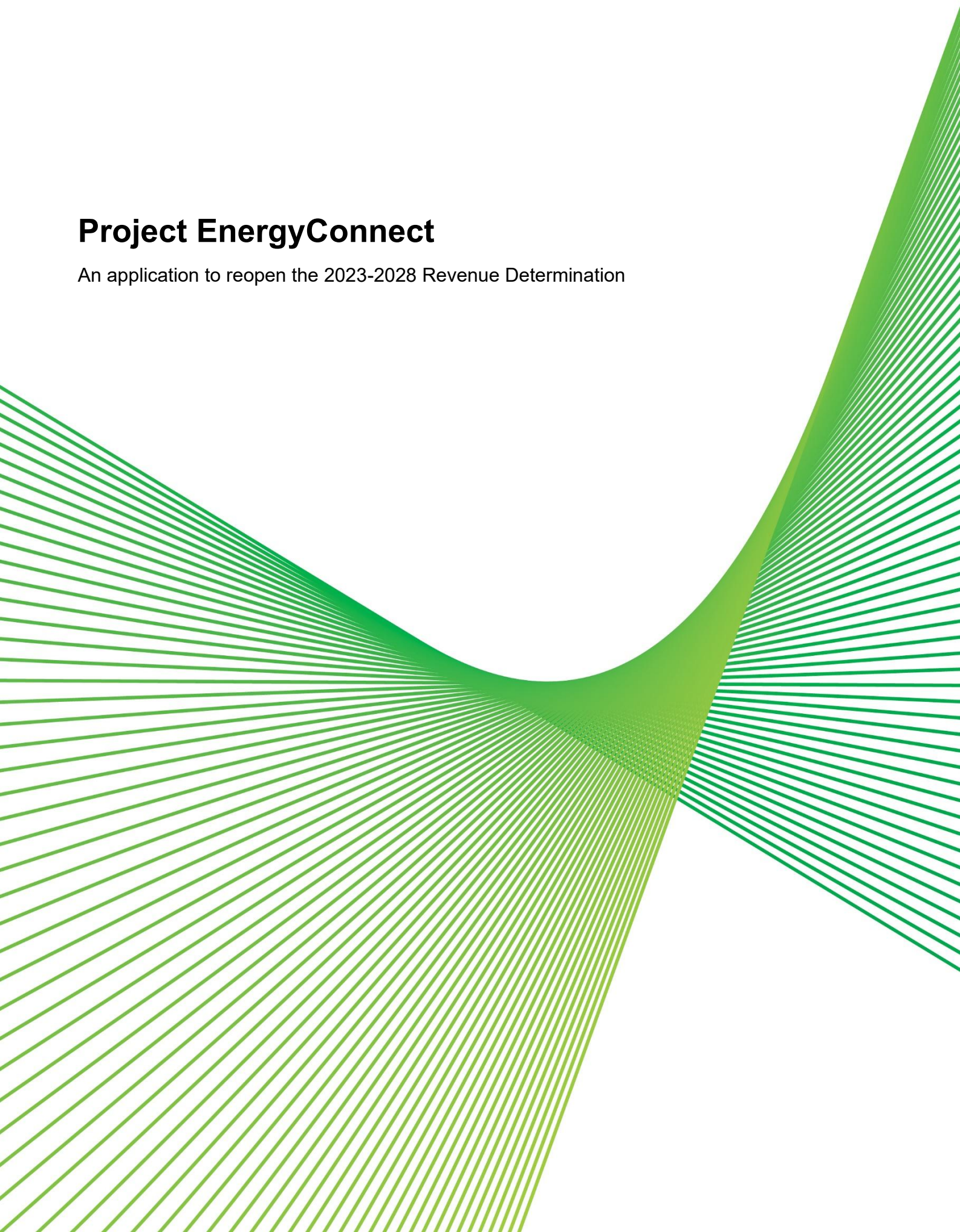
Transgrid

People. Power. Possibilities.

Project EnergyConnect

An application to reopen the 2023-2028 Revenue Determination



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February 2026

Clare Savage,
Chair, Australian Energy Regulator
Level 17 Casselden, 2 Lonsdale Street
Melbourne VIC 3000

Lodged online: aerinquiry@aer.gov.au

Dear Clare,

Project EnergyConnect – Reopener Application

Project EnergyConnect (**PEC**) is a nation-critical project, which is vital to Australia's transition to renewable energy and the achievement of State and Federal emissions reduction targets. It is the largest transmission project underway in Australia and will deliver welcome savings to energy consumers across the National Electricity Market (**NEM**).

By connecting South Australia, New South Wales and Victoria, PEC will address the weak interconnection across the NEM and unlock the South-West Renewable Energy Zone (**REZ**), thereby facilitating 3.5 GW of new renewable generation ahead of coal-fired generator closures. For consumers, PEC means improved reliability and reduced electricity costs in all three states – supporting shared generation and increased access to high-quality renewable resources.

At the start of this year, we confirmed that the forecast cost to deliver PEC had increased to $3.6 billion. We have heard directly through our stakeholder engagement about the importance of keeping network costs as low as possible, particularly given the affordability issues facing many households. In relation to PEC, however, the Australian Energy Market Operator (**AEMO**) has consistently identified it as an urgently needed, actionable project in each of its Integrated System Plans (**ISP**s) since 2020. As such, consumers in NSW, South Australia and Victoria are better off with PEC – and the sooner the better – because its capital costs will be more than offset by savings in wholesale energy prices.

I am pleased to confirm that updated independent modelling conducted by EY shows that PEC is expected to deliver total gross market benefits of $4.2 billion and net market benefits of $964 million in present value terms. Reassuringly, this analysis confirms that, despite the increased costs to deliver this critical interconnector project, it remains the best option for meeting consumers' future energy needs. In addition, even at the higher cost to complete, the construction cost for PEC benchmarks favourably against other transmission projects.

Transgrid is submitting the attached Application in relation to PEC, in accordance with the capital expenditure reopener provisions in Clause 6A.7.1(a) of the National Electricity Rules (**NER**). This Application is necessary because significant external factors outside Transgrid's control impacted the contractor's ability to deliver the project in accordance with the competitively determined contractual terms and conditions. These factors

included floods in New South Wales, labour shortages, project delays and hyper-inflation, all of which combined to severely impact the contractor.

Transgrid refers to this event as Contract Failure. Specifically, the accumulation of adverse circumstances affecting PEC, which became apparent in the period between August to October 2023, required Transgrid's Board to recognise and accept on 25 October 2023 that the construction of PEC would not be completed by the competitively procured contractor, Secure Energy Joint Venture (**SEJV**), under the existing Engineering, Procurement and Construction (**EPC**) contract. Furthermore, if PEC was to proceed and deliver the expected consumer benefits, an alternative contractual arrangement would be necessary. Transgrid has adopted the term 'Contract Failure' to capture these circumstances in a simple expression that can be readily understood.

As explained in this Application, at every stage of the process Transgrid has acted to protect the interests of consumers and deliver PEC at the lowest cost and with minimal delay. The evidence shows that the initial decision to enter into the EPC contract and our management of that contract reflected good industry practice. Following the Contract Failure, we continued to hold our contractor to account, while fully exploring all options including engaging alternative contractors to deliver the project. Ultimately, Transgrid concluded that the best option was to establish new contractual arrangements with Elecnor Australia Pty Ltd (**Elecnor Australia**) to deliver PEC at the lowest cost and as soon as practicable for the benefit of consumers.

Throughout this process, we considered independent technical, legal, and accounting advice to ensure that Transgrid's approach delivers the best outcome for consumers. Benchmarking analysis undertaken by KPMG demonstrates that while the costs of delivering PEC have increased from the initial estimates, the latest forecast project costs compare very favourably with other large transmission projects in Australia. While benchmarking is notoriously challenging where project design requirements and terrain differ markedly, PEC is expected to be cheaper than HumeLink, VNI West, and the transmission investments associated with the REZ developments in the Hunter Valley and Central-West Orana. Transgrid is therefore confident that it has achieved value for money on behalf of consumers.

In taking action to address Contract Failure, Transgrid has consistently acted in consumers' best interests, despite the uncertainty and costs in doing so. Even after allowing for the financial relief provided by this Application, we estimate that shareholders will face losses in the region of $130 million, through a combination of increased financing costs and potential penalties that may apply under the AER's Capital Expenditure Sharing Scheme (**CESS**). Furthermore, Transgrid's Board (with the support of the shareholders) committed to the increased project costs of delivering PEC without first seeking assurance from the AER in relation to the cost recovery arrangements. Transgrid's Board and shareholders adopted that approach because to do otherwise would have led to avoidable delays in the project, higher project costs and appreciably reduced net benefits for consumers.

In preparing this Application, we have engaged extensively with the Transgrid Advisory Council (**TAC),** which is our principal stakeholder engagement forum comprising energy consumers, business and industry representatives. During six deep dive sessions and a further facilitated workshop, we have listened to the range of views expressed by TAC members and provided a draft Application for feedback. Transgrid is grateful to the TAC for its invaluable feedback which has been reflected in this Application. Details of our engagement, including the views of the TAC members and Transgrid's responses, are provided in Attachment 1 to our Application.

Transgrid remains committed to delivering PEC and achieving the best possible outcome for consumers – and the actions taken by Transgrid as described in this Application provide a clear demonstration of that

commitment. Transgrid looks forward to working with the AER and our stakeholders in progressing this Application as we continue to work to deliver PEC.

Yours faithfully

Brett Redman

Chief Executive Officer

Contents

1. Introduction and background

Key points

- PEC will deliver substantial benefits to consumers as it plays a central role in the future development of the national transmission system, including by making an important contribution to achieving the Federal and State targets for renewable generation and emissions reductions, and maintaining security and reliability of supply.
- AEMO has identified PEC as an urgently needed, actionable ISP project in each ISP since 2020. The New South Wales Government has also demonstrated its support for PEC through various initiatives to facilitate the project's construction and integration into the State's energy grid. This support from the national transmission planner and the New South Wales Government underscores the importance of the project for the NEM, the State and consumers.
- Transgrid has remained committed to the successful delivery of PEC, despite a number of significant challenges that have led to delays and increased costs. In June 2021, Transgrid entered into a fixed price EPC contract with SEJV to deliver PEC. Subsequently, a series of external factors severely impacted the ability of SEJV to deliver PEC in accordance with the terms and conditions of that contract.
- The accumulation of adverse circumstances affecting PEC, which became apparent in the period between August to October 2023, required Transgrid's Board to recognise and accept on 25 October 2023 that alternative contractual arrangements would be necessary if PEC were to proceed. Transgrid has adopted the term 'Contract Failure', which is not a concept of law, to capture these circumstances in a simple expression that can be readily understood. In response, Transgrid identified and evaluated the alternative options before entering into an Incentivised Completion Cost (ICC) contract to deliver PEC with Elecnor Australia in December 2024.
- Following the new contractual arrangements, substantial improvements have been achieved in relation to project delivery, with PEC now running ahead of the agreed project milestones. In addition, local communities are benefiting significantly in terms of employment, training and local housing.
- Transgrid is lodging this Application to the AER, which seeks an amendment to Transgrid's revenue determination to include the increased costs of delivering PEC as a result of the Contract Failure, in accordance with the NER.
- Transgrid will continue to engage with the Transgrid Advisory Council (TAC) and other stakeholders in relation to PEC and this Application.
- Amounts are generally provided as real 2023$ to allow ready comparison back to the revenue determination. Numbers in tables may not add due to rounding.

