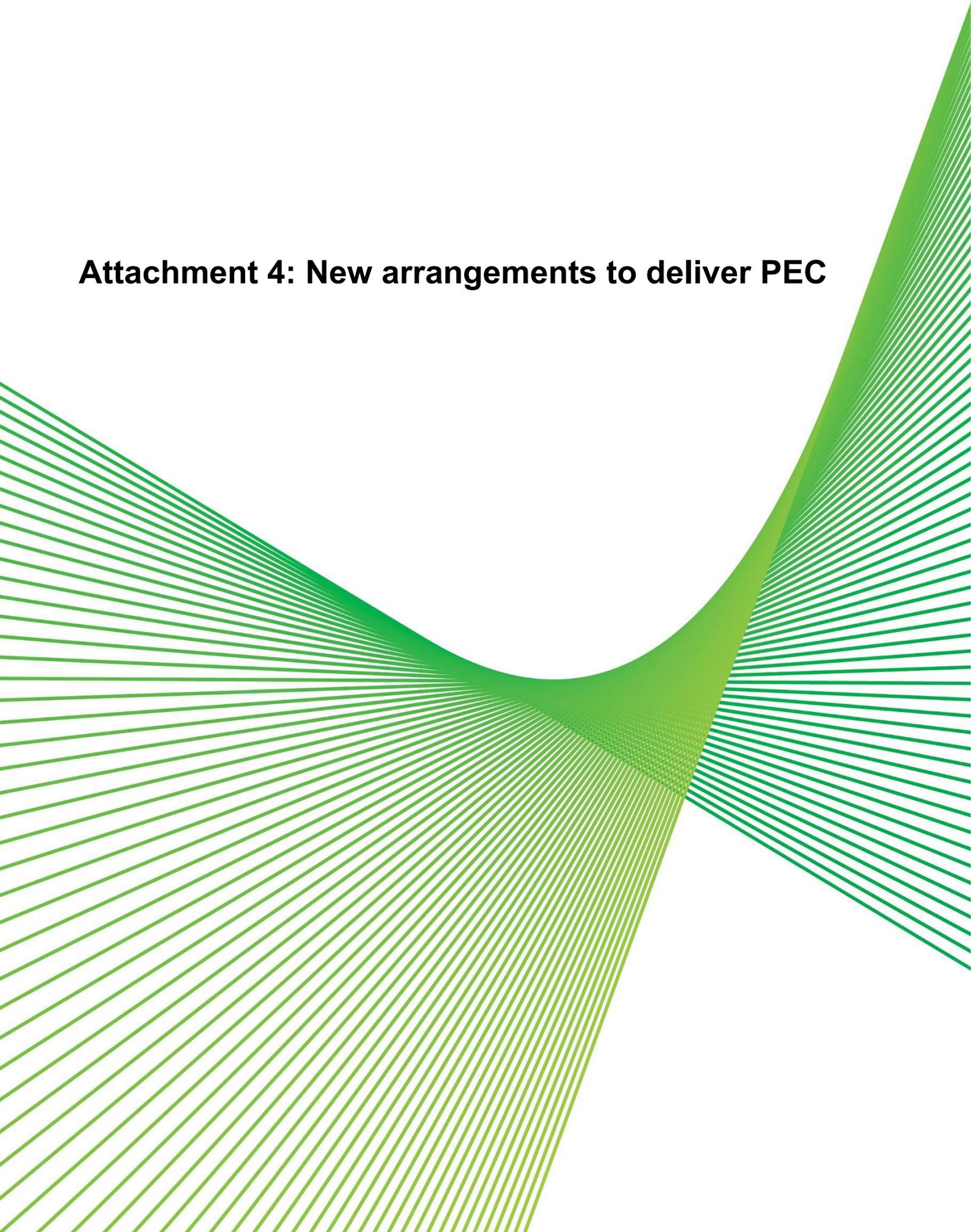


## **Attachment 4: New arrangements to deliver PEC**



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## 1. Purpose and key messages

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This Attachment forms part of Transgrid's application to reopen the 2023-2028 Revenue Determination in accordance with clause 6A.7.1 of the NER (**Application**).

The event referred to in this Application is Contract Failure, which meant that PEC would not be completed by the competitively procured contractor, Secure Energy Joint Venture (**SEJV**), under the existing Engineering, Procurement and Construction (**EPC**) contract.

