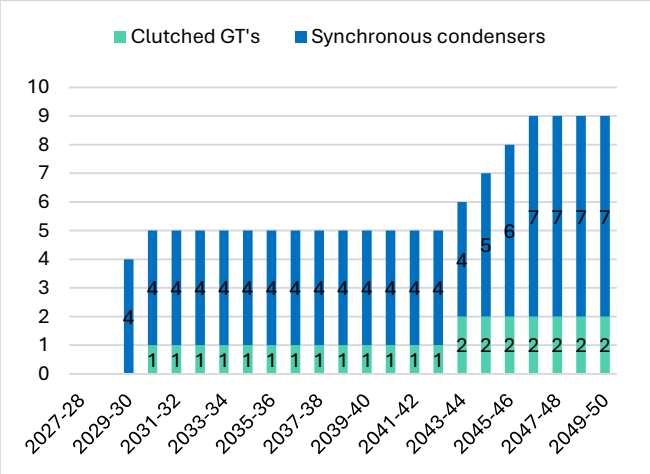


Figure 7 Portfolio 1a Balanced Technology (BESS in Minimum) Timing and Composition

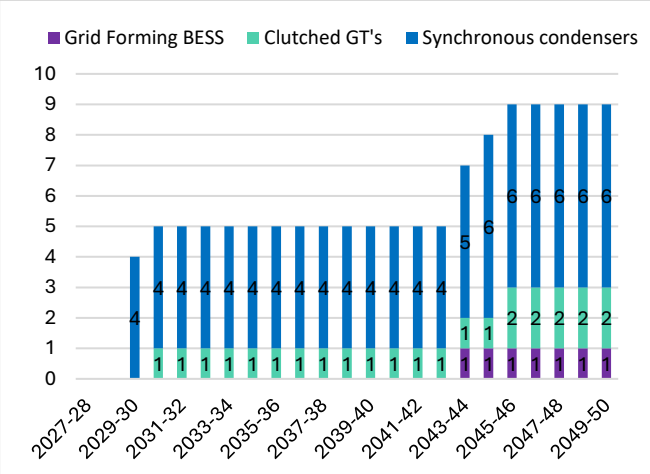


Figure 8 Portfolio 2 Synchronous Condensers Timing and Composition

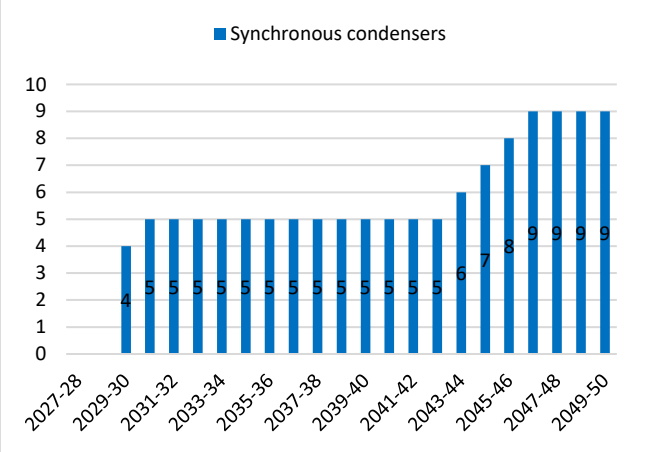


Figure 9 Portfolio 3 Clutched Gas Turbines Timing and Composition

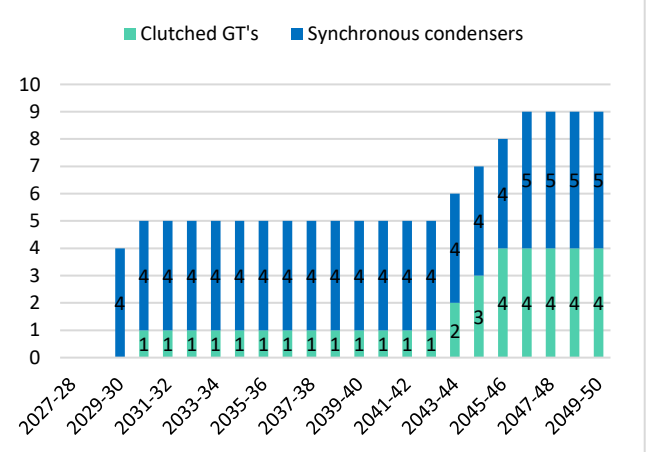
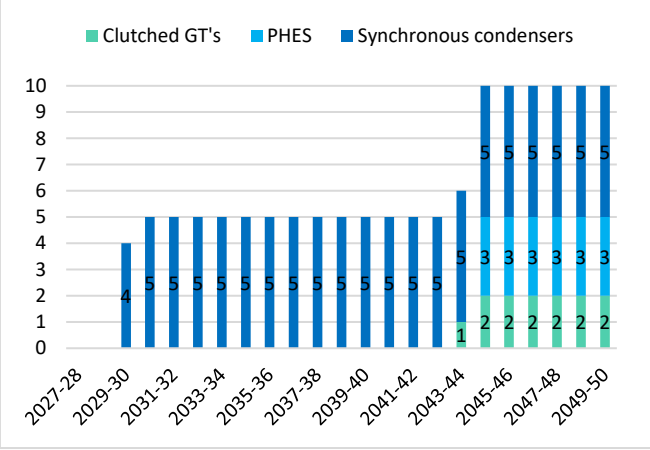


Figure 10 Portfolio 4 PHES Timing and Composition



Figures 11 to 13 provide the timing and composition of components common to all portfolios. These elements are to address the Southern Queensland minimum, Northern Queensland minimum and efficient level needs.