1.1 Project overview

PEC is a landmark infrastructure project, which will deliver the first new electricity interconnector between Australian states in 15 years. The Australian energy landscape is changing, as we transition away from traditional fossil fuel-based electricity generation to a greater mix of renewable energy sources. The main drivers of this change include:

- closure of traditional coal-fired power plants
- reduced cost and increasing penetration of renewable energy generation (wind and solar)
- Government commitments to reduce carbon emissions, and
- demand for more reliable and affordable electricity.

Against this backdrop, PEC is a critical piece of transmission infrastructure for the NEM that forms an integral part of AEMO's Optimal Development Path (**ODP**), both on its own and in combination with other actionable ISP projects. AEMO makes it clear that any delay in the delivery of actionable ISP projects, such as PEC, will compromise the most efficient path to maintain reliable and secure electricity supply as coal retires, and as such, all actionable projects should progress "as urgently as possible."[1]

PEC will facilitate the development of significant renewable generation in New South Wales, South Australia and Victoria and contribute to meeting federal and state renewable generation and emission reduction targets. These targets depend on PEC and other ISP projects to promote the connection of renewable generation resources and provide transfer capacity to transport energy across the NEM to meet demand. Without PEC, significant changes to AEMO's ODP would be required, leading to a slower and more costly energy transition that would put federal and State Government renewable generation and emissions reduction targets at risk.

As shown in Figure 1, PEC will span 900 km connecting New South Wales, South Australia and Victoria. Transgrid is responsible for the New South Wales portion of the project, which involves the construction of 700 km of transmission line from the New South Wales/South Australia border to Wagga Wagga substation in two sections (Western and Eastern), and two new substations at Buronga and Dinawan. ElectraNet completed the 206 km South Australian portion of the project in December 2023.

[1] AEMO, 2024 Integrated System Plan, June 2024, p.16.

Figure 1: Route map of Project EnergyConnect and key connections

PEC will deliver a range of direct benefits for consumers in South Australia, New South Wales and Victoria in terms of savings in wholesale generation costs, and improved energy security and reliability.[2] Based on updated independent modelling conducted by EY, PEC is expected to provide $964 million of total net benefits over the life of the project, after allowing for the latest estimate of the total construction costs. In addition to the direct consumer benefits that PEC will provide, the project will facilitate other major transmission projects, which are essential to the future development of the NEM including:

- VNI West, which is required to efficiently maintain supply reliability in Victoria following the closure of coal-fired generation and the decreasing reliability of aging generators,[3]
- South West Renewable Energy Zone (**SWREZ**), which is required to unlock high-quality renewable generation in south-west NSW[4] and to help support the NEM as we transition away from coal-fired generation, and
- HumeLink, which is required to unlock the full capacity of the expanded Snowy Hydro Scheme and enable greater sharing of energy across the eastern states.[5]

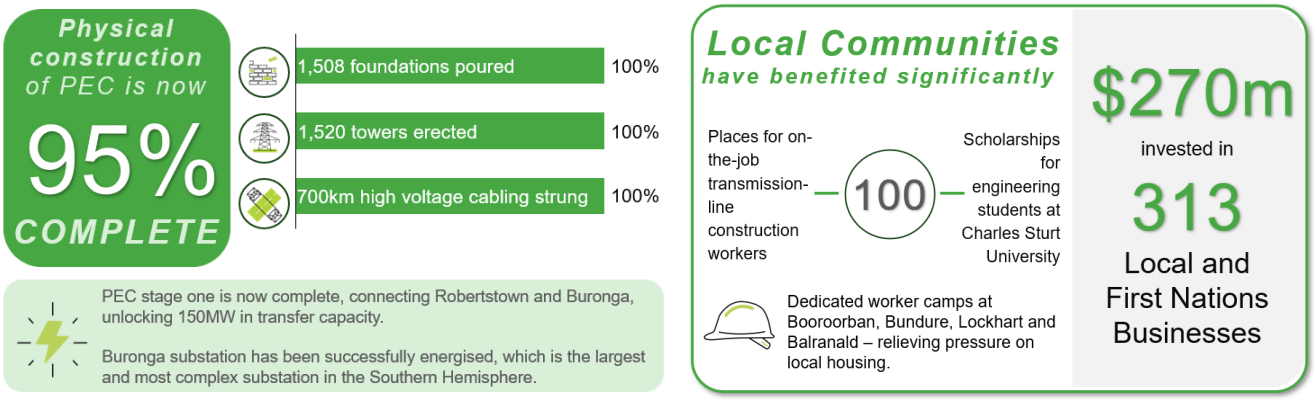
As explained in this Application, significant changes to the contractual arrangements for delivering PEC have been necessary following major project challenges, including flooding, labour shortages and hyper-inflation which have combined to materially impact the contractor's ability to deliver PEC. While the new contractual arrangements will result in cost increases for consumers, they have also brought about substantial

[2] Appendix 6a provides a detailed explanation of the reliability and security of supply benefits provided by PEC.
[3] AEMO, 2024 Integrated System Plan, Appendix 5 Network Investments, June 2024, p. 44.
[4] AEMO, Draft 2026 Integrated System Plan, Appendix 5 Network Investments, December 2025, p. 41.
[5] AEMO, 2024 Integrated System Plan, Appendix 5 Network Investments, June 2024, p. 22.

improvements in resourcing and productivity which had become constrained as the contractor faced severe challenges.

Figure 2 provides a snapshot of the recent progress in project delivery and the wider economic benefits that are being obtained by the local communities that are supporting the delivery of PEC.

Figure 2: Recent project developments and community benefits (December 2025, $m nominal)



Transgrid remains committed to the successful delivery of PEC, despite a number of significant challenges that have led to delays and increased costs. The New South Wales Government has also demonstrated its commitment to PEC by providing support, including through initiatives such as the Strategic Benefit Payments Scheme, which provides financial compensation to private landowners hosting transmission infrastructure. The support for PEC from the New South Wales Government and AEMO reinforces the importance of its timely delivery for the NEM, the State and its consumers. Further detailed information on PEC, including the project chronology, is provided in Attachment 2 to this Application.

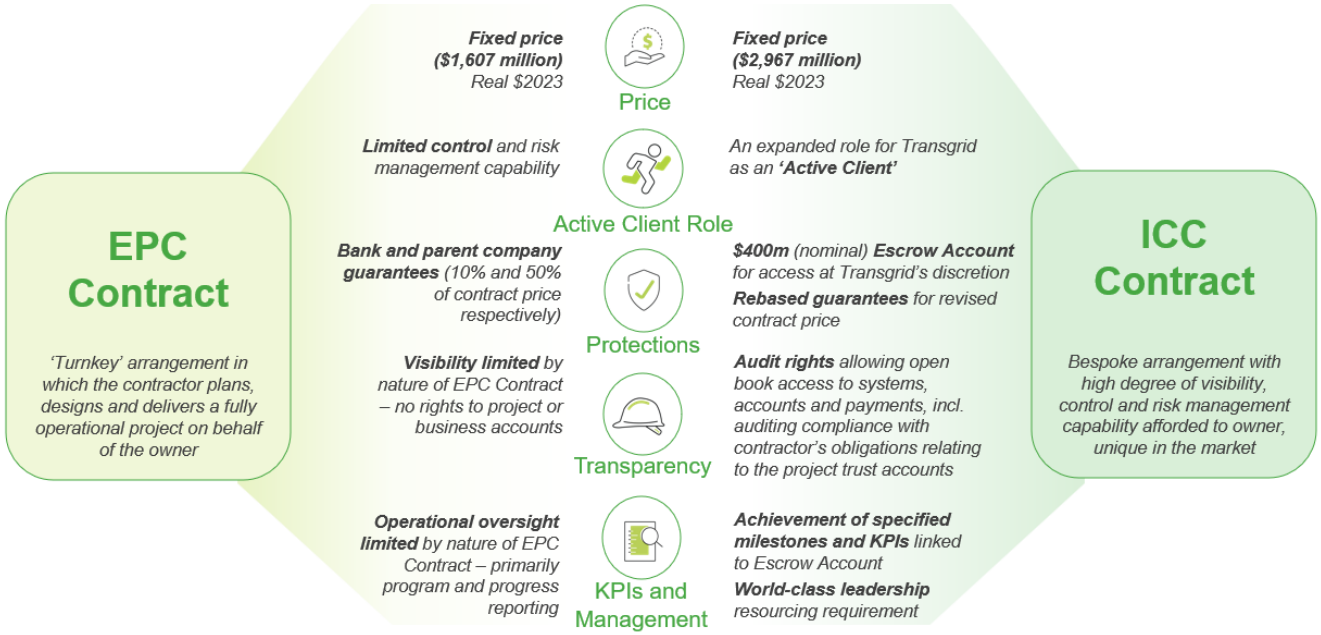
1.2 New contractual arrangements

Elecnor Australia is the contractor with responsibility for delivering PEC in accordance with an ICC contract, which was executed in December 2024. These contractual arrangements replaced the EPC contract that was originally awarded to SEJV in June 2021, following a competitive tender process. SEJV was a joint venture between Elecnor Australia and Clough Projects Australia Pty Ltd (**Clough**).

Following the execution of the EPC contract, a number of factors materially impacted the ability of SEJV to deliver PEC. As a result, on 25 October 2023, Transgrid's Board recognised and accepted that the construction of PEC would not be completed by SEJV under the existing EPC contract and, if the project were to proceed, an alternate arrangement to delivery under the EPC contract would be necessary. The subsequent decision to enter into an ICC contract with Elecnor Australia is explained in further detail in Chapter 2 and Attachment 3 to this Application.

As shown in Figure 3 below, the ICC contract includes substantially different terms and conditions compared to the EPC contract, including an increased contract price; an enhanced management role for Transgrid; and protection arrangements that are unprecedented in the Australian market. Further information on the ICC contract is provided in section 2.3.2 and Attachment 4 to this Application.

Figure 3: Comparison of ICC and EPC contract[6]



Transgrid's decision to execute the ICC contract at a substantially increased price without delaying the project to first secure regulatory approval demonstrates our commitment to delivering PEC. As explained in Chapter 2 of this Application, Transgrid considered alternative options, such as contract termination, that would have protected Transgrid's commercial position, but exposed consumers to the cost of significant project delays. Transgrid rejected these alternative options in favour of an approach that maximises the overall benefit for consumers.

1.3 Purpose of this document

In April 2023, the AER made its determination on Transgrid's total regulated revenue for the regulatory period from 1 July 2023 to 30 June 2028. In that determination, the capital expenditure allowance provided by the AER included an amount in relation to PEC that reflected the forecast costs of delivering PEC under the EPC contract. As explained in the previous section, the EPC contract was subsequently replaced by a new ICC contract in December 2024 with substantially different terms and conditions. While the AER's revenue determination was set on the basis that PEC would be delivered in accordance with the EPC contract, that assumption has not eventuated.

Table 1 shows Transgrid's revised forecast total capital expenditure to deliver PEC under the ICC contract compared to the inflation adjusted PEC Contingent Project Allowance (**CPA**) determined by the AER. The table shows that the majority of the increase in capital expenditure required to deliver PEC relates to the new contract costs.

[6] The EPC contract value of $1,607 million includes $103 million of provisional sums. The EPC contract value excluding provisional sums is $1,504 million.