Following the Contract Failure and having considered all credible options and conducted a detailed net market benefit analysis, Transgrid identified that entering into a bespoke Incentivised Completion Cost (**ICC**) contract with Elecnor Australia<sup>1</sup> to complete PEC. The cost benefit assessment showed that this option would achieve the best outcome for consumers.

The purpose of this Attachment is to outline the steps that Transgrid took to secure the new ICC contract and to ensure that its terms and conditions (including price) are prudent and efficient. This Attachment also outlines the significant further protections and project performance measures obtained on behalf of consumers in the ICC contract.

### Key messages

- In response to Elecnor Australia providing a Revised Offer Submission (**ROS**) to complete PEC, Transgrid established a Peer Review Team (**PRT**) to review this submission. The PRT, having assessed the methodologies underpinning price and program, found Elecnor Australia's estimate cost to complete to be prudent and indicative of a reasoned and calculated process.
- Given that the forecast cost for the option to retain Elecnor Australia to complete the project provided by far the highest net market benefits to consumers, the Transgrid Board approved negotiations with Elecnor Australia to agree new contract terms and conditions, including price.
- The ICC contract negotiated with Elecnor Australia differs fundamentally from the 'hands off' EPC contract and contains terms and conditions which are unique in the Australian market, as well as substantial protections for Transgrid, incentives for Elecnor Australia in relation to project delivery, and extensive changes to the management of the project. These protections create a favourable outcome for consumers, by ensuring Elecnor Australia delivers the project to maximise market benefits.
- An external report was commissioned from KPMG to benchmark the cost of delivering PEC under the ICC contract against other major transmission projects. In addition to KPMG's report, E3 Advisory also assessed the prudence and efficiency of Transgrid's decision-making in

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<sup>1</sup> Technically, the 'contractor' under the ICC contract remains Secure Energy Joint Venture; however, for ease, Transgrid will refer to Elecnor Australia (being the only solvent member of SEJV) as the contractor for the remainder of this Attachment.

response to Contract Failure. These reports support the prudence and efficiency of the ICC contract price, having regard to the particular circumstances facing Transgrid.

## 2. Revised Offer Submission

In July 2024, Elecnor Australia provided an options paper describing the different options it proposed regarding PEC. Following further discussions and a detailed examination of those options, on 2 September 2024 Transgrid established a PRT to analyse the robustness of the program and schedule presented by Elecnor Australia.

The PRT comprised specialist advisors in addition to key members of the project team, as set out in Table 1.

Table 1: Peer Review Team members

Position	Organisation
Chief Procurement Officer	Transgrid
Commercial Director	Transgrid
Commercial Adviser	DJC Consulting
Senior Planning Manager	TBH
Senior Estimator	TSA Riley
Senior Estimator	KPMG

The PRT undertook a due diligence exercise which included a review of the methodology and processes utilised by Elecnor Australia to determine its estimated cost to complete. Through the review process, the PRT found that:

- Elecnor Australia’s estimated cost to complete is prudent and indicative of a reasoned and calculated process.
- The PRT reviewed Elecnor Australia’s estimate of its Forecast Final Cost (**FFC**) (actual costs plus forecast cost to complete) and concluded that the likely outcome ranged from \$3,440 million to \$3,622 million. This analysis indicated that the fixed price of \$3,475 million was reasonable<sup>2</sup>.
- The PRT determined the substantiation and additional information provided by Elecnor Australia met the PRT’s expectations in the methodology adopted to build-up the forecast cost to complete.

Given that the forecast cost for the option to retain Elecnor Australia to complete the project provided the highest net market benefits to consumers and was broadly aligned with external estimates (confirmed by cost estimation reports by Fission and Turner & Townsend, described later in this Attachment) the Transgrid Board approved further negotiations with Elecnor Australia to agree a revised, fully resourced programme, new project milestones, and new contract terms and conditions, including a revised contract price.

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<sup>2</sup> Where amounts are reported in this attachment, these are generally provided as nominal amounts to retain consistency with the information and data available at the time.

### 3. Negotiation of the new contractual terms and conditions

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Transgrid's negotiators were two seasoned executives, with extensive executive, transactional and major project experience. One held management roles including executive management roles at Thiess Construction, Ergon Energy, Macquarie Infrastructure and Real Assets (MIRA) 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.

Transgrid's negotiators consulted, liaised and sought approval to negotiate in accordance with Transgrid's governance structure. Transgrid's negotiators were supported through the process by internal and external legal, commercial and regulatory advisors to ensure the negotiation process would lead to a prudent and efficient outcome. Transgrid's governance structure and processes were followed throughout the negotiation process, with input at each level and all final decisions were proposed by Management to the CEO and Board for approval.