Figure 11 SQ Portfolio Timing and Composition - Common to all Portfolio Options

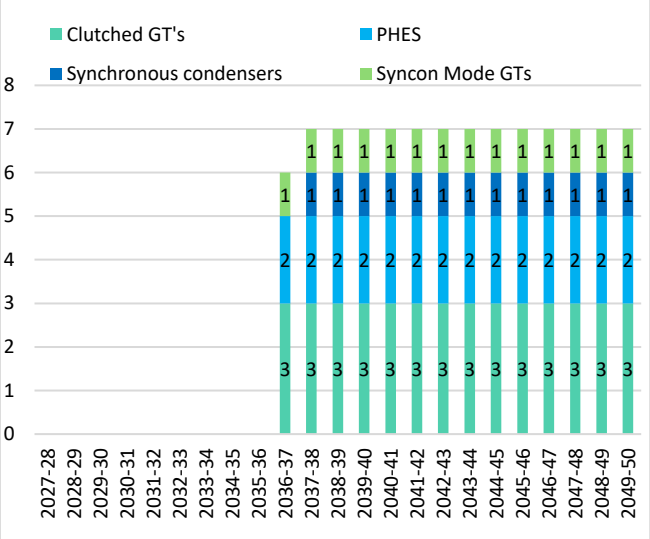


Figure 12 NQ Portfolio Timing and Composition - Common to all Portfolio Options

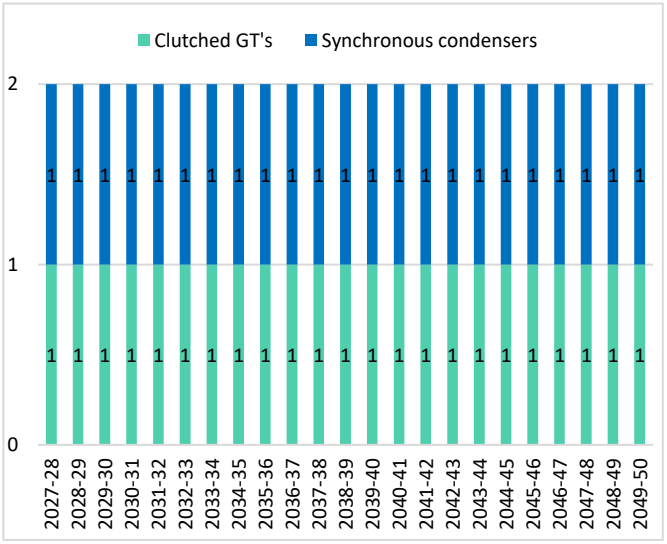
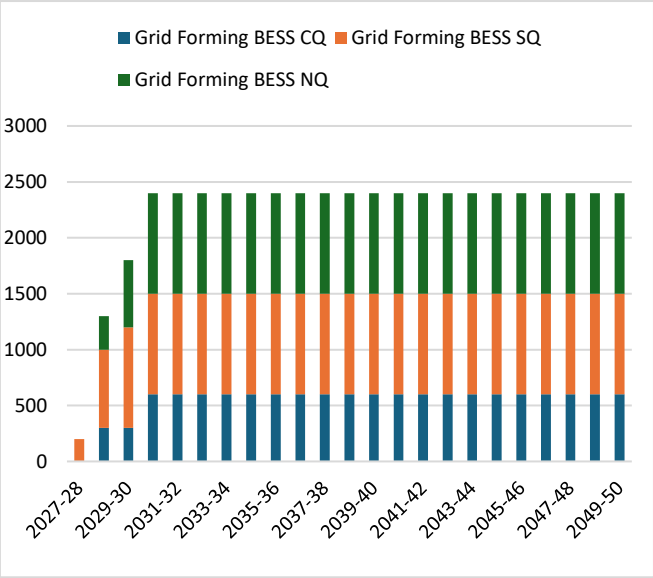


Figure 13 Efficient level timing - common to all portfolios



Powerlink considers the need for efficient level services in each region between 2028 and 2030 is uncertain.

- Forecasts for IBR installations are uncertain with AEMO's IBR forecasts significantly changing year on year adding to the complexity of predicting the efficient need, particularly in the 2028 to 2030 timeframe.
- AEMO's forecasts do not differentiate between IBRs that are self-remediating or those that may pay system strength charges.

Powerlink's connection information indicates that solar/wind farms in application stage are self-remediating their system strength impacts, and it is uncertain how many IBR in future will choose to purchase system strength services from Powerlink. The potential for these factors to lead to an over-estimate of the need for efficient level services creates a risk that Powerlink could over-invest in efficient level system strength services, leading to inefficient expenditure that would not be in the interests of customers.

6.1.1 Engagement with the market

For efficient system strength needs beyond 2027, Powerlink anticipates re-engaging with industry at an appropriate time(s). Proponents of potential non-network solutions are encouraged to become a member of Powerlink's Non-Network Engagement Stakeholder Register by emailing networkassessments@powerlink.com.au to remain informed on future opportunities. Powerlink will also request market communications via AEMO Communications to advise NEM participants and interested parties on potential opportunities, and will include updates in the TAPR.

It is important to note that before a system strength contract could be established, further detailed technical assessment will be required, including AEMO's approval, to any proposed services to ensure system strength technical requirements are fit for purpose. The extent to which the costs of a system strength contract would be likely to represent expenditure that is prudent and efficient will also be an important consideration for Powerlink.

6.2 Developing portfolio options to meet system strength requirements

6.2.1 Overview of how portfolios have been formed

Powerlink has implemented a probabilistic approach to assess the likelihood of maintaining sufficient system strength across the grid. This methodology uses binomial probability theory to assess the likely availability of system strength assets. Powerlink have then used this availability to quantify the probability that the portfolio satisfies system strength limits advice. Each synchronous condenser, gas turbine and pumped hydro unit is represented as either available or unavailable, with an associated probability of availability derived from AEMO's 2025/26 IASR.

These availability assumptions incorporate both forced outage rates and planned maintenance outage requirements. The resulting probability distributions are combined with limits advice pass/fail assessments to calculate the likelihood that sufficient system strength resources are available to maintain compliance under each portfolio configuration.

Each unit's contribution to system strength is also evaluated based on its system strength equivalency, a measure of how much system strength it provides compared to a retiring coal unit in that region, derived from power system modelling and technical analysis of fault level contributions and stability impacts. In this assessment, Powerlink has considered coal generator retirement projections based on the 2026 ISP retirement outcomes.

Figures 6 to 13 provide a visual representation of the number of system strength equivalent units available in each region.

6.3 Limits advice and determination of required system strength services

Limits advice is a key input to determining the number, type, timing and location of system strength services required to meet Powerlink's obligations as System Strength Service Provider for Queensland. It translates AEMO's minimum fault level requirements and system strength node criteria into practical operating envelopes that can be assessed in both planning and operational timeframes.

The process starts with AEMO's published minimum fault level requirements at each system strength node, including the relevant pre-contingent and post-contingent requirements under the most onerous credible contingency. Limits advice may also be updated due to new non-network contracts, operational considerations, changes to IBR connections, evolving changes to the network (including demand level changes) that impact system strength. Powerlink then undertakes detailed power system studies to assess whether the available portfolio of synchronous plant, synchronous condensers and contracted services can maintain adequate fault level and stable voltage performance under relevant network configurations, IBR dispatch conditions and contingency events.