Table 1: Revised capital expenditure forecasts for PEC ($m, 2022/23)

	Current Forecast	CPA Allowance[7]	Forecast Increase
Contract costs	2,967	1,634	1,333
Other project costs	661	487	174
Total	**3,628**	**2,121**	**1,507**

The regulatory framework provides a mechanism for the AER to reopen its revenue determination if a TNSP's capital expenditure requirements have increased materially as a result of 'an event' that has occurred during the regulatory period. However, the amount that can be included in a reopener Application must be limited to increases that have been caused by the event. For example, it is not permissible to include cost increases that are unrelated to the event, such as cost increases that occurred prior to that event.

The event referred to in this Application to reopen the 2023-2028 revenue determination is a Contract Failure, which is described in Chapter 2. 'Contract Failure' is a short-hand label, which is not a concept of law, that Transgrid has given to the event so that it can be readily captured in a simple expression.

The proposed reopener amount is $1,142 million, which is $365 million or approximately 24% lower than the total forecast increase in Transgrid's costs. Transgrid's shareholders have funded the total PEC overspend at the cost of equity rather than the regulated WACC, and this will continue until the overspend is included in Transgrid's RAB. The total net cost to shareholders, including financing costs and expected penalties under the CESS, is estimated to be approximately $130 million (assuming the reopener amount is accepted and the standard CESS penalty applies to the overspend amount, which is expected to be $365 million, as noted above).

Transgrid's actual capital expenditure, including the overspend amount, will be reviewed by the AER in making its revenue determination for the 2028-2033 regulatory period. Only capital expenditure that the AER determines to be prudent and efficient will be recovered from consumers. Shareholders are therefore exposed to further financial penalties if any expenditure is found not to be prudent and efficient.[8]

[7] The AER's allowance for Contract Costs of $1,634 million includes escalation for the longer project duration and higher than expected inflation and, therefore, exceeds the EPC contract value of $1,607 million. Section 3.2 of this Application explains that the AER's allowance is the base from which the increase in Contract Costs is measured.

[8] As per the AER's 2025 Capital Expenditure Incentive Guidelines, the application of CESS can vary in limited circumstances at the AER's discretion.

1.4 Rules compliance

As explained in this Application, Transgrid considers that the Contract Failure and the costs incurred to rectify it satisfy the relevant provisions of the NER. As such, this document, the accompanying attachments and supporting information comprise Transgrid's Application to reopen the 2023-2028 Revenue Determination, in accordance with clause 6A.7.1 of the NER, to increase the capital expenditure allowance for PEC.

Table 2 below provides a summary of the NER requirements and how each clause has been satisfied.

Table 2: Transgrid's compliance with the NER provisions

Clause	Summary of the NER requirement	How has this requirement been met	Compliance
6A.7.1(a)(1)	An event has occurred that is beyond the reasonable control of the TNSP and could not reasonably have been foreseen at the time the revenue determination was made.	Section 2.1 defines the event as Contract Failure and explains that its occurrence was beyond Transgrid's reasonable control and was not reasonably foreseeable.	✓
6A.7.1(a)(2)	The AER did not provide an expenditure allowance for the event in its revenue determination.	As an unforeseen event, no expenditure allowance was provided in the AER's revenue determination.	✓
6A.7.1(a)(3)	The TNSP proposes to undertake capital expenditure to rectify the adverse consequences of the event.	Transgrid has entered into the ICC contract to rectify the adverse consequences of the Contract Failure, which will increase Transgrid's capital expenditure.	✓
6A.7.1(a)(4)	The capital expenditure required to rectify the adverse consequences of the event exceeds 5% of the value of the TNSP's regulatory asset base and will result in the TNSP exceeding the AER's total capital expenditure allowance for the regulatory period.	Attachment 6 sets out the data which demonstrates compliance with this provision. It shows that 5% of Transgrid's RAB is $457 million compared to the rectification costs of $1,142 million. It also shows that Transgrid's total capital expenditure for the regulatory period will exceed the AER's allowance.	✓
6A.7.1(a)(5)	The TNSP cannot remain within the AER's total capital expenditure allowance by reducing other capital expenditure without materially adversely affecting the reliability and security of the transmission system.	Attachment 6 explains that Transgrid's total capital expenditure cannot remain within the AER's allowance given the substantial costs of rectifying the event and the limited scope to defer other projects, all of which will deliver significant benefits to consumers.	✓
6A.7.1(a)(6)	A failure to rectify the adverse consequences of the event would be likely to materially adversely affect the reliability and security of the relevant transmission system.	Attachment 6 explains the material, adverse consequences of the Contract Failure. GHD has provided an independent expert opinion in an Appendix to Attachment 6, which explains the criticality of PEC to reliability and security of supply,	✓

Clause	Summary of the NER requirement	How has this requirement been met	Compliance
		particularly in New South Wales and South Australia.	
6A.7.1(a)(7)	The event is not a pass-through event or a contingent project.	A Contract Failure is not a pass-through event or a contingent project.	✓
6A.7.1(b)	An application must not be made within 90 business days prior to the end of a regulatory year.	This Application has been lodged in accordance with this requirement.	✓

As noted in Table 2, detailed information that demonstrates compliance with the NER requirements is provided in Attachment 6 to this Application.

1.5 Regulatory principles

The reopener provisions in clause 6A.7.1 of the Rules were introduced by the Australian Energy Market Commission (**AEMC**) in a Rule determination in 2006. That Rule determination was an important milestone in the development of the regulatory framework as it finalised the design of the revenue-setting arrangements that were to apply to transmission networks.

As part of its determination process, the AEMC undertook an extensive stakeholder consultation to consider how the Rules should apply, including how each element of the framework would operate individually and collectively to protect the long-term interests of consumers. In finalising its design, the AEMC also had regard to a comprehensive review undertaken by an expert panel, completed in March 2006, that had been convened by Energy Ministers. In summary, the AEMC's design of the regulatory framework, including the reopener provisions, involved a comprehensive examination of the alternative approaches to balancing risks and incentives to provide a regulatory framework that would promote the long-term interests of consumers in accordance with the National Electricity Objective.

In that context, the AEMC's Rule determination explains that the purpose of the reopener provisions is to:[9]

> "*...allow for the revenue cap to be reopened during a regulatory control period where an event occurs that sufficiently impacts on the financial viability of the business, or its scope to respond to unforeseeable circumstances*."

In summarising the feedback from stakeholders, the AEMC noted that the majority of the submissions received supported the reopening of a revenue determination if specific circumstances eventuated. The AEMC also noted that the Expert Panel considered that reopener provisions should be adopted as a mechanism for appropriately balancing incentives and risks:[10]

[9] AEMC, Rule Determination, National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006 No.18. 16 November 2006, p. 60.
[10] Ibid, p.61.

> "… *the incentives and risks inherent in the building block approach to price caps can be ameliorated by incorporating pass through or re-opener clauses, thereby allowing the price control parameters to be adjusted before the end of the designated period if certain trigger events take place."*

Following a detailed consideration of the issues and the submissions received, the AEMC concluded that a TNSP should be able to apply for the re-opening of its revenue cap if a 'shipwreck event' occurs, which it defined as the TNSP being required to incur unforeseen capital expenditure that is at least 5% of its RAB. The AEMC explained that this approach is intended:[11]

> *"…to overcome the incentive for a TNSP to defer major vital investment where it would result in the TNSP exceeding its capital expenditure allowance for the period."*

The reopener provisions adopted by the AEMC in 2006 are those described in section 1.4 above, which Transgrid has fully satisfied in this Application.

In drafting the Rules provisions, the AEMC did not attempt to list the 'events' that would trigger a reopener Application. Instead, the AEMC described the characteristics and consequences that an event or 'series of events' must satisfy. This approach reflects a conscious decision by the AEMC to define an event broadly with reference to its impact on the network company and consumers, including the impact on the reliability and security of supply if no action was taken in response to the event.

As explained in this Application, in the absence of the reopener provisions, PEC would have been paused or abandoned as Transgrid sought to clarify the cost recovery arrangements with the AER, with consequential delays and cost consequences for electricity consumers. This Application, therefore, is fully aligned with the AEMC's intended purpose in drafting the reopener provisions, which is to avoid project delays and adverse outcomes for consumers by allowing a revenue determination to be reopened, subject to satisfying the reopener provisions. As already noted, further details on Transgrid's compliance with the reopener provisions are provided in Attachment 6 to this Application.

1.6 Stakeholder engagement

Transgrid recognises the importance of engaging with our stakeholders, particularly in relation to major transmission projects such as PEC. During the development of this Application, Transgrid engaged with the TAC, which is Transgrid's principal stakeholder engagement forum comprising energy consumers, business and industry representatives.

Transgrid's engagement approach in relation to this Application aligns with 'inform to consult' on the IAP2 Spectrum of Public Participation,[12] which reflects the commercial-in-confidence nature of the issues that are central to this Application. Despite the commercially sensitive issues relating to PEC, Transgrid has engaged extensively with the TAC through six deep dive sessions. A further workshop was also held to provide TAC members with an opportunity to provide feedback on Transgrid's draft Application. We briefly summarise the

[11] Ibid, p.61.
[12] International Association for Public Participation (IAP2), IAP2 Public Participation Spectrum, https://iap2.org.au/resources/spectrum/

range of views expressed by TAC members, noting that further detailed information, including Transgrid's response to the feedback received, is provided in Attachment 1 to this Application.

TAC members provided a range of views on the following matters relating to this Application, including:

- the design of the regulatory framework and the risk sharing arrangements
- Transgrid's decision to negotiate an ICC contract with Elecnor Australia
- whether the TAC should have been consulted prior to Transgrid taking that decision on behalf of consumers
- the increased costs of delivering PEC and affordability considerations
- whether 'Contract Failure' is a shipwreck event, as described by the AEMC, and
- whether Transgrid should make an Application to reopen the 2023-2028 revenue determination.

Some TAC members suggested that there had been a 'collective failure' by Transgrid, AEMO and the AER to protect the interests of consumers in relation to PEC. Specifically, these TAC members considered that more active engagement by all three parties may have prevented Contract Failure or ameliorated its impact. For these TAC members, it was unreasonable for Contract Failure to occur as risks had been transferred to the contractor for a premium contract price. It was suggested that a resolution to the issues faced by Transgrid, other than a reopener, would be preferable, including the possibility of the AER waiving CESS penalties for any overspend amount that is found to be prudent and efficient.

Other TAC members expressed different views. For example, some TAC members commented that market circumstances and the risk appetite of prospective service providers will often dictate the preferred contracting structure. In this context, these TAC members considered it reasonable that Transgrid entered into an EPC contract in June 2021. In relation to this reopener Application, the view was expressed that the prospects for essential investment to support the energy transition would be compromised if TNSPs were unable to rely on the reopener provisions in the Rules.

Some TAC members questioned whether 'Contract Failure' is a 'shipwreck event' of the kind described by the AEMC in its 2006 Rule determination. Specifically, the suggestion was made that the event is essentially contractual in nature and does not constitute a 'shipwreck'. As explained in section 1.5 above, Transgrid notes that the AEMC ultimately defined a 'shipwreck event' in terms of its impact on the network company's capital expenditure requirements, i.e., that the impact of the event must exceed 5% of its RAB. The AEMC's approach, therefore, was to define 'an event' broadly and then set preconditions in clause 6A.7.1 that must be satisfied for a reopener Application to be allowed. As explained in section 1.4 and Attachment 6, each of these conditions have been met and, therefore, Contract Failure is a 'shipwreck event' of the kind contemplated by the AEMC.

Transgrid appreciates the TAC's feedback and the views expressed on a range of complex commercial and regulatory issues. As a general observation, Transgrid shares the TAC's concerns regarding affordability, and the importance of taking decisions in the best interests of consumers. At each stage of the project, Transgrid has endeavoured to put consumers' interests first in its decision-making. In relation to the TAC's possible role in endorsing or directly engaging on commercial decisions to be taken by Transgrid's Board, commercial sensitivities and the potential risk of litigation meant that in-depth engagement was not possible on this occasion.