As agreed with the Transgrid Board, it was important to retain the concepts of a fixed price and specified delivery dates (to protect Transgrid and consumers from the risk of further cost increases) and to obtain additional commitments from Elecnor Australia, given the failure of the EPC contract.

The terms and conditions of the ICC contract are unique in the Australian market, which fundamentally moved away from the 'hands off' approach of the EPC contract. The key differences between the EPC and ICC contracts include:

- Material and substantial protections for Transgrid and changes to incentives for Elecnor Australia in relation to the timely and efficient completion of the project, including deposit by Elecnor Australia's parent company of the significant amount of \$400 million into an escrow account in which Transgrid is able to access in the event of ICC or project breaches. The escrow account is intended to improve contractor performance by providing Transgrid with the ability to drawdown funds in the event of unsatisfactory contractor performance, including a failure to achieve project KPIs, failure to pay subcontractors, failure to achieve project milestones, or failure to maintain sufficient working capital. These arrangements provide significant protection against delivery risk in favour of Transgrid and consumers.
- Revised security arrangements, which include increased securities to reflect the new contract price. Elecnor Australia provided bank guarantees for \$347.5 million (being 10% of the revised contract price) and Elecnor Australia's parent company provided a refreshed parent company guarantee, valued at [REDACTED] of the revised contract price [REDACTED]. In addition, Elecnor Australia was required to pay Transgrid \$116 million as surety for project certainty and part payment of Liquidated Damages. These arrangements are superior to market and provide improved protections for Transgrid and consumers.
- Profit sharing arrangements that encourage Elecnor Australia to seek cost savings while ensuring that consumers obtain their fair share of any profit above \$50 million. By the same token, consumers are insulated from cost overruns through the additional performance and security guarantees secured in the ICC contract.
- Extensive changes to the management of the project, which provides for an expanded role for Transgrid as an 'active client'. The purpose of these changes is to provide Transgrid with significantly more visibility, control and risk management capability than would be afforded under an EPC contract. In addition,

Transgrid incorporated the following KPIs in the ICC contract, which include leading indicators of performance, including behaviour-based KPIs, to ensure that Elecnor Australia remains focussed on project quality and delivery. In contrast to KPIs in an EPC contract, leading indicators enable Transgrid to take proactive action, if required, so that performance issues can be addressed before impacting on project delivery:

- attending and contributing to the new tiered progress and governance meetings
  - creating and implementing a planning system consistent with the Lean Construction Institute's Last Planner System®
  - demonstrating the effectiveness of the planning system
  - demonstrating effective cost management and cost control, including monthly Forecast Final Costs and monthly cashflows
- achieving pre-agreed monthly and quarterly production targets for overhead transmission lines and substations, and
  - providing progressively and in a structured manner, all assurance records and documentation ahead of practical completion.

Table 2 provides further details on the key features of this unprecedented ICC contract which will ensure that PEC is completed in a prudent and efficient manner. These measures provide Transgrid and consumers with assurance that Elecnor Australia will deliver PEC prudently and efficiently under the ICC contract and therefore will rectify the adverse consequences of the Contract Failure.

Table 2: Key terms and conditions of the ICC contract

Measure	Detail	Impact / assurance
<b>Greater delivery certainty</b>		
Achievement of specified milestones and KPIs	The ICC contract specifies a list of KPIs that Elecnor Australia must satisfy as it completes its work on the project, as noted above. Additionally, Elecnor Australia must achieve Programme Milestones by specific dates.	The inclusion of specific KPIs is a new concept in the ICC contract 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.  Programme milestones are designed to assist with project delivery and are interim milestones such as on time construction of 50% of towers on Line 2 and 5 and completion of pre-energisation works in substations.
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 personnel as an 'active client'. Specifically, Elecnor Australia is required to provide: <ul style="list-style-type: none"> <li>● one additional Project Director</li> <li>● five site-based Project Coordinators</li> </ul>	The additional project leadership and management resources provide greater certainty that the contractor has adequate supervision and planning capability for the works and an increased capacity to pivot as issues arise.

