

Material change in circumstances – Meeting System Strength Requirements in NSW

AER Determination

June 2026

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AER reference: AER25011496

1 Summary

The Australian Energy Regulator (AER) is the economic regulator for electricity transmission and distribution services in the National Electricity Market (NEM). Our electricity-related powers and functions are set out in the National Electricity Law (NEL) and National Electricity Rules (NER). We are responsible for developing, publishing and maintaining the Regulatory Investment Test for Transmission (RIT-T) and accompanying RIT-T Application Guidelines. The RIT-T is an economic cost benefit analysis that is used by transmission businesses to assess and rank different investment options.

Transgrid is responsible for the electricity transmission network in NSW and is the system strength service provider responsible for system strength services in its network.

Between December 2022 and July 2025, Transgrid applied the RIT-T to address the identified need, as determined by the Australian Energy Market Operator (AEMO), of providing adequate sources of system strength to meet the minimum and efficient levels of system strength at each system strength node in NSW in the coming years to 2044. The RIT-T's project assessment conclusion report (PACR), released on 14 July 2025, found that the preferred option to address this need was installation of 17 synchronous condensers, backed by 8,150 MW of Battery Energy Storage Systems (BESS), 650 MW of upgrades to synchronous machines, and gas and hydro re-dispatch.

On 13 August 2025, a dispute notice was raised with the AER on the RIT-T, and on 23 December 2025, we published a determination that set out that Transgrid did not need to reapply the RIT-T or update its PACR with respect to the information raised in the dispute.

On 29 April 2026, Transgrid submitted to the AER a notice that a material change in circumstances (MCC) has occurred for this project. The notice identified that this material change had been triggered as a result of the criteria of one of the project's RIT reopening triggers being met. That is, the cost to procure synchronous condensers had increased by more than 30% since the publication of the PACR. Transgrid also identified increases in the time needed to procure synchronous condensers and changes to synchronous generator operation and retirement dates as other potential MCCs.

Consistent with the requirement of cl. 5.16.4(z3) of the NER, the MCC notice identified the nature of the MCC, actions Transgrid proposes to take in response, timeframes in which these actions will be completed and information that justifies the actions and timeframes. Transgrid's proposal is to undertake a streamlined analysis of the MCC and publish this analysis alongside a statement identifying whether the preferred option identified in the PACR has changed and, if so, the new preferred option. These actions were proposed to be completed by 24 June 2026.

Upon receiving an MCC notice, cl. 5.16.4(z5A)(2) of the NER requires the AER to determine whether to approve or reject any actions (and/or associated timeframes) notified by the RIT-T proponent, and where the AER approves any such actions, specify a reasonable timeframe within which such actions must be completed. Where the AER rejects the actions (and/or associated timeframes), cl. 5.16.4(z5A)(4) of the NER requires the AER to specify the actions (if any) the AER requires the RIT-T proponent to take, as well as a reasonable timeframe within which any such actions must be completed.

Having considered Transgrid's notice of MCC, the AER rejects the actions proposed by Transgrid in response to the MCC. Instead, the AER requires Transgrid to undertake updated analysis, publish a draft statement, allow for 1 month of public consultation, then prepare and publish a final statement which responds to submissions and identifies any refinement to the preferred option. The required actions are set out in section 4.

On balance, the AER considers that reapplying the RIT-T would create disproportionate delay, increase costs and increase risks to the reliability and secure operating state of the network. However, a limited period of consultation on Transgrid's updated assessment is still warranted to provide transparency around the changed inputs, assumptions and any refinement to the preferred option.

The AER does not consider that this limited period of consultation will materially affect timely delivery of system strength services. The benefit of the consultation in providing transparency around changes since completion of the RIT-T in July 2025 outweighs the limited risk of delay associated with the required process.

2 Background

2.1 System strength shortfall declared by AEMO

AEMO's 2022 *System Strength Report* identified system strength shortfalls at Newcastle and Sydney West system strength nodes from 1 July 2025 to 1 December 2025.¹ A system strength shortfall, or a fault level shortfall, is defined under clause 11.143.1 of the NER as a shortfall in the 3 phase fault level typically provided at a system strength node in a region (having regard to typical patterns of dispatched generation in central dispatch) compared to the minimum 3 phase fault level most recently determined by AEMO for the system strength node in the system strength requirements.² A key cause of the projected system strength shortfall was the planned early retirement of Eraring Power Station (Eraring) in August 2025. In December 2022, AEMO gave notice to Transgrid under clause 11.143.14(d) of the NER of the projected system strength shortfall.³ Under clause 11.143.15(b) of the NER, Transgrid must make system strength services available to address the expected system strength shortfall identified by AEMO in its notice.⁴