In relation to Transgrid's decision to submit this Application, it is important to note the following points:

- The reopener provisions in the NER have been designed to address rare events, such as the Contract Failure as defined and described in this Application.
- The ability to recover the costs of a rare event, if it occurs, through a reopener Application ensures that the costs to consumers are kept as low as possible. The alternative pathway is to compensate TNSPs for the risk of rare events, whether or not those events actually occur.
- Transgrid has acted to secure the best outcome for consumers, albeit in difficult circumstances. Given the financial commitments made by the company, Transgrid considers that submitting this Application is the most appropriate way to recover prudent and efficient costs in accordance with the NER provisions. It is also important to note that Transgrid's allowed rate of return is consistent with revenue-setting arrangements that provide a reasonable opportunity to recover at least its efficient costs, including the costs of rectifying events, such as Contract Failure, that satisfy the reopener provisions.[13]
- As explained in Chapter 3, Transgrid is not seeking to recover the total costs of delivering PEC in this Application. Furthermore, Transgrid is voluntarily excluding costs associated with Transgrid's new role as an 'active client' under the ICC contract, even though those costs fall within the scope of the reopener provisions. The voluntary exclusion of permissible costs from this Application means that Transgrid's shareholders will face additional costs and potential CESS penalties as a result of the Contract Failure. The prudency and efficiency of Transgrid's active client and other costs will be assessed by the AER in its ex post review prior to those costs being included in Transgrid's RAB.

Transgrid will continue to engage with the TAC and other stakeholders in relation to this Application and our progress in delivering major infrastructure projects, including PEC.

1.7 Structure of this Application

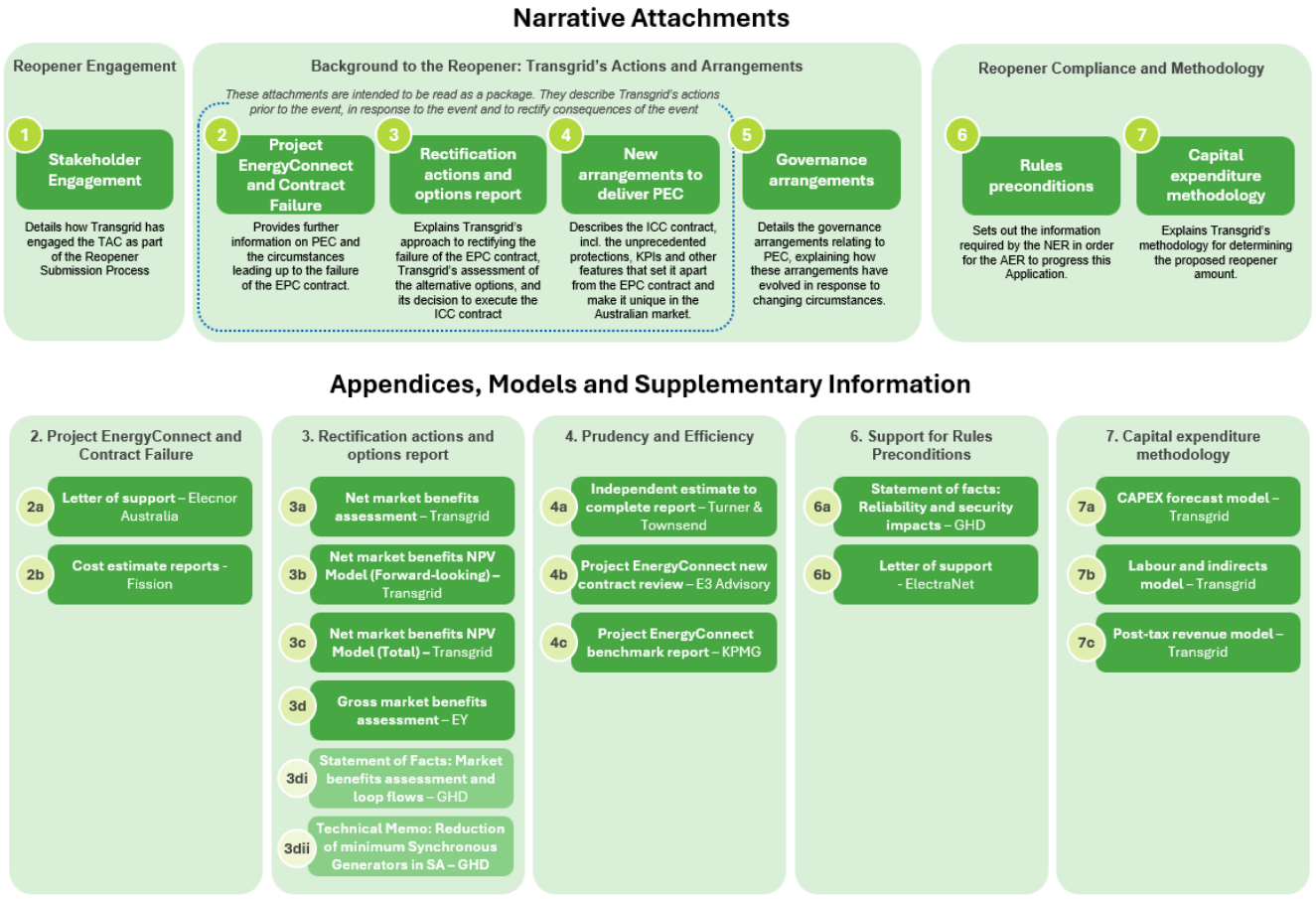
Transgrid's Application comprises this document, being the main Application; Attachments 1-7 that provide further detail on the information presented; and supporting Appendices and models. The remainder of this document is structured as follows:

- Chapter 2 explains the event definition, the causes of the event and Transgrid's response.
- Chapter 3 explains how the reopener costs have been determined, noting that these costs are less than the total increase in project costs that Transgrid will incur.
- Chapter 4 sets out the revenue and pricing implications arising from the proposed reopener amount.

The scope and content of the accompanying Attachments, Appendices and models are described in Figure 4 below.

[13] In accordance with the Revenue and Pricing Principles in the National Electricity Law.

Figure 4: Attachments and Appendices to Transgrid's Reopener Submission



2. Event definition, causes and rectification

Key points

- In order for the AER to accept this Application, Transgrid must demonstrate that, amongst other things, an 'event' has occurred that has led to a material increase in Transgrid's capital expenditure requirements. The event must not have been reasonably foreseeable at the time of the making of the revenue determination and must have been beyond Transgrid's reasonable control.
- The event is 'Contract Failure', which is further described in section 2.1. While various factors led to this outcome, Transgrid had no visibility of the cumulative financial impact of those factors on the contractor's ability to deliver PEC, nor did Transgrid have any control over those factors.
- Transgrid explored the options to address the Contract Failure with the objective of securing the best outcome for consumers. The principal choices were:
  - to negotiate a new contract with Elecnor Australia, or
  - to engage an alternative contractor.
- Transgrid formed the view that a decision by Elecnor Australia to walk away from the project would be contrary to consumers' interests as it would lead to extensive project delays and increased costs. Instead, Transgrid acted promptly to maintain project continuity to maximise the potential options to address the Contract Failure and achieve the best outcome for consumers.
- Following the completion of a competitive tender process to identify an alternative contractor and concurrent negotiations with Elecnor Australia, Transgrid concluded that executing the ICC contract with Elecnor Australia would provide the best outcome for consumers. The key benefits for consumers in executing the ICC contract are:
  - substantially lower cost and shorter completion timeframes compared to the alternative options
  - fixed price terms, supported by extensive protections against contractor non-performance and profit share if cost savings are achieved, and
  - an extended role for Transgrid under new 'active client' provisions to provide greater oversight and risk mitigation.
- Before executing the ICC contract in December 2024, Transgrid conducted a formal assessment of eight alternative options, including project abandonment. The options analysis confirmed that PEC will provide an overall net benefit to consumers, despite the increased costs, and that the ICC contract option was superior to all other options.
- Transgrid's decision-making throughout this period was supported by external independent technical, legal, and accounting advice. In addition to the advice that was obtained during the decision-making process, subsequent benchmarking analysis and an independent expert review conducted by E3 Advisory confirm that Transgrid's approach and the resulting outcomes are prudent and efficient.

2.1 Event definition

In the context of this Application, the event is a Contract Failure, which is defined in Box 1 below.

> **Box 1: Event Definition – 'Contract Failure'**
>
> The event for this Application is a Contract Failure. It means that the construction of PEC would not be completed by SEJV under the existing EPC contract and, if PEC were to proceed, an alternative arrangement to delivery under the EPC contract would be necessary.
>
> *Note: The fulsome, legal description of the event, the subject of this reopener application, is contained in section 2.1.1 of Attachment 6. For the convenience of readers, Transgrid has included short-hand descriptions of this event (labelled the 'Contract Failure') above, and in other sections of the application.*

Transgrid's Board recognised and accepted that Contract Failure had occurred on 25 October 2023 based on information and analysis obtained between August and October 2023 which revealed that SEJV faced such significant financial losses under the terms of the EPC contract that (in the absence of support from Elecnor Australia's parent company) PEC could not be delivered in accordance with the terms and conditions in that contract.

In order for the AER to accept this Application, the event must not have been reasonably foreseeable by Transgrid at the time the revenue determination was made and must not have been within Transgrid's reasonable control. We address these issues next by discussing the causes of the event, which were entirely outside Transgrid's control and not foreseeable. A comprehensive discussion of what is 'reasonably foreseeable' in this context, and the other NER requirements that Transgrid must also satisfy, is provided in Attachment 6 to this Application.

2.2 Causes of the event

Transgrid undertook a competitive and transparent procurement process during 2019 and 2020 to select a service provider to deliver PEC. The aim of that procurement process was to secure an EPC contract to deliver PEC at a competitive fixed price and by a specified date. The EPC contracting form was market standard at that time. As explained in Attachment 2 to this Application, the tender process was highly competitive, transparent and subject to a robust evaluation process. The successful bidder, being SEJV, submitted a price that was very closely aligned with the other shortlisted bidder following a strongly contested Request for Proposal (**RFP**) stage.

At that time, Transgrid's Board made the decision to enter into the EPC contract with SEJV with the knowledge that a competitively tendered process had identified the party best able to deliver the project on behalf of electricity consumers. Around the same time, the AER completed its revenue-setting process for PEC, and made the following observations regarding the risks and costs associated with the adoption of a fixed price, turnkey contracting arrangement:

> *"This is a conservative approach to contracting as it transfers the majority of risk to the contractor. This will provide cost certainty and reduce delivery risk for both Transgrid and consumers. However, it likely increases tendered costs because the contractor will instead bear procurement and construction risk. Alternative contracting approaches may lower*

tendered costs but would potentially increase Transgrid's own costs (including overheads and contract management) and risk.