Measure	Detail	Impact / assurance
	<ul style="list-style-type: none"> <li>• a Testing and Commissioning Lead, and</li> <li>• an HSE Director.</li> </ul>	
Payment of adequate working capital by Elecnor Australia	<p>The contract provides that the unpaid balance of the fixed price under the ICC contract remains on an ongoing basis, identical to Elecnor Australia's forecast cost to complete. If Elecnor Australia submits a revised final cost to complete that increases the forecast cost to complete the project, then Elecnor Australia's parent company is required to immediately pay the difference between the unpaid balance of the revised fixed price and the revised forecast cost to complete into a project trust account, funds from which can only be used against the project.</p>	<p>This provision ensures that the risk of any increases to the project's forecast cost to complete is allocated to Elecnor Australia and that Elecnor Australia's parent company provides adequate working capital on an ongoing basis, preventing the accumulation of large sums outstanding to complete the project. Transgrid can access funds in the \$400 million escrow account (see below) and has a termination right if Elecnor Australia's parent company fails to comply.</p> <p>By negotiating this provision, which is superior to the market standard, consumers are protected against cost increases as the contractor faces strong incentives to not exceed the fixed price.</p>
Residual profit share	<p>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.</p>	<p>A fixed price contract would ordinarily include a profit element. In the ICC contract, however, the profit share mechanism is designed so that consumers obtain a fair share of any material profit. This is an important concession, which ensures that the actual project costs are prudent and efficient.</p>
Active client	<p>For Transgrid to be certain of achieving the right behaviours and mindset to deliver the project safely and on time and to facilitate collaboration at all levels, the contract provides for Transgrid to take on an 'active client' role throughout project delivery, largely focused on managing performance, proactively resolving issues and realising opportunities.</p>	<p>As an 'active client', Transgrid has a substantially greater role in the project compared to the EPC contract. This provides for increased control throughout the remainder of the project.</p>
Audit rights and transparency	<p>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 payments to subcontractors, resources and costs to complete the project as well as compliance with Elecnor Australia's obligations relating to the project trust account. In addition, Elecnor Australia is required to cooperate in facilitating any</p>	<p>This ensures that Transgrid has greater oversight over Elecnor Australia's business and financial state, with the ability to view and verify this information on a day-to-day basis.</p>

Measure	Detail	Impact / assurance
	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 funds are used and to ensure that subcontractors and suppliers are paid on time.
<b>Poor performance &amp; default</b>		
Escrow account	The escrow account is a new mechanism in the ICC contract which provides Transgrid with greater control over the way in which Elecnor Australia delivers the project, and to ensure that Elecnor Australia delivers the project in accordance with the ICC contract.	The ICC contract requires Elecnor Australia's parent company to deposit \$400 million 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 there is any breach of the ICC contract by Elecnor Australia.

Table 3 shows the revised dates in the ICC contract compared to the EPC contract.

Table 3: Expected practical completion dates under EPC and ICC contracts

Separable Portion	EPC completion dates	ICC completion dates
SP1 (including Line 1, Line 4 and Substation 1a)	28 Jul 2023	16 Dec 2024
Line 2	28 Aug 2024	15 Sept 2026
Line 5	28 Aug 2024	31 Aug 2026
Substation 1b	28 Aug 2024	8 Sept 2025
Substation 2	28 Aug 2024	28 Sept 2026
Substation 3	28 Aug 2024	21 Aug 2025
Special protection and communications and balance of the works to support the operation of the project	28 Aug 2024	28 Sept 2026

## 4. Validation of prudent and efficient costs

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As set out in Attachment 3, Transgrid acted prudently and efficiently to obtain the best outcome for consumers in response to the failure of the EPC contract; this outcome is the continued delivery of PEC under an ICC contract with Elecnor Australia. Prior to entering into the ICC contract, Transgrid had multiple data points to inform its assessment of a prudent and efficient contract price, given its particular circumstances. Since that time, Transgrid has also engaged external providers to validate the prudence and efficiency of the ICC contract, focusing on:

- Transgrid's decision to enter into the ICC contract, and
- the new price, having regard to the costs of delivering major transmission projects in Australia.

In the remainder of this section, we summarise the reports and advice we have received from subject matter experts, which confirm that Transgrid's decision-making and the resulting ICC contract price are prudent and efficient.

### 4.1 Prior to entering into ICC contract

#### Fission reports

To assist Transgrid in assessing the alternative options for completing PEC, in August 2023 Fission prepared a cost estimate report that compared PEC with other projects, having regard to scope, terrain and complexity. Fission advised that the FFC (excluding Transgrid's costs) would be \$3,343 million if Elecnor Australia were replaced with an alternative delivery partner. The report also advised that Transgrid should expect to incur [REDACTED] in additional costs to engage a new contractor, totalling [REDACTED] (excluding Transgrid's costs).

