

Dear Sir/Madam,

Please find attached the Centre for Smart Power and Energy Research (CSPER), School of Engineering, Deakin University's submission on the Australian Energy Regulator's preliminary position concerning Transgrid's application to reopen its 2023–28 transmission revenue determination for Project EnergyConnect.

Prepared by Dr Alireza Ganjovi and Associate Professor Saman A. Gorji, the submission offers an engineering and energy-systems perspective on the evidence needed to assess the application. It addresses the definition and timing of the asserted event, the reliability and security consequences of material delay or non-completion, the relevant transmission system, and the boundary between reopener expenditure and later review.

We recommend that the AER distinguish observed conditions from predictions about future project delivery and assess reasonable control and foreseeability against a dated record of information and decisions. For Criterion 6, we propose comparing rectified delivery with specified delay and non-completion cases under consistent system assumptions. Credible interim and replacement measures should be tested before determining whether any remaining adverse effect is likely and material.

The submission also recommends a reconciliation of the approved allowance, event-caused costs, expenditure incurred before the application, remaining expenditure and available offsets. This would make the effect of expenditure timing on the reopener threshold and any substituted forecast clear.

CSPER does not seek to prejudge the AER's interpretation of the National Electricity Rules or the outcome of Transgrid's application. Our recommendations aim to make each finding traceable to the evidence required for that decision.

We appreciate the opportunity to contribute to the consultation and trust that the submission will assist the AER's assessment.

Yours sincerely,

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Submission on Transgrid Project EnergyConnect capex reopener

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1. Submission context and executive summary

CSPER responds to the AER's preliminary position on Transgrid's 2023–28 Project EnergyConnect (PEC) capex reopener. Our contribution is an auditable engineering test of the asserted event, the consequences of leaving it unrectified, and the expenditure eligible for a substituted forecast. PEC's value is established, but its general benefits do not alone establish the specific reopener tests. The AER should decide the seven criteria on dated records and paired operating scenarios; amounts outside the reopener remain subject to the separate 2028–33 review [1, 2].

Decision	Evidence requested	Consultation questions
Qualifying event	Dated conditions, contractor records, knowledge and decisions	1–6
Adverse consequence	Delay and non-completion cases; residual reliability and security effects	7–11
Expenditure boundary	Baseline, incremental cost, incurred and remaining spend, offsets	12

2. Scope and decision framework

Clause 6A.7.1 poses three separate questions: what qualifying event occurred; what would likely happen if its adverse consequences were not rectified; and what additional capex the Rules allow the AER to add. Evidence of contractor distress cannot substitute for an operational counterfactual, and evidence of system benefit cannot establish event causation or expenditure eligibility [1]. We address engineering evidence and decision quality, while recognising that the AER must resolve the legal interpretation.

The sequence matters. Only a clearly identified event permits a test of its unrectified consequences; only expenditure caused by rectifying those consequences can then be classified for the reopener. The AER's preliminary concerns focus on Criteria 1 and 6, while its interpretation of committed and already-incurred capex remains open [1]. Our proposed records let the AER identify a failure of proof at one step without treating that failure as a finding about the underlying value of PEC.

3. Criterion 1 event and evidence timeline

Criterion 1 requires an event that occurred during the regulatory period, lay beyond Transgrid's reasonable control and was not reasonably foreseeable when the determination was made. A series of events or a state of affairs can qualify. The AER questions whether Transgrid's "Contract Failure" combines observed conditions with an October 2023 prediction that the existing contract would not deliver PEC [1, 2]. Request a dated register with contemporaneous source, receipt date, decision and response for each entry:

Evidence field	Illustrative record and question
External conditions	September 2022 NSW floods: when did constraints become observable?
Contractor performance	Productivity following Clough's December 2022 administration: what changed?
Transgrid information	Contract issues by January 2023 and later financial information: who knew what, when?
Transgrid decisions	25 October 2023 Board assessment: what remedies remained available?
Future prediction	Expected inability to deliver under the existing EPC contract: forecast or occurrence?

The register should span the 2 December 2022 revised proposal and 28 April 2023 determination, without presuming which date governs foreseeability. Test reasonable control against monitoring, contractual protections, escalation and feasible alternatives; test foreseeability using information then available, without inferring it from the ultimate overrun. Comparable-project forecasting can discipline that inquiry but cannot settle the legal question [1, 3]. We do not conclude on the present record whether the contract failure was beyond reasonable control.