The outcomes of these studies are converted into limits advice[9]. This advice identifies the minimum combination of online plant and system strength services required to keep the power system within a secure operating envelope. The advice may be load dependent, configuration dependent or region specific, reflecting the fact that the contribution of each system strength source depends on its electrical location, availability, operating mode and interaction with nearby network elements and inverter-based resources.

For planning purposes, Powerlink applies the limits advice to determine whether forecast combinations of synchronous generation (coal, gas or hydro), synchronous condensers, and other contracted services are sufficient to meet the required level of system strength. This assessment considers both the physical contribution of each service and its expected availability, including forced outage rates and maintenance requirements. Where the available portfolio does not satisfy the limits advice with sufficient reliability, an additional system strength service is identified as being required.

The required number of services is therefore not determined solely by matching a published fault level value with a single asset rating. Instead, it is determined through an iterative assessment of system strength equivalence, regional electrical performance, credible contingency outcomes and service availability. Additional services are added until the portfolio is expected to satisfy the relevant limits advice across the forecast operating conditions and planning horizon.

This approach ensures that the portfolio is sized to maintain minimum system strength requirements while avoiding unnecessary over-procurement. It also provides a transparent basis for staging investment, because the timing of each additional service is linked to when the forecast available portfolio no longer satisfies limits advice due to factors such as coal generator unit retirements, changes in dispatch patterns, network outages, or changes in the assumed availability of existing synchronous plant.

Accordingly, limits advice acts as the bridge between detailed power system analysis and portfolio development. It defines the secure operating envelope, enables Powerlink to test whether the available portfolio is adequate and identifies when additional network or non-network system strength services are required to maintain compliance with the system strength standard.

To provide sufficient system strength 99.87% of the time, it is essential to plan for headroom above the minimum required system strength levels to account for forced outages and maintenance activities, ensuring grid resilience under various operating conditions.

[9] Transfer Limit Advice - System Strength QLD

6.3.1 Technological diversity

Powerlink considers technological diversity to be an important feature of the portfolio development process:

- Grid-forming BESS can increase system strength and help to support the operation of IBR in a similar way to synchronous condensers[10]. There are a number of grid-forming BESS already operational and in the connection application stage. However, as noted in section 6.4, the technical viability of grid-forming BESS to meet the minimum fault level requirement in a large inter-connected power system is yet to be proven.
- Synchronous generation is a proven source of system strength when these units are dispatched in the energy market. However, there is material uncertainty around the number and location of synchronous generation units that are likely to be online for the period to December 2030, and the risks associated with having sufficient operational demand to support the dispatch of this generation.
- Synchronous condensers are capable of providing significant fault current contribution and synchronous inertia (with installation of a flywheel). Synchronous condensers can offer system strength support comparable to that provided by large existing synchronous generators. Given the international demand for synchronous condensers, there are delivery risks associated with the technology.
- The addition of clutches to gas turbine units, to enable them to operate in synchronous condenser mode when not generating, could be a cost-effective way to provide system strength. The advantage of a gas turbine, compared, for example, to a synchronous generating unit, is its ability to start up relatively quickly to generate electricity to meet a sudden increase in demand or to compensate for the variability on renewable sources. Further, as synchronous machines, clutched gas generation projects should provide inertia and reactive power support when operating in generating mode. However, there are similar risks associated with the installation of the clutches, and operational challenges can arise due to the time required to switch between synchronous condenser to generation mode.
- PHES options represent a potentially reliable and cost-effective system strength solution. Operating PHES units in synchronous condenser mode ensures continuous provision of system strength.

Powerlink undertook high-level network planning analysis on the Balanced Technology portfolio (Portfolio 1) to ensure it would deliver minimum fault levels and efficient levels of system strength from December 2025. Existing sources of system strength and forecast IBR, combined with the location, size and availability of existing and proposed units, were important factors in determining the technical suitability of the Balanced Technology portfolio. As outlined above, the four additional portfolios assume a greater use of a particular technology for meeting the minimum requirements, namely Portfolio 1A (Balanced Technology with BESS in Minimum), Portfolio 2 (Synchronous Condensers), Portfolio 3 (Clutched Gas Turbines) and Portfolio 4 (Pumped Hydro Energy Storage).

This approach:

- allowed Powerlink to use cost estimates from AEMO's IASR to estimate the costs for non-network solutions, thereby providing an independent and comparable basis for comparing solution costs;
- allowed Powerlink to progress the market modelling and detailed planning studies without explicitly selecting unique proponent solutions; and
- provides flexibility for Powerlink to pivot to more technically and/or commercially feasible options in an environment where the status of projects plays a significant role in the cost-benefit analysis of non-network solutions.

[10] Powerlink, *PSCAD Assessment of the Effectiveness of Grid-forming Batteries*, April 2021, page 3.

6.4 Ability for grid-forming BESS to contribute to minimum fault level requirements

A key issue for Powerlink (and the industry more broadly) is the extent to which grid-forming BESS can be relied on to contribute to minimum system strength requirements. A minimum level of system strength is required to support a number of critical system services, including (but not limited to) maintaining the stability of IBR, satisfactory operation of protection systems, and stable switching of voltage control devices. Powerlink is progressing studies to examine the technical feasibility and capability of grid-forming BESS to deliver minimum system strength. It is not yet well understood how the power system would behave if grid forming BESS replace the existing synchronous generators to meet minimum system strength requirements in the near term, particularly in respect of protection quality fault current. As a result, Powerlink does not consider grid-forming BESS to be technically feasible for this application at this time. The uncertainty was the basis for developing Portfolio 1A, which tested how including grid-forming BESS to assist with the minimum system strength compared economically with other technology choices, if found to be technically feasible.

The role of grid-forming BESS in meeting minimum system strength requirements continues to evolve across the NEM. While industry participants increasingly recognise their ability to stabilise voltage waveforms and contribute to efficient system strength, it is not yet accepted that grid-forming BESS are sufficiently mature to replace synchronous assets for minimum fault level obligations.

The principal concern is whether inverter-based technologies can provide fault current with the magnitude, duration and characteristics required for reliable protection operation across a broad range of network conditions. Further power system studies, analysis, protection assessments and industry engagement are therefore required before grid-forming BESS can be relied upon as a standalone source of minimum system strength. AEMO's Transition Plan for System Security, published annually, will continue to explore and outline the pathway for grid-forming BESS to be included as a source of minimum system strength service.