For Project EnergyConnect, this contracting model may be appropriate for Transgrid given that it is relatively inexperienced in delivering a project as large and complex as Project EnergyConnect. It may also have reduced Transgrid's own project delivery costs, when compared to alternative project delivery and contracting models."[14]

For the avoidance of doubt, Transgrid made the commercial decision to enter into the EPC contract with SEJV, and it is not the AER's responsibility to advise on or approve contractual decisions. Importantly, however, the AER correctly understood Transgrid's procurement strategy, which sought to transfer risk from consumers and Transgrid to the successful bidder, being SEJV, in exchange for a reasonable risk premium determined by the competitive market. While not responsible for the contracting decision, the AER reviewed the competitively determined contract price, which included the premium paid, and considered it to be reasonable in the circumstances:

"We recognise that given the contracts were entered into following a competitive tender process, any risk premium included in the contracted prices will at least reflect the lowest efficient amount that the contractors are willing to bear. Transgrid's approach also in large part protects consumers from the risk of project cost overruns due to poor project delivery or unforeseen events. On balance, our view is Transgrid's tendered costs are likely to reasonably reflect the prudent and efficient costs required to deliver the project."[15]

Given the competitive tender process, and consistent with the AER's findings, Transgrid fully expected that PEC would be delivered in accordance with the terms of the EPC contract and that the project risks had been appropriately transferred to SEJV. In particular, Transgrid's Board considered the risk premium to be reasonable in order to compensate the contractor for the risks associated with a fixed price EPC contract. Furthermore, the contractor's required performance in accordance with the EPC contract was secured by material parent company guarantees and bonds. The EPC contract also included mechanisms for variation claims and extensions of time, which were considered appropriate to address project risks that could not be effectively managed by SEJV.

Following the execution of the EPC contract in June 2021, however, significant challenges affected project delivery which combined in such a way as to severely affect the financial capacity of the contractor to deliver PEC in accordance with that contract. Each of these challenges were external events that were outside Transgrid's control, and included:

- **Flooding**. Major flooding events in New South Wales in 2022 and 2023 caused significant site access issues, damaged works, and delayed material deliveries.
- **Labour shortages**. Labour shortages have been a persistent issue for the construction sector since the COVID-19 pandemic, with many migrant workers opting to return to their home countries, fewer young people entering the construction industry than those retiring from it and the surging demand for labour

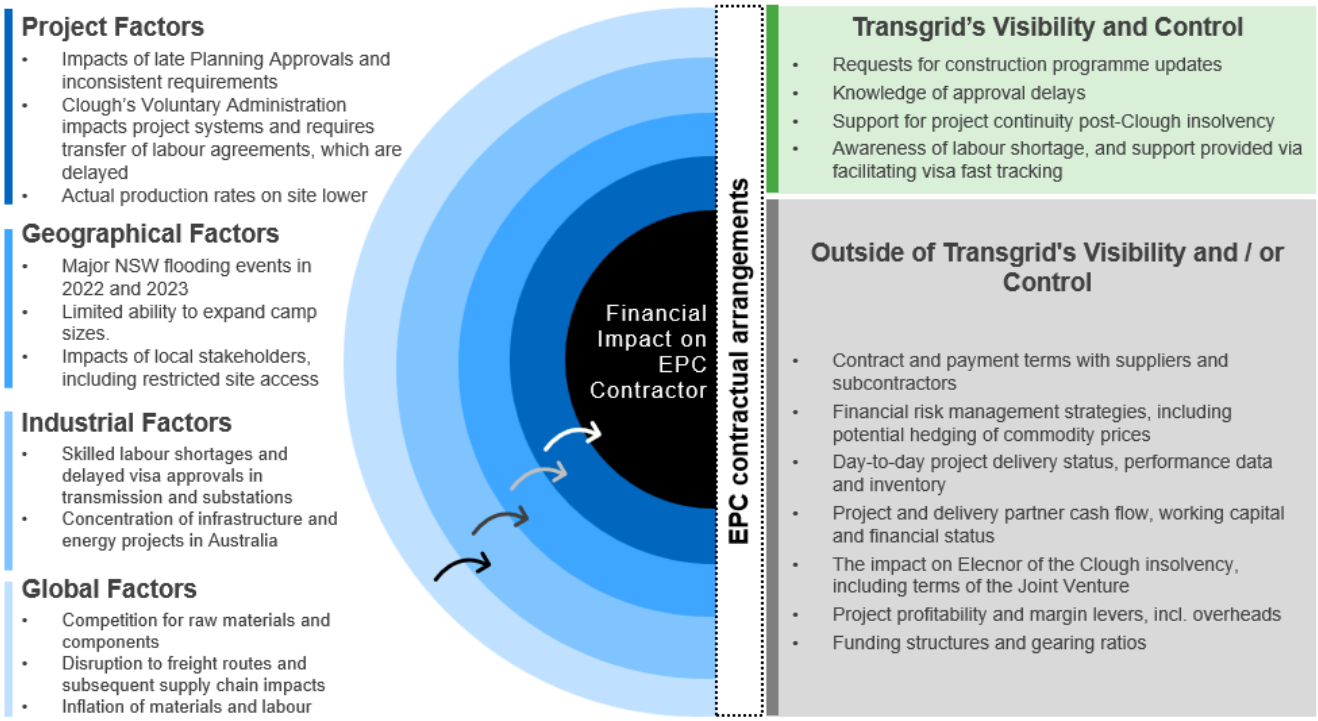
[14] AER, Final Decision, Transgrid Contingent Project - Project EnergyConnect, May 2021, p. 18.
[15] Ibid, p. 18.

leading to increased labour costs. While international borders have reopened, strong demand from the sector continues to outweigh supply[16].

- **Productivity**. Actual productivity fell short of the expected performance levels, resulting in additional costs and an extension of the construction schedule. The lower levels of productivity during the initial stages of the project were further impacted by external factors such as the limited supply of workers with suitable experience and the impact of flooding, as noted above.
- **Market conditions**. From 2021, the construction and energy sectors in Australia have faced unprecedented inflationary pressures. The cost of materials, labour, and logistics has risen sharply, with inflation peaking in 2022 and remaining elevated in 2023 and into 2024. As a consequence, the cost impact of a longer project timeframe was further impacted by much less favourable market conditions, adding to the future costs of delivering the project.

It is also important to note that these factors had a cumulative financial impact on the contractor, which were further amplified by the scale of the project covering a geographical area in excess of 700 km. Not only were these factors external to Transgrid and beyond Transgrid's control, as the project owner under an EPC contract Transgrid had no visibility of how these challenges were impacting the financial position of the contractor. In particular, Transgrid had no role in the commercial decisions taken by SEJV to manage its financial exposure to the multitude of external factors that may impact the project financially, as shown in Figure 5 below.

Figure 5: Context during delivery of PEC and Transgrid's visibility and control



[16] Turner & Townsend, The Lasting Impact of COVID-19 on the Construction Sector, 14 June 2024, section 4.

As shown in Figure 5, under a turnkey EPC contract Transgrid had visibility and oversight of the contractor's performance in relation to project delivery, but no visibility or oversight of the contractor's financial performance. It is also important to note that the insolvency of Clough in December 2022 resulted in a significant loss of management systems and information, including actual rates of production, that affected the contractor's ability to accurately forecast the costs of completing PEC. These gaps were only fully addressed by mid-2024, which made it difficult for Elecnor Australia to assess the full extent of the financial challenges facing the project.

While the EPC contract placed limitations on Transgrid's project management role, this does not mean that Transgrid adopted a 'hands-off' approach to contract management, as explained in further detail in Attachment 2 to this Application. By August 2023 Transgrid had become sufficiently concerned about the contractor's deteriorating contract performance against the agreed project milestones to obtain open book access to review Elecnor Australia's project performance and financial position. Transgrid also received anecdotal reports of late payments to sub-contractors which raised further concerns. Prior to that date, Elecnor Australia made a series of claims for additional compensation many of which lacked substantiation and/or contractual entitlement. In accordance with effective contract management and in accordance with the interests of consumers, Transgrid held Elecnor Australia to the contract and only resolved those claims that were valid.

During August and September 2023 executives from Transgrid and Elecnor Australia's parent company met to discuss the issues being experienced on the project. During these meetings, Elecnor Australia's parent company stated that a commercial resolution would be required to resolve the ongoing project issues, noting that its forecast cost overrun at that time had increased to $380 million (nominal). Further information subsequently became available which indicated that the magnitude of the overrun would be considerably greater.

As already noted, the Contract Failure occurred on 25 October 2023 when Transgrid's Board recognised and accepted that the construction of PEC would not be completed by SEJV under the existing EPC contract and, if the project were to proceed, an alternative arrangement to delivery under the EPC contract would be necessary**.** That conclusion was supported by Transgrid's external independent technical, legal, and accounting advisors who, together with Transgrid, found that the projected magnitude of Elecnor Australia's losses under the EPC contract were such that without intervention, Elecnor Australia would become insolvent and that its parent company would not provide ongoing support. The circumstances are described in more detail in Attachment 2 to this Application.

In order to satisfy the NER requirements, Transgrid must not have been able to reasonably foresee the occurrence of the event, being the Contract Failure, at the time of the making of the revenue determination. As explained above, the Contract Failure was not foreseeable by Transgrid given its role under the EPC contractual arrangements and the complex and unknown cumulative impact of the multitude of factors that impacted the contractor's financial position. Further information on foreseeability and Transgrid's compliance with the NER provisions is provided in Attachment 6 to this Application.

2.3 Rectification options

In response to the Contract Failure, Transgrid considered whether to exercise its rights to enforce the EPC contract given Elecnor Australia's financial circumstances and the material parent company guarantees that Transgrid had secured when the EPC contract was established in June 2021. Transgrid concluded that attempting to enforce the EPC contract would lead Elecnor Australia to enter voluntary administration with the following adverse consequences for the project and consumers:

- project works would cease with immediate effect, and equipment and materials would be removed from sites
- no warranties would be provided in relation to partially completed works
- intellectual property and experienced project workers would be lost
- a replacement contractor would be unlikely to complete the project for a fixed price and not without significant indemnities, and
- significant further project delays would be expected of a minimum of 12 months with substantial cost consequences for consumers, in addition to a loss of project benefits.

For these reasons, Transgrid did not consider contract enforcement and termination to be an appropriate course of action for consumers at that time. By the same token, Transgrid wanted to ensure that Elecnor Australia remained bound to its contractual commitments as far as practicable and for Transgrid to maintain its legal rights including in relation to claiming under the parent company guarantees. Transgrid therefore took immediate and ongoing action to maintain project continuity and avoid the substantial delays and cost increases that would have arisen from pausing the project.

Transgrid then embarked on a comprehensive 14-month process, supported by external experts, to assess all alternative options and ensure that the resolution of the Contract Failure would deliver the best outcome for consumers. While contract enforcement and the recovery of the parent company guarantees was not expected to be the preferred option, it remained open to Transgrid to pursue that option as it considered how best to respond to the Contract Failure.