In May 2024, the NSW Government announced the extension of Eraring by 2 years.⁵ AEMO's 2024 *System Strength Report* identified the extension of Eraring would defer the projected system strength shortfalls at the Sydney West and Newcastle system strength nodes until 2027–28.⁶

2.2 Meeting System Strength Requirements in NSW RIT-T

Transgrid initiated the RIT-T process with the publication of the project specification consultation report (PSCR) on 16 December 2022 to assess options that would address the system strength shortfall projected by AEMO in the second half of 2025 and meet system strength requirements in NSW.⁷

AEMO's 2022 and 2024 Integrated System Plans (ISPs) identify the maintenance of system strength as critical to the security of the NEM power system.⁸ Though not identifying an actionable project, this recognition in conjunction with the system strength shortfall identified in AEMO's 2022 *System Strength Report* and the incoming system strength requirements highlighted the importance of this RIT-T process.⁹

¹ AEMO, [2022 System Strength Report](#), December 2022, p. 79.

² NER, cl.11.143.1

³ NER, cl.11.143.14(d); Transgrid, [Project Specification Consultation Report](#), December 2022, p. 3.

⁴ NER, cl.11.143.15(b)

⁵ NSW Government, [NSW Government secures 2-year extension to Eraring Power Station to manage reliability and price risks](#), 23 May 2024.

⁶ AEMO, [2024 System Strength Report](#), February 2025, p. 4.

⁷ Transgrid, [Project Specification Consultation Report](#), December 2022.

⁸ AEMO, [2022 Integrated System Plan](#), June 2022, p. 22-23; AEMO, [2024 Integrated System Plan](#), June 2024, p. 38.

⁹ Transgrid, [Project Specification Consultation Report](#), December 2022, p. 9.

Transgrid published the PACR for Meeting system strength requirements in NSW on 14 July 2025.¹⁰ The PACR identified portfolio option 2 as the preferred option. This option involves:

- Commissioning 3 synchronous condensers in Transgrid's network in 2028–29 and another 7 in 2029–30.
- One of the 10 synchronous condensers being brought forward to be available in 2029–30, when compared to other options. This synchronous condenser would be in Transgrid's network rather than the New England REZ.
- Procuring non-network solutions, provided they meet the criteria for efficient and prudent expenditure, including grid-forming battery energy storage system (BESS).¹¹

The PACR estimated the cost of portfolio option 2 to be \$6.269 billion.¹² Transgrid's modelling indicated that the preferred option was expected to close the risk of system strength gaps in 2029–30, reduce the risk of system strength gaps to less than 1.5% of the time in 2028–29 and less than 2% of the time in 2027–28, and increase system strength robustness in 2028–29.¹³ The PACR estimated that option 2 would deliver net market benefits of \$8.842 billion.¹⁴

To implement portfolio option 2 (as the preferred option identified in the PACR) the synchronous condensers have been split into two delivery phases, based on the target dates for commissioning. Phase 1 is the earlier phase, with synchronous condensers to be installed and commissioned by February 2029. The procurement of Phase 1 synchronous condensers is proceeding as a Priority Network Investment Project under state legislation, the *Electricity Infrastructure Investment Act (NSW)* (EII Act), rather than under the NER. Phase 2 is then the following tranche of synchronous condensers and is the relevant tranche for the MCC.

2.3 Transgrid's notice of MCC

On 29 April 2026, Transgrid submitted a notice to the AER that an MCC has occurred since the publication of the PACR for the Meeting system strength requirements in NSW project, and sets out the actions it proposes to take in response to the MCC.

Transgrid's notice specifies that an MCC has occurred that was identified in the PACR as a RIT reopening trigger, specifically that the cost of synchronous condensers required for and after 2031/32 has increased by significantly more than 30%.¹⁵

The notice also identifies two other key assumptions which were raised as further information and that may have also constituted an MCC:¹⁶

¹⁰ Transgrid, [Project Assessment Conclusions Report](#), July 2025, p. 3.

¹¹ Transgrid, [Project Assessment Conclusions Report](#), July 2025, pp. 62–63.

¹² Transgrid, [Project Assessment Conclusions Report](#), July 2025, p. 65.

¹³ Transgrid, [Project Assessment Conclusions Report](#), July 2025, p. 8.

¹⁴ Transgrid, [HoustonKemp NPV modelling outcomes](#), July 2025.