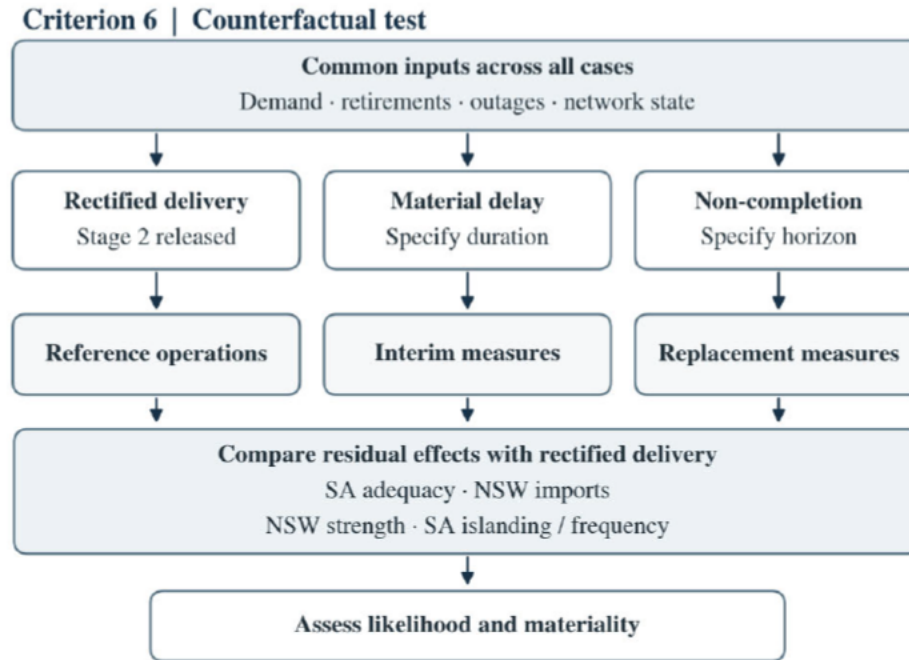
The AER should identify when each external condition changed contractor capacity, when Transgrid learned of the change, and when a reasonable corrective option ceased to be available. Distinguishing those dates avoids merging cause, observation and management response into a single "contract failure". It also allows an explicit finding on whether the relevant event had occurred during the regulatory period [1].

4. Criterion 6 reliability and security test

Criterion 6 concerns likely material adverse effects on reliability and security; the AER consults on whether its wording requires both or either [1]. AEMO identifies PEC's resource-sharing, South Australian islanding and NSW system-strength benefits, but has not analysed material delay or non-completion [1, 4, 5]. Compare the proposed rectification with two distinct unrectified cases: a specified Stage 2 delay and non-completion. Hold underlying demand, generation, retirement and network assumptions consistent, then vary uncertain inputs and test practicable responses. The October 2025 ESOO update removed a previously projected South Australian 2026–27 reliability gap following changes that included later Torrens Island B retirement; retirement assumptions therefore require sensitivity analysis [6].

Claimed effect	Engineering test
SA supply adequacy	Expected unserved energy, likelihood and duration of shortfall after credible resources and responses.
NSW access to imports	Transfer during scarcity or contingencies; resulting load-at-risk frequency and severity.
NSW system strength	Local fault-level and stability margins, duration of breach, and timely substitute services.
SA islanding and frequency	Separation likelihood, frequency nadir, rate of change, scheme operation and load shedding.

Below Figure shows the proposed Criterion 6 comparison. The rectified delivery case provides a common reference for a specified Stage 2 delay and non-completion. All three cases use consistent system assumptions; credible interim or replacement measures are then applied to the unrectified cases. The AER can compare the remaining effects on adequacy, imports, system strength and frequency security, and assess whether each effect is likely and material [1, 5].



Each result should name the affected element, contingency, technical limit, probability, duration and consequence. Model credible operating constraints, generation, storage, system-strength procurement and other network or non-network responses; report the residual effects, including interacting effects when they arise in the same operating conditions. The AER can then decide whether those effects meet “likely” and “materially”, rather than equating lower transfer capacity or higher intervention cost with a reliability failure [1]. International transmission appraisal also separates adequacy from operational performance [7].