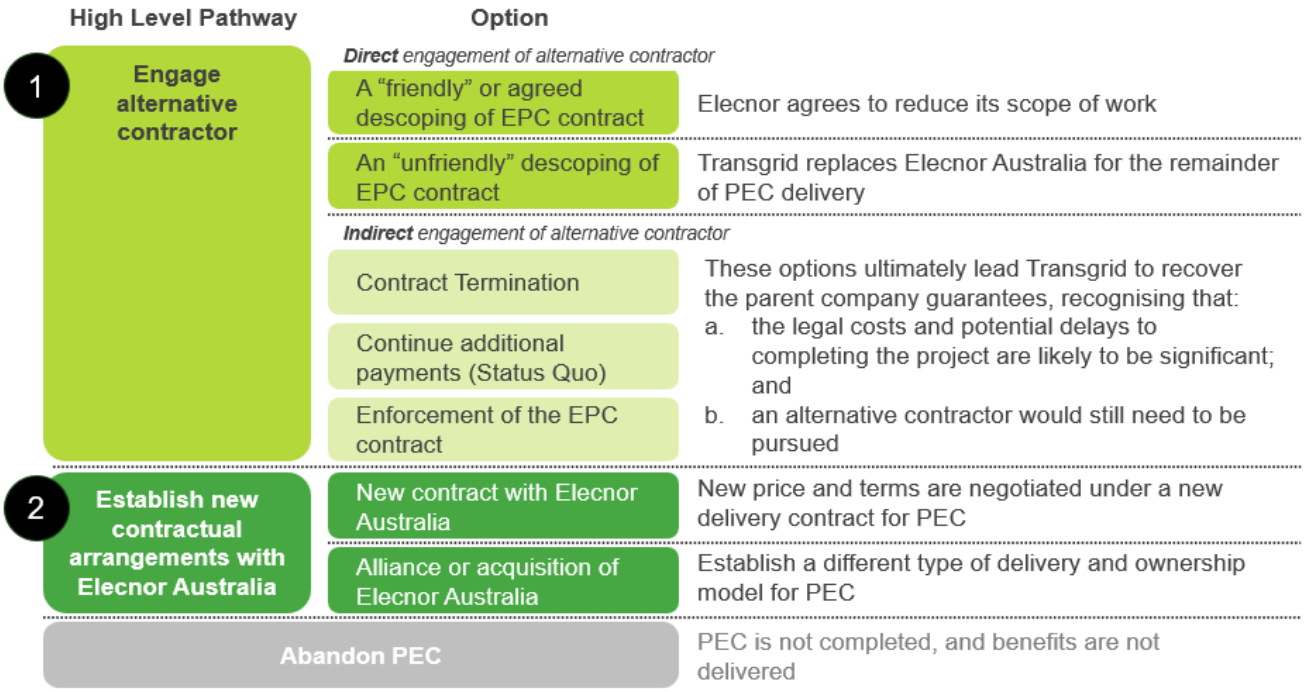
At a high level, there were two alternative pathways that Transgrid actively pursued to deliver PEC:

1. **Engage an alternative contractor**. Under this pathway, an alternative contractor would be appointed either to replace or work alongside Elecnor Australia. The options available to Transgrid under this pathway included:
    a. **Friendly descope**, where Elecnor Australia agrees to reduce its scope of work and assist with the transition to a new contractor.
    b. **Unfriendly descope**, where Transgrid replaces Elecnor Australia with no transitional assistance.
2. **Establish new contractual arrangements with Elecnor Australia.** Under this pathway, Elecnor Australia would be retained as the contractor, but under new contractual arrangements. The options available to Transgrid were:
    a. **Negotiate new contract terms**, which ensure that PEC will be delivered in a timely and efficient manner, with unprecedented protections against non-performance. This option was selected by Transgrid and ultimately led to the development of the ICC contract, which was executed in December 2024.
    b. **Alliance or acquisition of Elecnor Australia**, which would involve a significantly different delivery model with substantially increased risks for Transgrid and consumers. Given the significant project challenges and the risks of this contracting structure, this option was not progressed further.

Transgrid actively pursued both pathways to ensure that the best outcome was obtained for consumers. For each of these pathways, a number of specific options were considered as shown in Figure 6 below. The third

pathway, project abandonment, was not in consumers' best interests as the net benefits from PEC would be foregone.

Figure 6: High level pathways and options



Our quantitative assessment of the eight options shown in Figure 6 is summarised in section 2.4. We first discuss the two alternative pathways for delivering PEC in sections 2.3.1 and 2.3.2 below.

2.3.1 Engaging an alternative contractor

To explore this pathway, Transgrid undertook a tender process to identify a potential alternative contractor. The tender followed a conventional process, including:

- engagement of probity advisors
- issuing of returnable schedules
- conducting workshops with each tenderer, and
- the application of a standard evaluation criteria.

This process allowed Transgrid to engage directly with prospective service providers to understand the risk appetite, willingness to offer a fixed price, likely costs and schedule, capacity and capability in the market to complete some or all of the remaining project.

A summary of the tender process is set out in Box 2 below.

Box 2: Summary of tender process to secure an alternative contractor

Market Sounding

Transgrid undertook a confidential market sounding process in May 2024 to:

(i) brief selected market participants on the project status and requirements, and

(ii) seek feedback from the selected market participants to understand market appetite, capacity, and capability to step into a project where construction was 47% complete and under unusual circumstances.

All five selected entities expressed an interest in being part of the procurement process. [redacted] advised that they would form a Joint Venture, whereas [redacted] would participate as single entities, but intended to form strategic partnerships to further bolster capacity and capability in discrete areas.

Phase 1: Expression of Interest (EOI)

The purpose of the EOI was to shortlist applicants to participate in the RFT phase of the procurement process. EOI submissions were evaluated in accordance with the following EOI evaluation criteria: management systems, financial capability, safety performance, project experience and the proposed project leadership team.

Transgrid selected three contractors to proceed to the request for tender being: [redacted]

Phase 2: Request for tender (RFT)

The purpose of Phase 2 was to select the tenderers to participate in the development phase to undertake detailed due diligence of the project activities. RFT submissions were evaluated, and weighted, in accordance with the following evaluation criteria:

(iii) project leadership resources

(iv) management capability to deliver transmission lines and substations

(v) safety management

(vi) proposed development phase approach, 90-day mobilisation plan and transition programme, and

(vii) initial pricing for the Managing Contractor services and likely total cost.

Phase 3: Development Phase

Phase 3 would have enabled the tenderers to undertake detailed due diligence of the project activities and status, documentation, systems, and processes with Transgrid and confirm binding offers and best pricing to undertake the works. Phase 3 was ultimately not finalised as Elecnor Australia withdrew their willingness to support a 'friendly descope' and it became evident from the results of Phases 1 and 2 that bringing in an alternative contractor would not be in the best interests of consumers.

The outcome from the tender process indicated that if the remainder of the project were completed by an alternative contractor, the cost to complete PEC would range between $4,022 million to $4,061 million, (nominal). However, the alternative contractors were not willing to provide a fixed price offer in the timeframe required and, therefore, would expose Transgrid and consumers to the risk of further cost increases. In addition, Transgrid estimated that bringing in a new contractor on a fixed price would delay the project by at least 12 months, with a consequential loss of consumer benefits.

2.3.2 Establishing new contractual arrangements with Elecnor Australia

To obtain the best outcome for consumers, Transgrid also progressed its negotiations with Elecnor Australia in parallel with pursuing the alternative contractor pathway described above.

Transgrid's negotiators were two seasoned executives with extensive executive, transactional and major projects experience. One held management roles at Thiess Construction, Ergon Energy, Macquarie Infrastructure and Real Assets and Ventia Infrastructure Services while the other previously held positions as Executive Vice President, Mergers & Acquisitions, EVP Commercial, General Counsel and other senior executive roles in multiple international jurisdictions at Linklaters and BP plc. Sectors of experience for both executives include energy, oil and gas and other major civil projects. These Transgrid negotiators consulted, liaised and sought approval to negotiate in accordance with Transgrid's governance structure, as detailed in Attachment 5 to this Application.

The revised contract price was determined with reference to actual and potential productivity rates and applying those rates to calculate the costs of the remaining portions of the project. The loss of systems as a result of Clough's insolvency and the lack of demonstrated production rates impacted Elecnor Australia's ability to prepare accurate cost estimates until July 2024. Elecnor Australia's revised contract price was subject to reviews by its Project Managers, Programme Director, Country Managers, General Managers, the Managing Director and CEO, prior to being approved by its Board.

Elecnor Australia's proposed price was reviewed and challenged by Transgrid, from July 2024 through to October 2024. Transgrid focused on the proposed work programme, construction methodologies and productivity assumptions, supply rates, risks, opportunities and contingencies. In addition to negotiating the new price, the terms and conditions of the ICC contract were also negotiated. As noted in section 1.2, the negotiated outcomes in relation to the ICC contract terms and conditions, which are summarised in Box 3 below, are unique in the Australian market.

Box 3: Key differences between the EPC contract and the ICC contract

Transgrid's role as an 'active client'

Transgrid negotiated an extended role in the day-to-day management and control of the project through the inclusion of active client provisions. This is a significant change from the limited role afforded to Transgrid under the EPC contracting model. While the active client role will increase Transgrid's project management costs, it is expected to deliver significant consumer benefits by ensuring that Transgrid is able to identify and address any emerging project or financial performance issues.

Achievement of specified milestones and KPIs

The inclusion of specific KPIs in the ICC contract is a new concept to ensure that Elecnor Australia focuses on the quality of its work, plans and forecasts sufficiently ahead, and the safety of its staff and subcontractors on the project as it completes the remainder of PEC, creating an improved risk profile for consumers and Transgrid.

Appointment of highly qualified resources

Elecnor Australia is required to provide a world-class project leadership and management team to lead delivery and facilitate participation by Transgrid's personnel, as an active client. The additional project leadership and management resources provide greater certainty that Elecnor Australia has adequate supervision and planning capability for the works and an increased capacity to pivot as issues arise.

Audit rights and transparency

Transgrid has a right to engage an external service provider to undertake ongoing audits of Elecnor Australia. Elecnor Australia must provide to Transgrid, at any time, open book access to its key systems, accounts and records in relation to Elecnor Australia's activities, including in regard to payments to subcontractors, resources and costs to complete PEC as well as compliance with Elecnor Australia's obligations relating to the project trust account. Furthermore, Elecnor Australia is required to cooperate in facilitating any functions of Transgrid or its nominees to inspect and verify such information.

Project trust account

A project trust account has been opened in Elecnor Australia's name and all payments required to be made by Transgrid or Elecnor Australia's parent company to Elecnor Australia are held on trust in the project trust account for the benefit of Elecnor Australia, subcontractors and Transgrid. The use of a project trust account ensures that Transgrid has visibility over the way in which Elecnor Australia uses any project funds to ensure that subcontractors and suppliers are paid on time.

Escrow account

The escrow account is a new mechanism that has not previously been used in the Australian contracting market. It was added to the ICC contract in order for Transgrid to ensure that Elecnor Australia delivers PEC in accordance with the ICC contract. The ICC contract required Elecnor Australia's parent company to deposit $400 million (nominal) into an account nominated by Transgrid. Subject to certain limitations, Transgrid has access to draw down on the funds held in the escrow account if Elecnor Australia breaches the ICC contract.

Residual profit share

While the fixed price does not include a profit component, the ICC contract contains terms which provide for a rebate to Transgrid in the event of a significant cost underrun and Elecnor Australia's residual profit exceeding $50 million (nominal). This mechanism is designed to ensure that Elecnor Australia has an incentive to deliver the project efficiently, but cannot profit excessively if savings are achieved.

In establishing the ICC contract, Transgrid acted prudently and efficiently to obtain the best available terms and conditions from Elecnor Australia, in addition to pursuing the alternative pathway of engaging a replacement contractor. Transgrid acknowledged and accepted the risk of incurring significant additional costs under the ICC contract, noting that the additional costs had not been included in Transgrid's revenue determination and may be subject to an ex post review by the AER.

Further information on Transgrid's assessment of the rectification options is provided in Attachment 3 to this Application.