Fission provided a further estimated FFC, assuming Elecnor Australia completes the project. This estimate considered the current status of works and assumed that the remaining scope would be delivered with a blend of contractual rates and current market rates. Fission estimated that Elecnor Australia's FFC (excluding Transgrid costs) could be expected to range from \$2,357 million to \$3,094 million.

Fission concluded that Transgrid would likely achieve a lower contract value if it were able to negotiate a revised contract with Elecnor Australia, instead of replacing Elecnor Australia with an alternative contractor.

#### Turner & Townsend cost assessment

In July 2024, Transgrid commissioned an independent assessment of the costs to complete the project from Turner & Townsend. Transgrid used this analysis as a further data point from which to assess the prudence and efficiency of the new contract terms and conditions that were being negotiated with Elecnor Australia.

Subsequently, Transgrid obtained an updated estimate from Turner & Townsend with refined assumptions to account for actual conditions and limitations, such as the availability of local supplies and different factors influencing productivity. The updated report confirms that the negotiated outcome is prudent and efficient.

## 4.2 Further evidence of prudent and efficient costs

To provide further evidence regarding the prudence and efficiency of the decision to recontract with Elecnor Australia, Transgrid has commissioned the following independent reports:

- a detailed review from E3 Advisory of Transgrid's decision-making in entering into the ICC contract with Elecnor Australia and the prudence and efficiency of those terms and conditions, and
- a benchmarking report from KPMG that assesses the final forecast costs of delivering PEC under the ICC contract with other national and international transmission projects.

We discuss each of these reports below.

### E3 Advisory report

Transgrid engaged E3 Advisory to provide an independent report that examined the prudence and efficiency of Transgrid's response to the Contract Failure. Given the significant scope of this exercise, Transgrid did not ask E3 Advisory to examine Transgrid's decision-making prior to Contract Failure, which we discuss in Attachment 2. In undertaking its assessment, E3 Advisory had regard to the prudence and efficiency guidance provided by the AER and applied its own expertise in relation to major infrastructure projects in the context of PEC and Transgrid's particular circumstances.

In summary, E3 Advisory concluded that

- of the options available in the circumstances, Transgrid's decision to establish a new ICC contract with Elecnor Australia was prudent and efficient
- the price and schedule of the new contract benchmarks reasonably with other relevant project data, and
- the ICC contract terms and conditions, in combination with the new price and schedule, are prudent and efficient.

In addition to these summary findings, E3 Advisory made a number of specific findings in relation to Transgrid's response to the Contract Failure and establishing the new terms and conditions in the ICC contract, as set out below.

### E3 Advisory's findings regarding Transgrid's response to Contract Failure:

- The governance arrangements for the EPC contract, post the Contract Failure, were appropriate for the nature and scale of PEC.
- The options considered by the Board were appropriate to the changing circumstances.
- It was prudent and efficient of Transgrid's management to maintain a focus on the progress of the contract works whilst resolution options were being explored.
- The period from the Contract Failure until the Board's decision to establish the ICC contract was reasonable given the changing circumstances.
- Transgrid actively managed the risks post Contract Failure and considered the risks of each option.
- Transgrid was prudent in considering at various stages, the descoping of the EPC contract for delivery by other means.

- Transgrid was prudent and efficient to retain aspects of the commercial structure of the EPC contract when negotiating the ICC contract.
- Transgrid considered lessons from other projects in determining the basis for the ICC contract.
- The assessment by Transgrid of Offer E from Elecnor Australia, applying two separate approaches, was reasonable in the circumstances despite some minor limitations.
- Transgrid's schedule assessment approach was reasonable and informed by Turner & Townsend's schedule analysis.
- It was prudent of Transgrid to progress a market tender process for an alternative contractor, the outcome of which provided an efficiency basis for option assessment.

E3 Advisory's findings regarding the ICC contract terms and conditions:

- Transgrid was prudent in negotiating a profit share mechanism on an open book basis, which incentivised the contractor on achieving efficient cost outcomes.
- The ICC contract completion dates were appropriate in the context of the other contract mechanisms.
- Transgrid was prudent in securing and revising the delay damages mechanism whilst resetting the completion dates, focusing the contractor on an efficient schedule delivery.
- Transgrid was prudent in applying an abatement mechanism to Programme Milestone Dates, focussing the contractor on an efficient delivery under the schedule.
- Transgrid was prudent in negotiating a \$400 million escrow account with the Guarantor to enable efficient claw back in the event of contractor performance failure.
- Transgrid was prudent in negotiating a performance KPI regime related to Transgrid's objectives.
- Transgrid was prudent in establishing a project trust account to provide a secure and transparent account for contract payments solely for the project.
- Transgrid was prudent in negotiating payment of damages for late Separable Portion (**SP1**).