For “likely”, disclose the probability model and the plausible range across weather, outage and retirement assumptions; for “materially”, show changes in the relevant technical measure against the applicable limit and the number of exposed hours. Resource adequacy should not be inferred from a single forecast gap if feasible capacity responses remove it. Security effects should identify the initiating event and operational sequence leading to instability or load shedding. Report results both before and after feasible mitigation, since the difference determines which adverse consequence actually remains [1, 4, 5].

5. Relevant transmission system

The AER asks whether Criterion 6 covers Transgrid’s NSW network alone or the physically connected NSW and South Australian systems. Report modelled outcomes under both geographic scopes. Trace each effect to its network location and causal pathway across PEC: NSW transfer and system strength should be distinguished from South Australian adequacy and islanding [1, 4]. State whether inclusion of South Australia changes the finding on likelihood or materiality. The location of an engineering effect does not determine who pays for PEC; international cross-border cost-allocation practice addresses those as separate questions [8].

A cross-border result should identify the operating state in which NSW capacity or flows alter South Australian frequency, islanding exposure or available supply. This permits an engineering finding under either reading of “relevant transmission system”, with the AER’s legal choice stated separately [1].

6. Expenditure boundary and later review

In 2022–23 dollars, Transgrid compares a \$2,121 million PEC allowance with a \$3,628 million forecast, a \$1,507 million increase. It requests \$1,142 million through this reopener and leaves \$365 million outside it [2]. Require a transaction-level reconciliation of the approved baseline; event-caused incremental work; expenditure incurred before the 13 February 2026 application; contracted but unincurred and remaining forecast costs; insurance, bond and contractor recoveries; and amounts

reserved for later review. Code each item once by contract, work package, date and price basis. Do not deduct proceeds already netted from Transgrid's forecast twice [2].

The timing distinction can change Criterion 4's threshold result. The AER tentatively considers that unincurred costs could satisfy Criterion 3 even if committed, but has reached no preliminary conclusion on whether already-incurred expenditure counts toward Criterion 4. If only future spend qualifies, it may fall below the stated \$457 million threshold (5% of first-year RAB); test separately whether total period capex exceeds its approved forecast [1]. The AER also preliminarily reads clause 6A.7.1(f) as allowing only expenditure yet to be undertaken into a substituted forecast. Resolve these interpretations openly and apply the same cost ledger to each. Amounts not approved through the reopener, including the \$365 million balance, may be examined for prudence and efficiency in the 2028–33 determination; capital expenditure sharing scheme treatment is a separate decision [1, 9].

Record the date on which each obligation was agreed, work performed, expenditure recognised and cash paid: a contract commitment, an invoice and incurred capex answer different timing questions. For shared overhead and financing, document the allocation rule and prevent overlap with baseline allowances. State the threshold result under both treatments of pre-application costs, and identify the amount that could actually be added if every other criterion were met. Neither exclusion from this reopener nor inclusion in a later review establishes automatic recovery [1, 2].

7. International lessons and limits

Three comparisons sharpen the evidence request. In Great Britain, Ofgem's ASTI framework links delivered outputs and efficient outturn to project allowances; its approximately 5% project-allowance adjustment threshold is different from Australia's 5% first-year RAB threshold [10]. Across Europe, ACER advises regulators to identify specific risks, account for protections already supplied by regulation, and assess efficient costs of delays beyond promoters' control [11]. In the United States, FERC distinguished costs incurred before and after approval of an abandoned-plant incentive and required within-month cost separation [12]. These examples support delivery records, residual-risk analysis and dated cost ledgers. Foreign mechanisms do not determine the meaning of the Australian Rules [1].

8. Consolidated recommendations

- i. Define the asserted event from dated observations and separately test control and foreseeability (questions 1–6).
- ii. Test specified delay and non-completion cases against credible alternatives; quantify each residual system effect (questions 7–10).
- iii. Report NSW-only and connected NSW–SA effects, while separating system scope from cost allocation (questions 9, 11).
- iv. Reconcile the allowance, event increment, incurred and remaining spend, and offsets before applying the threshold (question 12).
- v. Give criterion-specific reasons and identify costs left to the 2028–33 review without presuming recovery (questions 1, 9, 12) [1].

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