¹⁵ Transgrid, [Project Assessment Conclusions Report](#), July 2025, p. 110, and Transgrid, [Notice of MCC](#), April 2026, p. 2.

¹⁶ Transgrid, [Notice of MCC](#), April 2026, p. 3.

- Material increases in the delivery timeline for Phase 2 synchronous condensers. Transgrid states this is due to both:
 - the time required to complete the regulatory process and
 - high international demand for equipment leading to a risk of significantly increased long lead item procurement times.
- Changes to the anticipated timing of retirement and operation behaviour of NSW coal units in the 2026 draft ISP and 2025 Transition Plan for System Security.

The procurement of Phase 1 synchronous condensers is proceeding under the EII Act as a Priority Network Investment Project, and so procurement of that package of synchronous condensers will not be affected by the MCC analysis. The MCC analysis is expected to result in the identification of the quantities and locations of Phase 2 synchronous condensers and non-network solutions that, combined with the Phase 1 synchronous condensers and other sources of system strength, make up the preferred option.

As a result of the MCC, Transgrid proposes to:

1. not reapply the RIT-T
2. undertake a streamlined MCC assessment drawing on the PACR analysis but updating costs, timing and relevant input from recent publications like the draft 2026 ISP and 2025 Transition Plan for System Security
3. publish an MCC assessment statement on its website setting out whether the PACR preferred portfolio remains preferred, or any refinements to portfolio composition or timing.

Transgrid proposes to publish the MCC assessment statement by 24 June 2026.

Transgrid notes the following information in support of these actions:

- synchronous condenser manufacturing is globally constrained and lead times are increasing
 - delays to placing orders would materially delay delivery and increase reliance on operational interventions to meet the risk of system strength gaps. This would include redispach (additional generation) of hydro and gas units solely to provide system strength services and avoid re-scheduling outages, constraining generation or proactively shedding customer load leading to unserved energy.
 - delays risk moving delivery to after the 2033 expected retirement of existing Bayswater and Vales Point power stations causing significant periods with risks of system strength gaps even when redispach is factored in.
- The procurement process used for Phase 1 synchronous condensers may be leveraged for Phase 2 if there is not an extended period before regulatory approval is given. This may allow time and cost efficiencies in the process and serve to reduce the risk associated with increasing lead times.
- Ongoing analysis suggests the MCC is not expected to cause a change in the technology to be used under the preferred option, but may refine the composition of technologies identified in the PACR.

- Transgrid notes this analysis is largely complete, incorporates contextually relevant sources of information such as AEMO’s draft 2026 ISP and 2025 Transition Plan for System Strength and is the reason for the early proposed date for the actions above.
- The RIT-T for this project took 2.5 years to complete and a reapplication is suggested to take a similar amount of time given the complexity of modelling required and strong engagement from non-network option providers.
 - A reapplication of the RIT-T would delay the procurement process and guarantee much or all of the risk outlined above would be realised.

2.4 The MCC determination process

If a RIT-T proponent has published a PACR in respect of a RIT-T project, and an NSP still wishes to undertake the project and there has been any MCC, then the RIT-T proponent must notify the AER in writing of the MCC, which must also set out the nature of that MCC, any actions the RIT-T proponent proposes to take as a result and the timeframes within which it proposes to complete such actions.¹⁷

The RIT-T proponent must also provide the AER with 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 clause 5.16.4(z4A).¹⁸

Clause 5.16.4(z4) of the NER provides that an MCC includes, but is not limited to:

- a change to the key assumptions used in identifying the identified need described in the project assessment conclusions report
- for a RIT-T project contemplated by clause 5.16.4(k)(10), one or more RIT reopening triggers applying to the project having been triggered; or
- a change in circumstances which, in the reasonable opinion of the RIT-T proponent, means that the preferred option identified in the project assessment conclusions report may no longer be the preferred option.

Within 40 days of receiving the notice, the AER must determine whether to approve or reject any actions (and/or associated timeframes) notified by the RIT-T proponent, and where the AER approves any such actions, specify a reasonable timeframe within which such actions must be completed.¹⁹ Where the AER rejects the actions (and/or associated timeframes), the AER must specify the actions (if any) the AER requires the RIT-T proponent to take, as well as a reasonable timeframe within which any such actions must be completed.²⁰

The AER must also publish the notice, notify the RIT-T proponent of the determination and publish the determination.²¹

¹⁷ NER, cl 5.16.4(z3)(4).

¹⁸ NER, cl 5.16.4(z3)(5).