Transgrid's 2026 Material Change in Circumstances Final Assessment reinforces this position. It states that grid-forming BESS are not currently considered technically feasible for providing protection-quality fault current, although independent advice from Aurecon anticipates potential feasibility for minimum-level requirements from FY33. Transgrid included grid-forming BESS from FY33 only where sufficient fallback solutions would remain available if performance did not meet expectations.[11]

For these reasons, Portfolio 1A introduces the grid-forming BESS in 2044, providing sufficient lead time for the technology, technical standards and supporting power system studies to mature before it is relied upon to contribute to minimum system strength requirements. The deferred timing allows practical operating experience to be established across the NEM, including evidence that grid-forming BESS can provide fault current of sufficient magnitude, duration and characteristics to support reliable protection operation under a broad range of network conditions. It also provides time for Powerlink and AEMO to complete the necessary stability, protection and system integration assessments, confirm appropriate performance specifications and determine whether the technology can be treated as a dependable substitute for synchronous plant. Until this capability is demonstrated, Portfolio 1A retains proven synchronous solutions through to 2044, preserving near-term system security while allowing grid-forming BESS to be adopted once technically and commercially mature.

[11] Transgrid, Meeting system strength requirements in NSW: Material Change in Circumstances final assessment, 25 August 2026, Executive Summary and Table 1. Available at: https://www.transgrid.com.au/media/m5ycbumc/260825_transgrid_system-strength_final-mcc-report-1.pdf

7 Preferred Option for the MCC

7.1 Net Present Value Results

For this Draft MCC Assessment, Powerlink undertook a cost-benefit analysis in accordance with the requirements of the RIT-T Instrument and RIT-T Application Guidelines. The analysis found Portfolio 2 (Synchronous Condensers) was the top-ranked option. Portfolio 2 remains the preferred option. The revised timing and composition do not change its relative economic or technical merits. It delivers an estimated net economic benefit of $3.380 billion, approximately $204 million more than Portfolio 3. Deferring later synchronous condensers also avoids premature investment and preserves flexibility to consider credible non-network alternatives before further commitments are made. The breakdown of NPV results is outlined in Table 5. The NPV results, including details of the key inputs and assumptions used for the analysis, are in Appendix A.[12]

Table 5 NPV of the portfolio options (June 2025 dollars, millions)

Portfolio	Description	Costs		Gross economic benefits			Net economic benefit benefit	Rank
		Capex	Opex	Wholesale Market Benefits	Emissions from losses[13]	Avoided USE[14]		
Portfolio 1	Balanced Technology	-$675	-$268	$99	-$35	$4,009	$3,130	4
Portfolio 1A	Balanced Technology (BESS in Min.)	-$639	-$260	$58	-$35	$4,009	$3,134	3
Portfolio 2	**Synchronous Condensers**	**-$382**	**-$216**	**$0**	**-$31**	**$4,009**	**$3,380**	**1**
Portfolio 3	Clutched Gas Turbines	-$668	-$244	$109	-$30	$4,009	$3,176	2
Portfolio 4	Pumped Hydro Energy Storage	-$1,843	-$592	$729	-$25	$4,009	$2,277	5

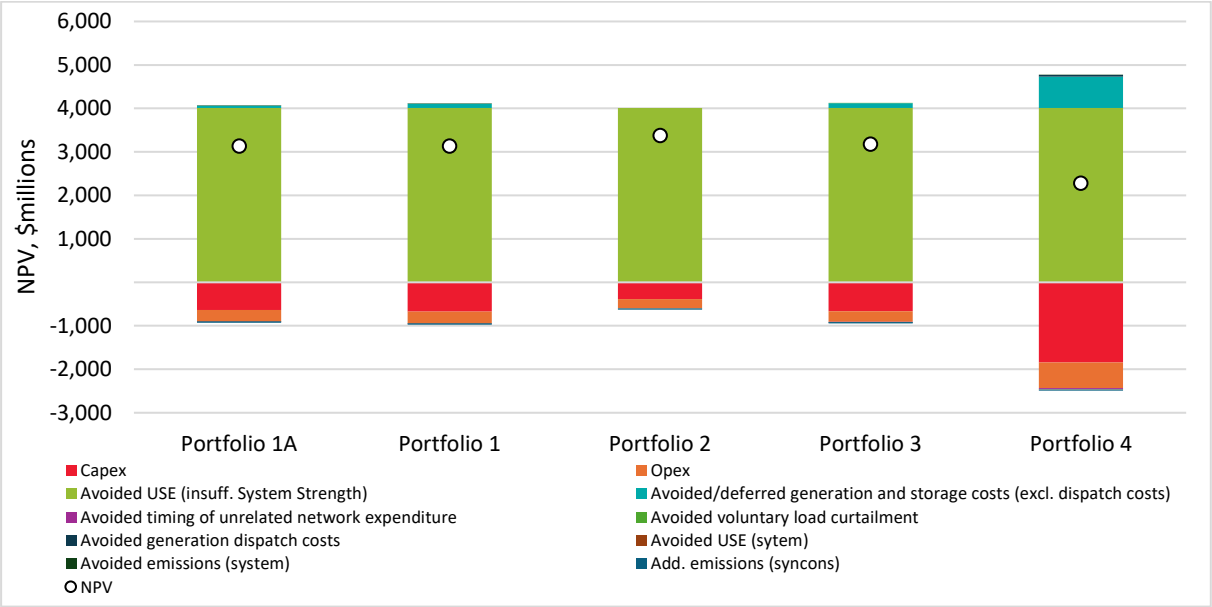
Figure 14 below show the relative value of each of the benefits streams and expenditure for each portfolio option.

[12] All costs for this Draft MCC Assessment are shown in 30 June 2025 dollars to align with the 2026 ISP and original RIT-T.

[13] This captures the value of the additional emissions from the use of units in synchronous condensers mode due to the energy they consume. It has been estimated via the post-processing assessment

[14] This avoided unserved energy reflects the post-processing assessment of the avoided USE during periods of insufficient system strength under the base case (and has been capped in the analysis). It is separate from the general system USE captured in the wholesale market modelling (which is immaterial).

Figure 14 Breakdown of the NPV of the portfolio options (June 2025 dollars, millions)



7.1.1 Summary of NPV results

The updated NPV results show that all portfolio options deliver positive net economic benefits. This is primarily driven by the avoided unserved energy benefit associated with addressing insufficient system strength, which is the largest benefit category across all portfolios at approximately $4.009 billion in present value terms.