2.4 Options analysis

As shown in Figure 6, section 2.3, Transgrid identified eight options to address the Contract Failure each of which relate to one of three high-level pathways:

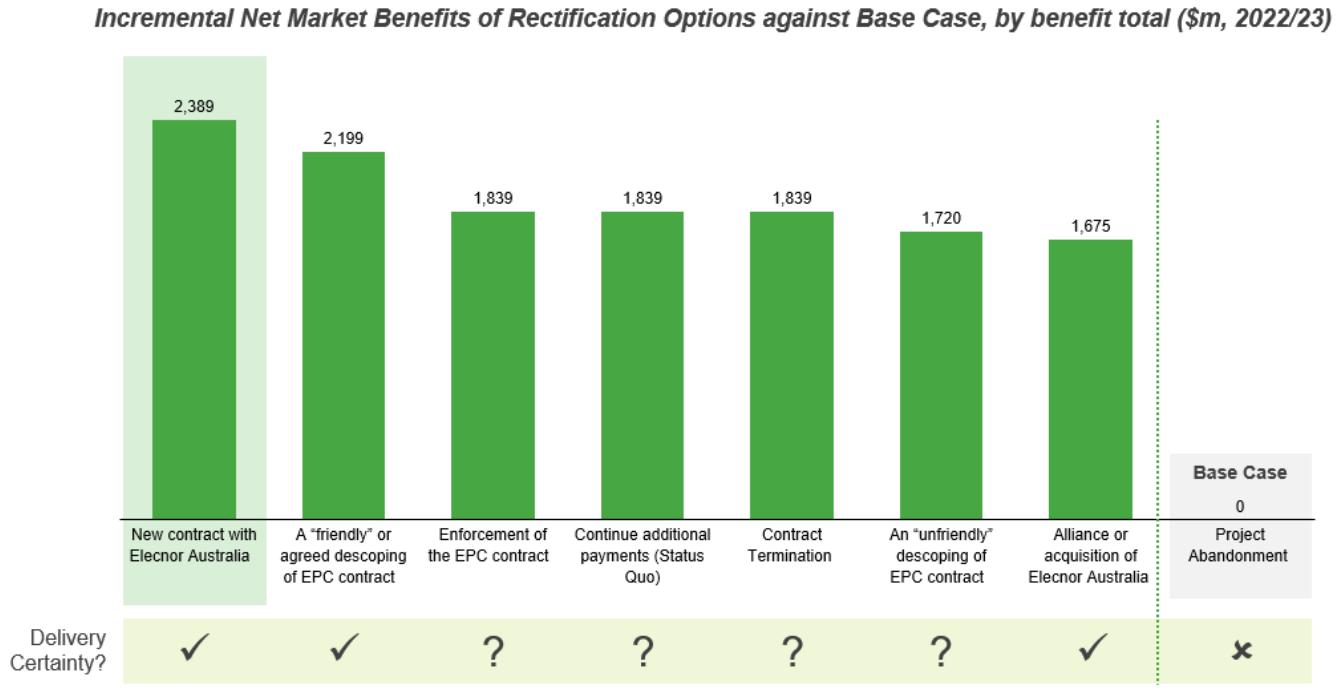
- engage an alternative contractor
- establish new contractual arrangements with Elecnor Australia, and
- project abandonment.

To provide a comprehensive assessment of the eight options, Transgrid engaged EY and HoustonKemp to conduct a net market benefit test, consistent with the approach used in the Regulatory Investment Test for Transmission (**RIT-T**). The purpose of that analysis was to identify the preferred option, being the option that maximises the net market benefit for consumers.

The net market benefit analysis conducted by EY and HoustonKemp estimated that the gross market benefits provided by PEC would be $4.2 billion, with the ICC contract delivering the highest total net market benefit of $964 million (in present value terms). From a total project cost perspective, therefore, the analysis confirms that consumers are better off with PEC, and the project should definitely not be abandoned. In deciding how to respond to Contract Failure, our options analysis focused on the incremental net market benefits for each alternative option. That approach recognises that decision-making should only be informed by future costs and benefits.

Figure 7 shows the incremental net market benefit of each option and also indicates those options that provide greater certainty regarding the timely delivery of PEC. For example, options involving enforcement, continuation of payments, and contract termination are expected to deliver PEC later, hence the reduced benefits compared to options involving either a new contract with Elecnor Australia or a 'friendly' descoping. Figure 7 shows that the ICC contract with Elecnor Australia achieves the highest incremental net market benefits of $2,389 million and, therefore, is the preferred option.

Figure 7: Assessment of the competing options ($m, 2022/23)



In addition to conducting the net market benefit analysis, Transgrid also obtained independent expert reports to assist in evaluating the alternative options, which provided further support for the prudency and efficiency of the ICC contract option, including:

- A report from Fission, which confirmed that Transgrid would likely achieve a lower contract cost if it were able to negotiate a revised contract with Elecnor Australia, instead of replacing Elecnor Australia with an alternative contractor.
- A report from Turner & Townsend which provided a further independent assessment of the costs to complete the project. Transgrid used this benchmarking analysis as a further data point from which to assess the prudency and efficiency of the new contract and new contract price that was being negotiated with Elecnor Australia.
- A benchmarking report prepared by KPMG, which verifies that the negotiated outcome compares favourably with other major transmission projects.
- A review from E3 Advisory which confirms that Transgrid took appropriate steps to obtain the best outcome on behalf of electricity consumers.

In summary, while the Contract Failure has led to substantially higher costs than envisaged in the EPC contract, Transgrid has acted prudently and efficiently to rectify the adverse consequences of that event for the benefit of consumers. Further detailed information on the options analysis and Transgrid's decision making is provided in Attachment 3 to this Application.

3. Forecast capital expenditure and reopener amount

Key points

- Transgrid's proposed reopener amount is limited to the cost increases that have been caused by the event, being Contract Failure, in accordance with the NER requirements.
- Transgrid considers that it has adopted a conservative approach to the reopener amount. In particular, Transgrid is voluntarily not claiming any costs in this Application relating to its active client role under the ICC contract, even though these costs fall within the scope of the reopener provisions.
- The total forecast capital expenditure to deliver PEC has increased by $1,507 million and the proposed reopener amount is approximately $365 million lower at $1,142 million, which is approximately 24% below the total increase in project costs.
- The remaining costs are expected to be reviewed by the AER during its ex post review, following the successful completion of the project.
- Transgrid negotiated a profit share arrangement in the new ICC contract for the benefit of consumers. Accordingly, if a profit share is provided to Transgrid at the end of the project, we commit to return the full value to consumers.

3.1 Forecast capital expenditure and reopener amount

Table 3 summarises the forecast total capital expenditure to complete PEC is $3,628 million compared to the AER's inflation adjusted PEC CPA allowance of $2,121 million. The reopener amount is $1,142 million, which is approximately $365 million or 24% lower than the forecast increase in the total project costs.

Table 3: Summary of the Reopener Amount ($m, 2022/23)

Items	Current forecast	CPA allowance	Forecast increase	Excluded from reopener	Reopener amount
Contract Costs	2,967	1,634	1,333	211	1,122
Other Project Costs	661	487	174	154	20
Total	**3,628**	**2,121**	**1,507**	**365**	**1,142**

Following the completion of PEC, the AER will conduct an ex post review in relation to any overspend amount incurred by Transgrid. The AER's ex post review will examine the prudency and efficiency of any overspend, and any expenditure that does not satisfy the AER's assessment will be excluded from Transgrid's regulatory asset base, i.e., those costs will be borne by Transgrid's shareholders rather than consumers. Based on current forecasts, Transgrid expects that the AER's ex post review will apply to approximately $365 million, assuming that the reopener amount is approved.

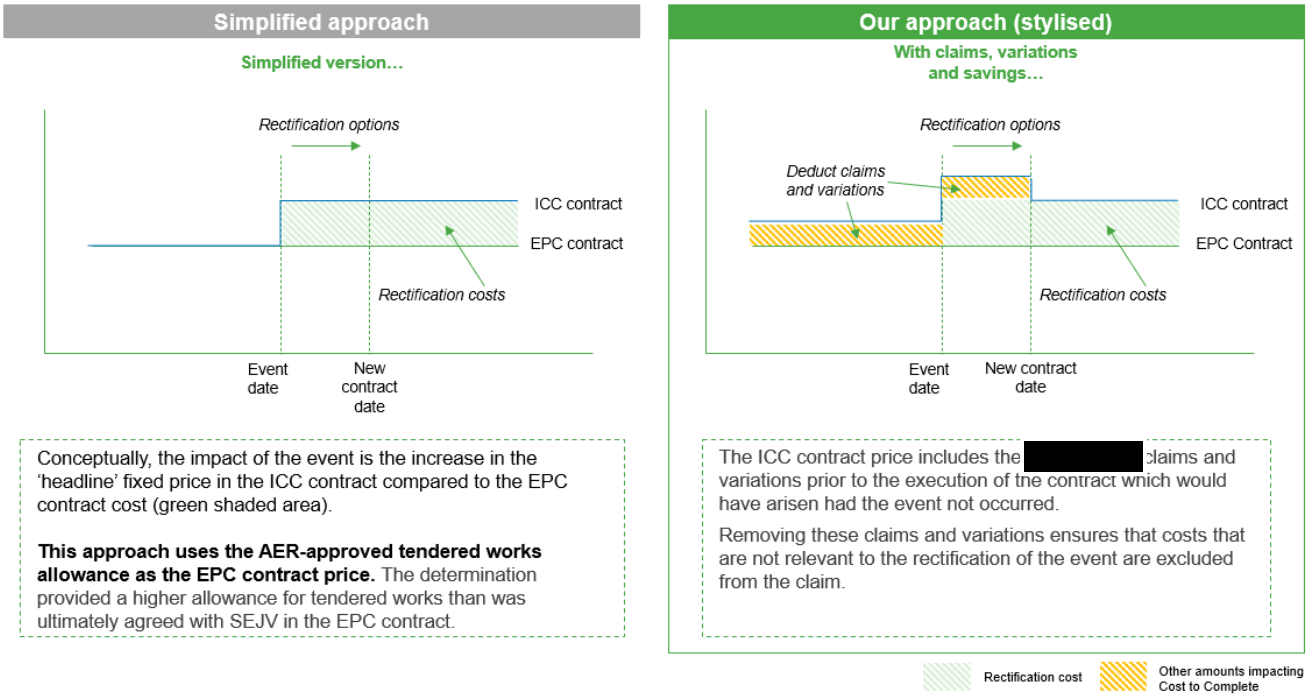
In summary, the reopener amount principally relates to the increase in the contract costs caused by Contract Failure, while the AER's subsequent ex post review will focus on the prudency and efficiency of any increase in 'Other Project Costs', being Transgrid's internal project costs. While Transgrid is confident that these cost increases will be assessed as prudent and efficient, we recognise that the ex post review provides

stakeholders with comfort the AER will be able to scrutinise these cost increases even though they fall outside the scope of this Application. The AER's ex post review will also scrutinise the Contract Cost increases that are excluded from this Application.

3.2 ICC contract cost

This section explains the methodology, approach and calculations to determining the reopener amount for the contract cost. A high-level overview of the methodology is shown in Figure 8 below.