¹⁹ NER, cl 5.16.4(z5A)(2).

²⁰ NER, cl 5.16.4(z5A)(4).

²¹ NER, cl 5.16.4(z5A).

In making a determination, the AER must have regard to:²²

- the credible options identified in the PACR
- the MCC identified by the RIT-T proponent
- whether a failure to promptly undertake the RIT-T project is likely to materially affect the reliability and secure operating state of the transmission network or a significant part of that network
- whether the RIT-T proponent has had regard to:²³
 - whether, in the RIT-T proponent's reasonable opinion, the reapplication of the RIT-T to the RIT-T project is justified in the circumstances;
 - the costs and delay that may result from the actions the RIT-T proponent proposes to take as a result of the MCC; and
 - the costs and delay that may result from the reapplication (in whole or in part) of the RIT-T to the RIT-T project.

The AER may request additional information or analysis from the RIT-T proponent that the AER considers reasonably necessary to assist it in making a determination.²⁴ A request for additional information or analysis automatically extends the period of time for making a determination by the amount of time it takes the RIT-T proponent to provide the additional information or analysis, provided that the AER makes the request for additional information at least seven business days prior to expiry of the period of time for making a determination.²⁵

²² NER, cl 5.16.4(z5)(1).

²³ NER, cl 5.16.4(z4A).

²⁴ NER, cl 5.16.4(z5)(2).

²⁵ NER, cl 5.16.4(z5C).

3 AER Assessment

Under cl. 5.16.4(z5A)(2) of the NER, the AER has determined to reject the actions and timeframes proposed by Transgrid in its notice of MCC for the Meeting System Strength in NSW RIT-T. In accordance with cl. 5.16.4(z5A)(4) of the NER, the AER instead requires Transgrid to take the actions and comply with the timeframes set out in section 4. In summary, those actions require Transgrid to undertake updated analysis, publish a draft statement, allow for a 1 month public consultation, then prepare and publish a final statement which responds to submissions and identifies any refinement to the preferred option.

We understand from Transgrid's notice of MCC that, while the cost of synchronous condensers has increased, other changes in circumstances may reduce the number of synchronous condensers required. Through its MCC analysis and the required actions, Transgrid must identify the most efficient solution in the long-term interests of consumers, including where a smaller network component in the preferred option may reduce costs. That analysis will consider changes in system strength requirements over time, the risks of deferring further investment in synchronous condensers, and the extent to which other technologies may be able to provide some of these services in future.

We are satisfied that the requirements of cl. 5.16.4(z3) of the NER have been met. In particular, the increase in the cost of synchronous condensers has triggered a RIT-T reopening trigger identified in the PACR and therefore constitutes an MCC.

In making this determination, we have had regard to the matters in cl. 5.16.4(z5) and cl. 5.16.4(z4A) of the NER, as well as the National Electricity Objective and the purpose of the RIT-T. On balance, we consider that reapplying the RIT-T would impose disproportionate delay and risk, but that a limited period of consultation on Transgrid's updated assessment is necessary to provide transparency around the changed inputs, assumptions and any refinement to the preferred option.

Why reapplication of the RIT-T is not justified

We do not consider that reapplication of the RIT-T, in whole or in part, is justified in the circumstances. Transgrid's notice indicates that international demand has increased lead times for synchronous condensers and that delaying procurement of the Phase 2 synchronous condensers would materially increase the risk that they are not in service in time to address forecast system strength gaps emerging in the early 2030s, including following the expected retirement of Bayswater and Vales Point power stations. In those circumstances, a full reapplication of the RIT-T would be likely to increase costs to consumers and increase risks to the reliability and secure operating state of the network.

We accept that there is urgency in progressing the Phase 2 synchronous condensers. In January 2026, Origin announced an extension of operations for Eraring through to April 2029.²⁶ This extension is expected to reduce pressure on the timing of Phase 1 synchronous condensers. However, we understand that Transgrid does not consider that the extension of Eraring is a material change in circumstances in relation to the RIT-T, and Transgrid did not

²⁶ Origin, [Origin extends Eraring Power Station operations to 2029](#), 20 January 2026.

notify the AER of an MCC as a result of the extension. The delivery of Phase 2 synchronous condensers is planned to occur after the now-extended Eraring close date, and both Phase 1 and Phase 2 synchronous condensers remain important to addressing forecast system strength gaps emerging after that period. If procurement is materially delayed, the Phase 2 synchronous condensers may not be commissioned in time to address the impact of generator retirements in the early 2030s. This would increase the likelihood of reliance on redispatch, additional network constraints or load shedding, with corresponding cost and reliability impacts for consumers.