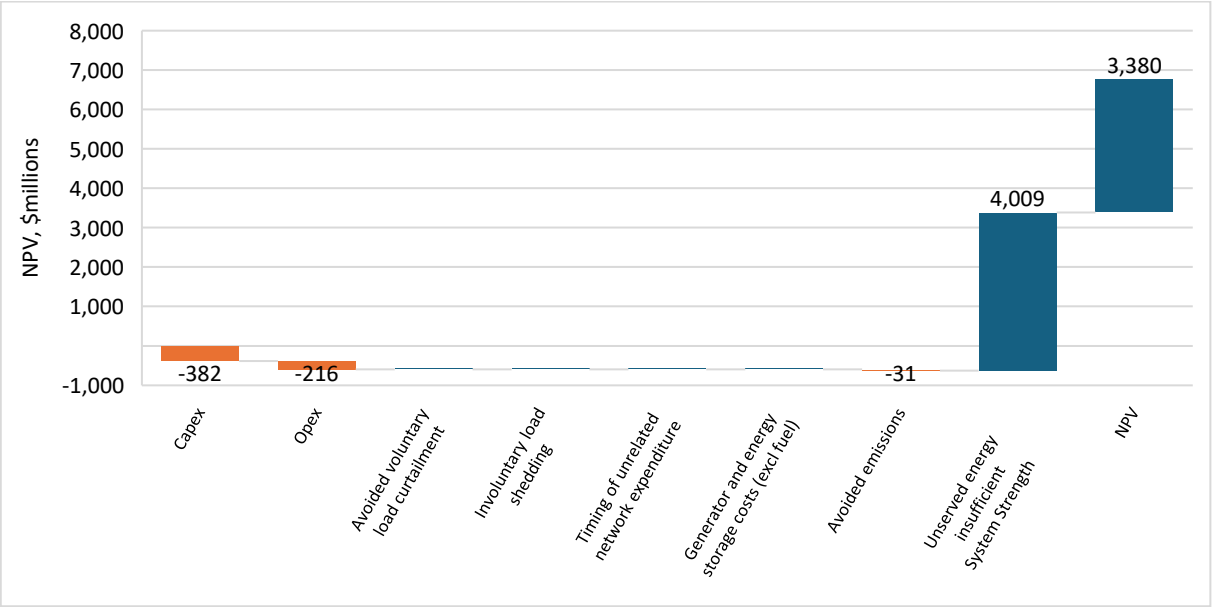
Portfolio 2 remains the top-ranked option, with a net economic benefit of approximately $3.380billion. Its ranking is supported by the lowest capital cost of the portfolios assessed, at approximately $382 million, while delivering the same avoided unserved energy benefit as the other options. Portfolio 2 also has no material wholesale market benefit adjustment shown in the table and avoids additional proponent-party costs (such as construction of grid-forming BESS and gas turbines that are not already committed) associated with the alternative technology portfolios.

Portfolio 3 is the second-ranked option, with a net economic benefit of approximately $3.176 billion. This is followed by Portfolio 1A at approximately $3.134 billion and Portfolio 1 at approximately $3.130 billion. The difference between these three options is relatively small compared with the overall scale of benefits. Portfolio 3 has higher capital and operating costs than Portfolio 2 but also includes higher wholesale market benefits of approximately $109 million. Portfolio 1A and Portfolio 1 have lower wholesale market benefits of approximately $58 million and $99 million respectively.

Portfolio 4 has the lowest net economic benefit, at approximately $2.277 billion. Although it includes the highest wholesale market benefit adjustment at approximately $729 million and the lowest emissions impact from synchronous condenser losses at approximately $25 million, these benefits are outweighed by its substantially higher capital cost of approximately $1.843 billion and operating cost of approximately $592 million.

Portfolio 2 remains the preferred option for the Draft MCC Assessment. It provides the highest net economic benefit, approximately $204 million higher than the second-ranked option, while maintaining a lower overall cost profile and delivering the same material system strength benefit as the other portfolios.

Figure 15 Composition of the estimated net market benefits for portfolio 2, relative to the base case



7.2 NPV Sensitivity analysis

Powerlink has tested the robustness of the results of the NPV analysis above to changes in a number of key variables and assumptions. These tests have been designed to investigate whether the preferred portfolio option changes under these alternative key assumptions.

The range of factors tested as part of the sensitivity analysis in this report are:

- changes to the capital cost of synchronous condensers; and
- alternative commercial discount rate assumptions.
- commercial discount rate assumptions.

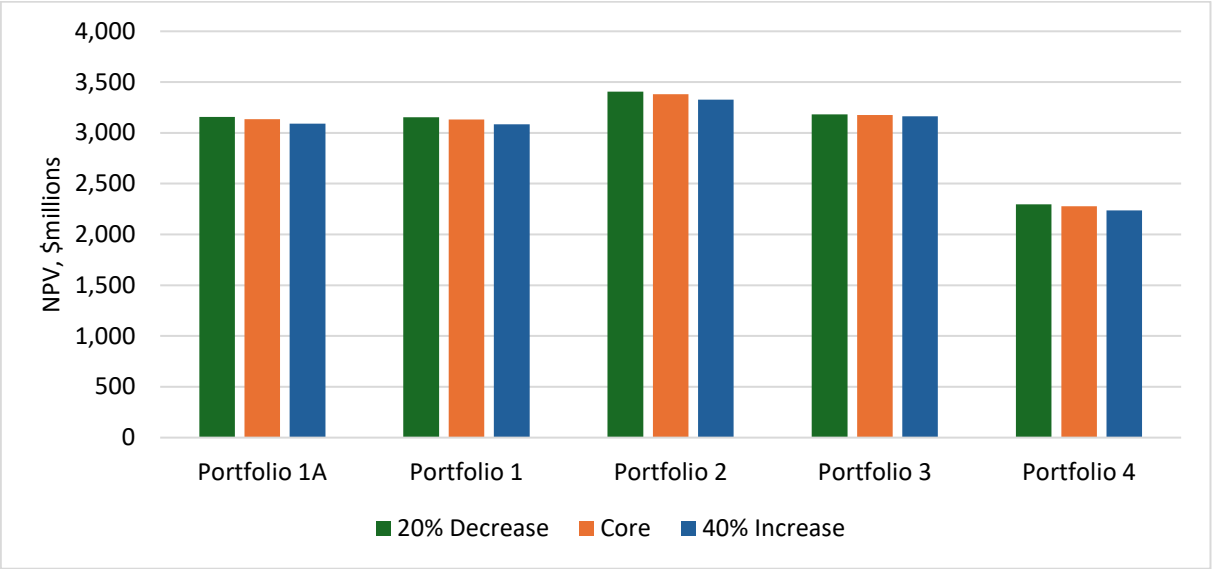
Powerlink has not undertaken sensitivities:

- involving higher or lower VCR or Value of Emissions Reduction (VER) as the value of avoided unserved energy and emissions are not different across the portfolios. This means that the sensitivities on these variables will not change the ranking of the options); or
- that vary the assumed non-network capital (or operating costs). This sensitivity also does not have a material impact on the outcome of the preferred option.