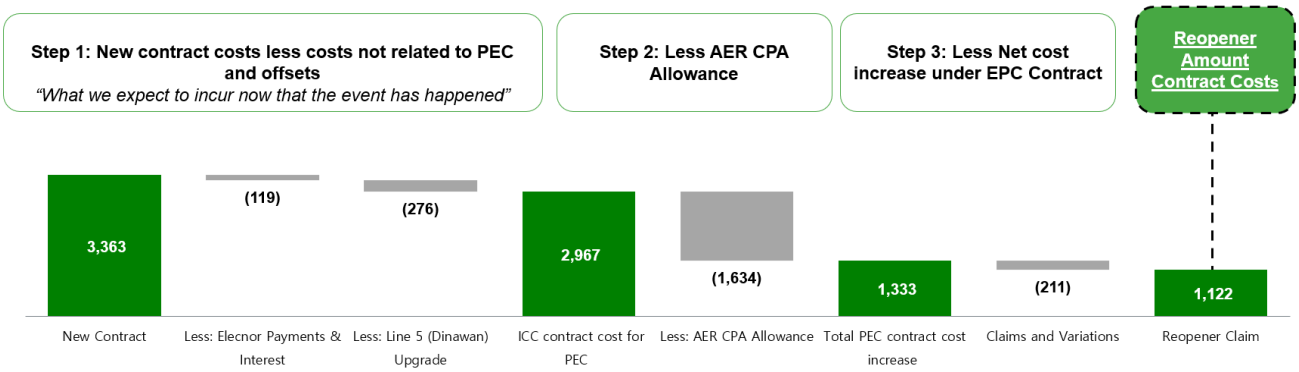
Figure 8: Methodology for determining the reopener amount for the Contract Costs



The 'simplified approach' in Figure 8 illustrates that the event caused a 'step up' in the costs of delivering PEC from the fixed price in the EPC contract, depicted by the green line, to the fixed price in the ICC contract, depicted by the blue line. The difference between the two lines, shown by the green shaded area is the reopener cost or the 'rectification costs', i.e., the additional costs that must be incurred if PEC is to be delivered.

The 'our approach' in Figure 8 extends the simplified approach to show that the ICC contract includes additional claims and variations amounts, depicted by orange boxes, that were paid by Transgrid in accordance with the EPC contract. Therefore, the ICC contract is a combination of the EPC contract, plus claims and variations, plus the rectification costs. The reopener amount is therefore calculated as the ICC contract price (the blue line) minus the EPC contract price (the green line) minus the claims and variations (the orange boxes). This is also represented in Figure 9 below, which shows that the reopener amount with respect to the contract costs is $1,122 million.

Figure 9: Determining the reopener amount for the Contract Costs



As explained in section 2.3.2, Transgrid negotiated a profit sharing arrangement into the ICC contract, which means that if Elecnor Australia makes a profit in excess of $50 million (nominal), any additional profit above that amount will be shared equally between Elecnor Australia and Transgrid. The ICC contract price includes no allowance for profit and, therefore, Elecnor Australia's cost performance would need to be better than expected in order for Elecnor Australia to earn any profit in relation to PEC.

If a profit share is provided to Transgrid at the end of the project, we commit to return Transgrid's profit share to consumers.

3.3 Other project costs

In addition to the Contract Cost increase, Transgrid expects to incur increases in its Other Project Costs which comprise Transgrid's own internal labour resources, external labour hire, and costs for professional and other services.

Table 4 below shows Transgrid's forecast capital expenditure for Other Project Costs, and the net cost increase taking account of the AER's CPA allowance and Clough Bonds that have been received by Transgrid to defray its increased costs caused by project delay.

Table 4: Transgrid's forecast Other Project Costs ($m, Real 2022/23)

Other Project Costs	Total	Basis of forecast
Total forecast costs	765	Internal Transgrid forecast based on specific roles, activities and scopes of work
Less Bonds	(104)	Compensation received to defray the increase in Transgrid's costs arising from the administration of Clough
Net increase in Other Project Costs before AER allowance	**661**	This is the sum of the two items shown above
Less AER CPA allowance	(487)	The AER's CPA allowance inflation adjusted from real 2018$ to real 2023$
Net cost increase	**174**	

While Table 4 shows that Transgrid expects to incur cost increases of $174 million, only those cost increases that have been caused by the event may be included in this Application. As set out below, Transgrid proposes to include Negotiation and Analysis and Insurance costs in this Application, but does not seek to recover Transgrid's other costs, such as active client costs. The AER will assess the prudency and efficiency of these other costs in its ex post review as a precondition for those costs being included in Transgrid's RAB.

Negotiation and Analysis Costs

The Negotiation and Analysis Costs comprise the cost associated with undertaking analysis, options assessments and finalising the ICC contract. These costs include:

- the cost of internal labour to negotiate the ICC contract
- legal fees relating to the drafting and finalisation of the contract and to finalise matters relating to the contract (such as claims), and
- other external advisor costs incurred to analyse and negotiate the ICC contract.

The reopener amount for Negotiation and Analysis Costs is $6 million. This comprises $4 million of non-labour costs and $2 million of internal labour costs. Of the non-labour costs approximately 50% relate to legal fees, with the balance for a range of external advisers. As these costs would not have been incurred but for the Contract Failure, they have been included in the reopener amount.

Insurance Costs

Transgrid renewed its insurance coverage for Material Damage and Third-Party Liability cover to reflect the increase in the ICC Contract Cost compared to the EPC contract, excluding the costs of the completed works such as Separable Portion 1 (**SP1**). The increase in the Insurance Costs as a consequence of the event is $14 million and has been included in the reopener amount.

Excluded active client costs

As already noted, Transgrid will incur additional costs as a result of its active client role, which is a new role under the ICC contract. While these costs are directly attributable to the event, Transgrid is voluntarily not seeking to recover these costs in this Application. This decision means that Transgrid's shareholders will share a greater burden of the increase in project costs and help ease affordability concerns. In relation to the AER's review process, this conservative approach means that the AER will review Transgrid's active client costs as part of its ex post review and also provides confidence that the amount claimed in this Application is reasonable.

Proposed amount for Other Project Costs

Table 5 below shows Transgrid's proposed reopener amount for Other Project Costs.

Table 5: Other Project Costs, Reopener Amount ($m, Real 2022/23)

Item	Real $m
Contract Analysis and Negotiation costs	6
Insurance costs	14
Total Other Project Costs	**20**

Further detailed information on the calculation of the reopener amount is provided in Attachment 7 to this Application, which sets out the capital expenditure methodology.

4. Revenue and pricing implications

Key points

- Transgrid's total maximum allowed revenue for the final year of the 2023-2028 period will increase by $173 million (nominal) as a result of the reopener Application.
- As explained in sections 1.1 and 2.4, PEC is expected to deliver substantial net benefits to consumers in New South Wales, South Australia and Victoria by enabling the connection and sharing of lower cost generation across the NEM.
- The bill impact analysis presented in this section, which reflects the total costs of PEC including the South Australian component, confirms that PEC will provide a net benefit to consumers over the period 2023-2050.

4.1 Revised annual building block revenue requirement and expected MAR

Table 6 below shows that $173 million (nominal) in incremental revenue is required during the 2023-2028 period in relation to the reopener amount in this Application.

Table 6: Incremental revenue from PEC capex reopener for the 2023-2028 regulatory period ($m, nominal)

Building block	Total	Approach
Return on capital	166	Calculated by multiplying the forecast opening capital base for a given year by the allowed rate of return adopted by the AER
Return of capital	10	Calculated as forecast straight line depreciation for each asset class less indexation of the capital base
Operating expenditure	1	Transgrid is not seeking to adjust its current operating expenditure allowance as part of this Application, other than adjusting the allowance for debt raising costs as a consequence of the revised capex allowance. Debt raising costs have been calculated using the AER's standard approach
Revenue adjustments	-	None
Corporate income tax	(11)	Calculated as forecast pre-tax income multiplied by the corporate tax rate, less the assumed value of imputation credits
Annual revenue requirement (i.e. unsmoothed)	**166**	
Impact of smoothing	7	Calculated by resolving the year 5 X-factor, so the NPV of the MAR for the 2023-2028 regulatory period matched that of the forecast annual revenue requirement for the same period
Maximum allowed revenue (i.e. smoothed)	**173**	

Transgrid is seeking to recover this incremental revenue during the last year of the current regulatory period because Transmission Use of System (**TUOS**) prices for prior years have already been determined.

Transgrid's revenue requirement for subsequent regulatory periods will reflect the actual costs of delivering PEC, subject to the AER's prudency and efficiency assessment in its ex post review.

Table 7: Incremental revenue from PEC capex reopener forecast by year ($m, nominal)

MAR (smoothed revenue)	2023-24	2024-25	2025-26	2026-27	2027-28	Total
AER 2023-2028 Determination (updated for 2025-26 return on debt)	924	960	1,108	1,283	1,389	5,663
Impact of capex reopener	-	-	-	-	173	173
Updated MAR	**924**	**960**	**1,108**	**1,283**	**1,562**	**5,837**

For further detail please see the updated PTRM, which has been submitted as part of this Application. The inclusion of $173 million in Transgrid's revenue for 2027-28 translates to an increase of approximately $18 per residential customer. As 2027-28 is the first year in which Transgrid may increase its revenue in accordance with this Application, the $18 increase per customer includes the impact of cost increases from prior years. To provide an indication of the total annual costs and benefits of PEC, the next section provides an assessment of the net impact of PEC on residential consumers' annual bills.

4.2 Customer bill impact of PEC

In addition to improving the reliability and security of supply in New South Wales, South Australia and Victoria, PEC is still expected to deliver substantial electricity bill savings for consumers across these States (compared to the scenario where PEC was not built). This is because the lower cost generation enabled by PEC will more than offset the increase in the transmission component of electricity bills, even after considering the increased cost of the capex reopener.

Table 8 below provides an indicative range for the average annual bill impact for residential customers across New South Wales, South Australia, and Victoria. It shows an estimated range for the annual generation savings per residential customer as a result of PEC proceeding, which have been estimated by ACIL Allen based on detailed modelling.[17] The estimated range for the annual residential transmission costs takes account of:

- The estimated share of the annual transmission costs relating to PEC that is expected to be allocated to residential customers in NSW and South Australia.
- The estimated impact of the Modified Load Export Charge (**MLEC**), which is an inter-regional transmission charge between regions based on a complex methodology that is mandated in the NER. The purpose of MLEC is to recognise that each TNSP makes use of its neighbouring TNSP's assets and should, therefore, contribute to those costs according to usage. In the case of PEC, the effect of MLEC will be to transfer some transmission costs from NSW to South Australia and Victoria. The analysis

[17] By its nature, these savings are indicative and are likely to vary from the estimates provided.

presented below provides an estimate of this impact, noting that the actual calculation will be determined annually in accordance with the NER.

Table 8: Indicative Average Annual Bill Impact of PEC for a typical residential customer by state, 2022-23 to 2049-50 ($Nominal)

	NSW[1]	SA	VIC
Generation saving	25 – 30	60 – 75	35 – 45
Transmission cost[2]	15 – 20	10 – 15	0 – 5
Net bill savings	**5 – 15**	**45 – 65**	**30 – 45**

Source: ACIL Allen, Transgrid analysis. Note: Bill impacts are indicative estimates only, rounded to the nearest $5 increment.1. The indicative bill impacts for residential customers living within the Australian Capital Territory are assumed to be the same as those for NSW Customers. 2. The estimated transmission cost upper bound value for NSW, and lower bound values for SA and VIC show the bill impact if MLEC did not have any redistributive effect. In reality, we expect the net impact of MLEC to redistribute transmission costs from NSW to SA and VIC, although the magnitude of this effect is difficult to estimate at this stage.

The analysis shows that residential consumers in New South Wales, South Australia and Victoria remain better off with PEC compared to the hypothetical case in which PEC did not proceed. It also illustrates the value of PEC in providing a more integrated grid as highlighted by AEMO's ISP, particularly for consumers in South Australia and Victoria.

5. Next steps

The AER will now review this Application in accordance with the NER requirements. Transgrid expects that the AER will seek additional information as part of its review process and seek the views of stakeholders and interested parties. Transgrid welcomes the AER's review, and we look forward to working with its staff and Board in making its determination.