We acknowledge that Transgrid is considering alternative technologies. However, the material before us indicates that these alternatives have not yet been demonstrated to provide the required system strength services at the relevant scale and timing needed to meet the minimum system strength requirements. For that reason, we consider the risk associated with materially delaying Phase 2 procurement remains significant.

At the same time, we do not consider that requiring Transgrid to undertake a short public consultation on a draft statement would create the same level of delay or risk as a reapplication of the RIT-T. A limited consultation period is a proportionate response to the MCC because it preserves the ability to progress procurement promptly while still allowing stakeholders to test the updated analysis.

Why a limited period of consultation is required

Consultation is a central feature of the RIT-T framework because it allows stakeholders to test the credible options, the inputs and assumptions used in the analysis, and the reasons for the preferred option. That feature remains important here because the MCC reflects changed costs, timing and power system assumptions since publication of the PACR.

We note that Transgrid undertook an extensive RIT-T process between December 2022 and July 2025, including substantial engagement with stakeholders and non-network proponents. That prior consultation reduces, but does not eliminate, the need for further consultation in response to the MCC.

The RIT-T process identified a preferred portfolio of technologies through detailed modelling. The material before us suggests that the MCC is more likely to result in a refinement to the composition or timing of that portfolio than in a wholly new set of credible options.

In ordinary circumstances, the AER would prefer a full public consultation process in response to an MCC, consistent with the RIT-T. However, for the reasons set out above, we consider that approach would create disproportionate delay in this case. The more appropriate response is to require a short consultation period that is targeted to the changes since the PACR, rather than reapplying the RIT-T process.

We therefore require Transgrid to publish a draft statement and consult for a period of 1 month before publishing a final statement. This will provide transparency around the changed inputs, assumptions and any refinement to the preferred option, while avoiding the material delay and increased reliability risk that would be associated with a reapplication of the RIT-T.

Reliability and timing impacts

We accept that a substantial delay to Phase 2 procurement would materially increase risks to the reliability and secure operating state of the network. However, the limited consultation period required by this determination does not create the same degree of risk. On the information before us, a 1 month consultation period, followed by a further period to consider submissions and finalise the statement, does not materially alter Transgrid's ability to proceed with procurement in a timely way.

We also note Transgrid's submission that there may be efficiencies in leveraging the existing procurement process used for the Phase 1 synchronous condensers. The required actions in section 4 are intended to allow Transgrid to continue progressing the project promptly, while ensuring stakeholders have a meaningful opportunity to comment on the updated assessment. On balance, we consider that this approach better promotes transparency without materially compromising timely delivery of system strength services.

4 Required actions and associated timeframes in response to MCC

The AER has determined to reject the actions proposed by Transgrid for the reasons specified in section 3. Instead, the AER requires Transgrid to undertake the following actions in the associated timeframes:

1. Undertake a streamlined cost benefit analysis, drawing on:
 - a) the existing PACR analysis
 - b) updated cost and timing information, and
 - c) the most recent AEMO ISP-related inputs and outputs and AEMO's 2025 Transition Plan for System Security, where relevant.
2. Transgrid must publish a draft statement on its website by 24 June 2026 which:
 - a) sets out:
 - i) a statement that the preferred option identified remains the preferred option, as well as any supporting information necessary to demonstrate that the preferred option identified remains the preferred option; or
 - ii) a statement that the preferred option is no longer the preferred option and identifying the new preferred option, as well as any supporting information necessary to demonstrate that the preferred option is no longer the preferred option and the reasons the new preferred option is the preferred option,
 - b) provides supporting information setting out the range of all potential solutions which could reasonably be expected to provide system strength, as well as reasons why any potential options were not considered credible or are considered to not form part of the preferred portfolio option,
 - c) provides a description of each of the changes in circumstances, including the changed operation of synchronous generation, and its materiality to the analysis, and
 - d) presents the updated cost benefit analysis developed under paragraph (1).
3. Transgrid must seek submissions from registered participants, AEMO and interested parties on the preferred option presented and the issues addressed in the draft statement. The period for submissions must be 1 month from the date Transgrid publishes the draft statement on its website.
4. Transgrid must publish a final statement which sets out the matters required under paragraph (2), incorporates feedback from submissions and provides a summary of, and response to, submissions received during the consultation period. The final statement must be published on Transgrid's website within 1 month of the closing date for submissions, at the latest by 24 August 2026.