7.2.1 Sensitivity on higher and lower tranches 2, 3 & 4 synchronous condenser costs

Figure 16 presents the results of assuming 40% higher and a 20% lower assumed synchronous condenser costs, relative to the central estimate within this Draft MCC Assessment for the later tranches which are currently not part of the contracted initial four (tranche 1) synchronous condensers consistent with the 'Class 5' nature of the estimates. These boundaries align with a class 5 estimate according to the Association for the Advancement of Cost Engineering (AACE) classification system. The results show that Portfolio 2 continues to be preferred, even under higher assumed synchronous condenser costs.

Figure 16 NPV of portfolio options – comparison between synchronous condenser costs (June 2025 dollars, millions)

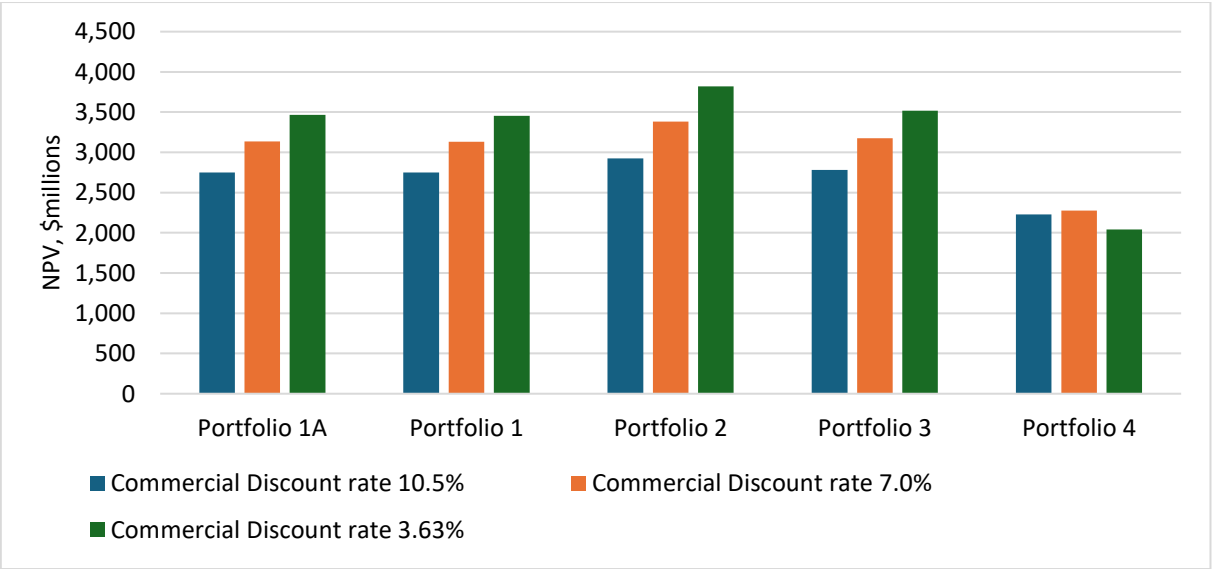


In terms of boundary testing, there would need to be a more than a 310% increase in synchronous condenser costs for Portfolio 2 to no longer be the top-ranked option (and, for all synchronous condenser costs greater than this level, Portfolio 3 would be preferred). As a result, Portfolio 2 has demonstrated that it is robust to the sensitivities in synchronous condenser costs.

7.2.2 Alternative commercial discount rate assumptions

Figure 17 shows that Portfolio 2 continues to be preferred under lower and higher assumed commercial discount rates.

Figure 17 NPV of portfolio options – comparison between commercial discount rates (June 2025 dollars, millions)



In terms of boundary testing, there is no credible discount rate at which Portfolio 2 is no longer the preferred option.

7.3 Identification of the preferred option

Powerlink has updated the portfolio asset timings to reflect the latest inputs from AEMO's 2026 ISP Step Change scenario. Tranche 1 remains the immediate priority, as it is required to meet the revised coal generator retirement timings.

Table 6 shows the differences in timing and number of network synchronous condensers required under Portfolio 2 as an outcome of the updated analysis undertaken for this Draft MCC Assessment.

The need for a synchronous condenser or equivalent service by June 2030 is no longer required in Southern Queensland due to the updated coal generator retirement assumptions in AEMO's 2026 ISP Step Change scenario, which indicate that Tarong Power Station is expected to remain in service for longer than assumed in the PACR analysis. This extends the availability of synchronous generation in Southern Queensland and is expected to provide sufficient minimum system strength support within the near-term planning horizon. As a result, the immediate need for a Southern Queensland synchronous condenser or equivalent service has been deferred, although Powerlink will continue to monitor Tarong Power Station's retirement timing, operational availability and dispatch outcomes to determine when replacement system strength services may be required.

Table 6 Portfolio 2 comparison between PACR and MCC Assessment

Tranche	PACR	MCC Assessment
Tranche 1	• Three synchronous condensers in Central Queensland by March 2029	• Two synchronous condensers in Central Queensland by March 2029 • Two synchronous condensers by August 2029
Tranche 2	• Three synchronous condensers in Central Queensland by June 2030 • One synchronous condenser in Southern Queensland by June 2030	• One synchronous condenser in Central Queensland by January 2031 • One synchronous condenser in Southern Queensland by June 2038
Tranche 3	• One synchronous condenser in Central Queensland by June 2033	• Two synchronous condensers in Central Queensland by June 2045
Tranche 4	• One synchronous condenser in Central Queensland by June 2034	• Two synchronous condensers in Central Queensland by June 2047

The top-ranked option, Portfolio 2 Synchronous Condensers, involves:

- Five synchronous condensers across Central Queensland by June 2031, with tranche 1 comprising of four network synchronous condensers and one non-network synchronous condenser required by June 2029, followed by;
    - one in Central Queensland, by January 2031 (tranche 2); and
    - one in Southern Queensland, by June 2038 (tranche 2); and
    - two in Central Queensland, by June 2045 (tranche 3); and
    - two in Central Queensland, by June 2047 (tranche 4)

- contracting with a range of synchronous units in Southern and Northern Queensland for minimum system strength requirements; and
- contracting for 550MW of grid-forming BESS in Southern Queensland, and 1,600MW of grid-forming BESS in Central Queensland/Northern Queensland, for efficient system strength requirements.
    - 660 to 1,200 megavolt amperes (MVA) of solutions in Southern Queensland;
    - 440 to 800MVA of solutions in Central Queensland; and
    - 760 to 1,300MVA of solutions in Northern Queensland.

At the time of this assessment Powerlink has not committed to the installation of a fifth synchronous condenser to allow for potential committed or anticipated non-network opportunities to become available that can deliver the required service with certainty by January 2031, and which will be evaluated under a future MCC or RIT-T. Similarly, for the remaining four synchronous condensers, which now fall well beyond the 10-year planning period of the RIT-T, Powerlink will re-evaluate the need for those system strength services closer to the investment need timing.

To manage project deliverability risks, Powerlink has proactively progressed the first tranche of Central Queensland synchronous condensers, including the publicly announced agreement with Hitachi Energy to supply and install four synchronous condensers by 2029. The announced works comprise two synchronous condensers at Calliope River Substation near Gladstone, one at Nebo Substation and one at Stanwell Substation, and form part of the near-term network response required to maintain system strength as coal generation retirement timings change. The outcome of this Draft MCC Assessment has identified the near-term need for four network synchronous condensers in Central Queensland to provide system strength services remains critical to maintain the minimum fault level requirements for power system stability in the region.

Powerlink continues to actively seek out opportunities for non-network solutions to replace in part or in full the need to invest in future network synchronous condensers and will utilise the MCC process and RIT-T reopening triggers, or a future RIT-T, to pivot to and support the development of new system strength solutions, should they become available and an identified need for system strength services is confirmed.

7.4 Portfolio Costs of Preferred Option

The updated Portfolio 2 cost breakdown shows total expenditure of $598 million, comprising $382 million of capital expenditure and $216 million of operating expenditure. Network expenditure is driven by the capital cost of synchronous condenser investment, while operating expenditure includes both network and non-network service costs. Non-network expenditure is primarily reflected through operating expenditure associated with contracted system strength services, with the table indicating $5 million of non-network opex. Overall, the cost profile demonstrates that Portfolio 2 remains materially weighted toward near-term network capital investment, supported by targeted non-network contracting to meet minimum and efficient system strength requirements while maintaining flexibility as future need timing is refined.

Table 7 Preferred option. Present value portfolio costs (real June 2025 $)

Portfolio	Portfolio 2 Synchronous Condensers
Present value of network expenditure ($m)	
CAPEX	**382**
OPEX	**211**
Total	
Non-network expenditure	
CAPEX	**0**
OPEX	**5**
Total	**5**
Total expenditure	
CAPEX	**382**
OPEX	**216**
Total	**598**

8 Submissions

Powerlink invites submissions and comments from market participants, AEMO, potential non-network providers, and any other interested parties on this Draft MCC Assessment and the draft preferred option presented, by Monday **30 November 2026**.

Powerlink will also hold a webinar on Wednesday 4 November 2026 to discuss the draft findings published in this report. Registrations are available on Powerlink's website.

Submissions should be presented in a written form and should clearly identify the author of the submission, including contact details for subsequent follow-up if required. If parties prefer, they may request to meet with Powerlink ahead of providing a written response.

Powerlink will respond to all relevant issues raised in submissions, and encourages parties making a submission to focus on the adequacy and transparency of Powerlink's response to the AER's requirements for this MCC assessment, as outlined above.

Proponents of non-network solutions who have previously engaged with Powerlink on their solution(s) may but are not required to resubmit their proposal. Proponents of non-network solutions who consider that they are now anticipated or committed should provide evidence as part of their submission.

Powerlink will publish submissions on the Draft MCC Assessment, subject to any claim of confidentiality by the person making the submission. Where confidentiality over part or all of a submission is made, this should be clearly identified. Powerlink may also explore whether a redacted or non-confidential version of the submission can be made available.[15]

[15] AER, *Application Guidelines, Regulatory Investment Test for Transmission*, November 2024, page 70.

Powerlink has a general obligation to use all reasonable endeavours not to disclose any confidential information it receives. The obligation is subject to a number of exceptions, including that disclosure may be made:

- with the consent of the person providing the information; or
- to the AER, AEMC or any other regulator having jurisdiction over Powerlink under the NER or otherwise.

Submissions should be emailed to Powerlink via networkassessments@powerlink.com.au, with 'System Strength RIT-T MCC Submission' in the subject field of the email. Alternatively, submissions can be mailed to Powerlink, addressed to:

Michelle Norris
Manager, Network Investment Strategic Engagement
Powerlink Queensland
PO Box 1193
Virginia Qld 4014.

Appendix A. MCC assessment modelled scenario and input parameters

The table below lists key assumptions and input parameters used in this assessment.

Table 8 Key assumptions and input parameters used in this assessment

Property	Detail and data source for MCC	Detail and data source for PACR
Horizon	1 July 2026 to 30 June 2050	1 July 2025 to 30 June 2050
Generator closures	2026 ISP Step Change schedule.	2024 ISP – Step Change.
Fixed project list	Committed and Anticipated projects based on the January 2026 Generation Information update, together with additional policy-supported projects aligned with the 2026 ISP.	Committed and anticipated generators from Draft 2024 ISP which is based on the July 2023 AEMO Generation Information. 17 Queensland projects updated based on the May 2024 Generation Information.
Demand traces	2026 ISP Step Change scenario, using 10% POE demand traces.	2024 ISP – Step Change.
Existing line limits	2026 IASR workbook v7.8, Step Change.	2023 IAS workbook v5.317 – Step Change.
Transmission augmentations	2026 IASR workbook v7.8, Step Change.	2023 IAS workbook v5.317 – Step Change.
Fuel prices	2026 IASR workbook v7.8, Step Change.	2023 IAS workbook v5.317 – Step Change.
NEM carbon budgets to achieve Federal Government targets	2026 IASR workbook v7.8, Step Change.	2023 IAS workbook v5.317 – Step Change.
NEM policy targets	2026 IASR workbook v7.8, Step Change.	2023 IAS workbook v5.317 – Step Change
State-based policy targets	2026 IASR workbook v7.8, Step Change.	2023 IAS workbook v5.317 – Step Change
Discount rate	7% real, pre-tax.	7% real, pre-tax.
Cost of emissions	AER's *Valuing Emissions Reduction* guidance note.	AER's *Valuing Emissions Reduction* guidance note.

Appendix B. Comparison of net present value methodology

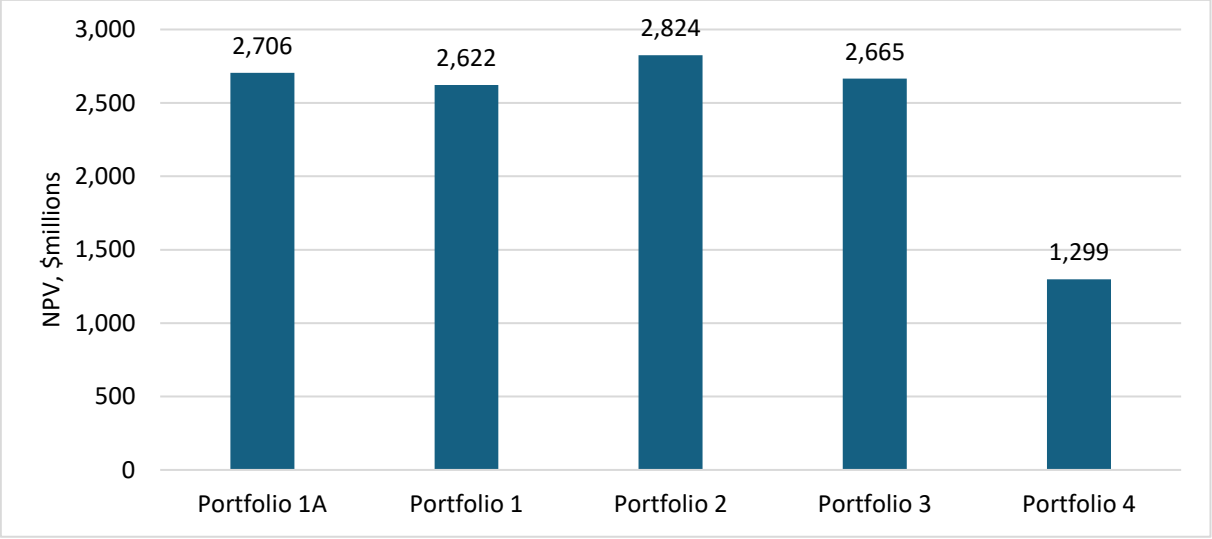
Since publishing the PACR for the System Strength RIT-T, Powerlink has aligned its approach to annualising and discounting costs with AEMO's ISP methodology. This converts capital investment into an equivalent annual cashflow, enabling consistent comparison of assets with different economic lives and commissioning dates. Powerlink is required to follow the assumptions used by AEMO and has adopted this approach in this assessment to align with AEMO's assumptions. This approach changes the capital cost profile of solutions assessed used this MCC assessment compared to the PACR. In the PACR, capital cost was modelled on when it would be incurred by Powerlink.

Under the AEMO cost-benefit assessment methodology the capital cost is spread over the economic life of the asset to reflect how the costs would be recovered. The WACC is also included in the annual cost of the capital investment. The cashflow calculation applies the technology-specific real pre-tax WACC estimates from AEMO's 2025-26 IASR. In particular.

- 3% for regulated WACC for transmission assets;
- 8% for BESS WACC;
- 9% for large open-cycle gas turbine WACC; and
- 8.5% for 24-hour PHES WACC.

Comparatively the method used in the PACR did not include a return on investment for either regulated or unregulated assets. The results of a net present value using the methodology consistent with the assessment in the PACR are presented bellow in Figure 18 using the 2026 ISP Step Change scenario.

Figure 18 Net present value assessment with methodology used in the PACR, 2026 ISP Step Change Scenario



Portfolio 2 remains the preferred option consistent with the results under the latest AEMO ISP methodology used in the MCC assessment. The rankings of Portfolios however are slightly different with Portfolio 1A being ranked second rather than Portfolio 3 under the methodology used in the PACR. The net present value is lower under the PACR methodology as the capital cost is incurred earlier.

Appendix C. Compliance checklist

The table below outlines Powerlink's compliance requirements and assessment with regard to a material change in circumstances set out in the NER.

Table 9 MCC Checklist

Clause	Requirement	Assessment
5.16.4(z3)(1)	RIT-T proponent has published a PACR in respect of a RIT-T project	Published 30 June 2025
5.16.4(z3)(2)	A Network Service Provider still wishes to undertake the RIT-T project to address the identified need	Yes, refer to Section 7
5.16.4(z3)(3)	There has been any material change in circumstances	Yes, refer to Section 4
5.16.4(z3)(4)	Notify the AER in writing of the material change in circumstances, which must also set out the nature of that material change in circumstances, any actions the RIT-T proponent proposes to take as a result of that material change in circumstances and the timeframes within which it proposes to complete any such actions	On 19 August 2026, Powerlink provided written notification to the AER of the MCC and set out the nature of MCC, the actions Powerlink proposed to take as a result of the MCC and the timeframes within which Powerlink proposed to complete any such actions.
5.16.4(z3)(5)	Provide any information necessary to support any actions the RIT-T proponent proposes to take, including any information necessary to demonstrate that the RIT-T proponent has had regard to the matters in paragraph (z4A)	Yes, refer to Section 7 of the MCC Notification.
5.16.4(z4A)(1)	Whether, in the RIT-T proponent's reasonable opinion, the reapplication of the regulatory investment test for transmission to the RIT-T project is justified in the circumstances;	No, refer to Section 7.1 of the MCC Notification
5.16.4(z4A)(2)	The costs and delay that may result from the actions the RIT-T proponent proposes to take as a result of the material change in circumstances	Refer to Section 7.2 of the MCC Notification
5.16.4(z4A)(3)	The costs and delay that may result from the reapplication (in whole or in part) of the regulatory investment test for transmission to the RIT-T project.	Refer to Section 7.2 of the MCC Notification

Contact us

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