- Transgrid was prudent to negotiate replacement securities commensurate with the ICC Contract Price and consistent with market.
- Transgrid was prudent to negotiate liability caps commensurate with the ICC Contract Price and consistent with market.
- Transgrid was prudent in enhancing contract governance and Elecnor Australia's leadership capacity and capability.
- Transgrid was prudent in defining an 'active client' role with specific rights which increase Transgrid's control of project management.
- Transgrid was prudent, given the remaining scope of the works, to negotiate removal of Provisional Sums.
- Transgrid was prudent in expanding its rights of termination.

- Transgrid was prudent in negotiating a narrower definition of Change in Law.

### KPMG Benchmarking Report

KPMG was engaged by Transgrid to undertake a comparative analysis of the contract price for PEC, against Australian and international external data. The benchmarking review analysed the contract price for PEC for the transmission lines and substation components. Benchmarking data was obtained from the following data categories and sources:

- **Category 1 - Transgrid Projects:** project costs for PEC1, HumeLink East2 and West3.
- **Category 2 - Publicly available sources:** publicly accessible datasets based on the AER, AEMO, Australian university research papers, international regulatory bodies such as MISO and ACER, and international research papers from established institutions.
- **Category 3 - In-house data from KPMG's domestic and international partners:** data collected and aggregated by KPMG's partners working on transmission infrastructure.

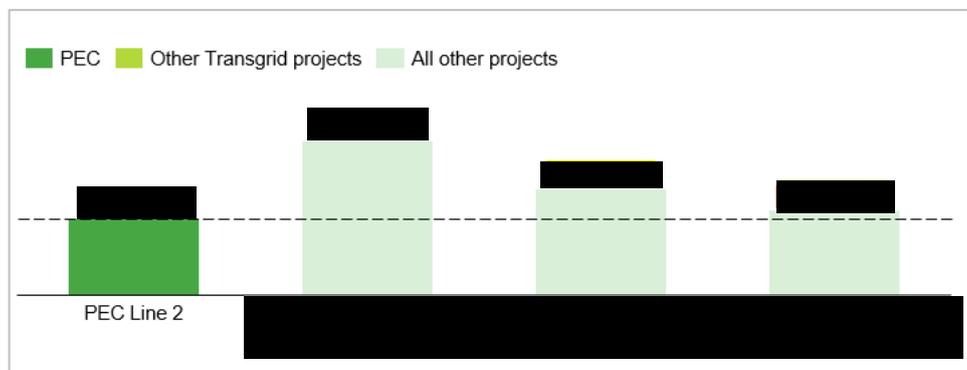
In relation to transmission line benchmarking, KPMG's key findings are summarised below:

- The PEC Line 5 (500kV) cost per km is [REDACTED], compared to HumeLink East at [REDACTED] and HumeLink West at [REDACTED]. The average cost per km for all 500kV Australian projects is [REDACTED] and the average cost per km for all 500kV reference projects is [REDACTED].
- HumeLink West is an outlier at [REDACTED] per km when compared to other Transgrid projects. The project is being delivered in an alpine terrain and has had significant landowner issues, with the proposed route impacting cost and construction timelines.
- The PEC Line 2 (330kV) cost per km is [REDACTED], compared to the average cost per km of [REDACTED] for publicly available 330kV data sources.
- The procurement strategies for PEC and HumeLink differ primarily due to different approaches to cost estimation and risk allocation. PEC adopts a fixed-cost estimate, transferring greater cost certainty to Transgrid but also limiting contractor flexibility. In contrast, HumeLink follows an Incentivised Target Cost model, incentivising cost efficiency while sharing risk between the client and contractors.
- The figures below present the transmission line benchmarking results, which show that the Line 5 (Figure 1) and Line 2 (Figure 2) costs for PEC compare favourably with other transmission projects. This benchmarking outcome provides strong evidence that the revised cost to deliver PEC is prudent and efficient

Figure 1: Comparison of 500kV transmission line costs (\$m / km)

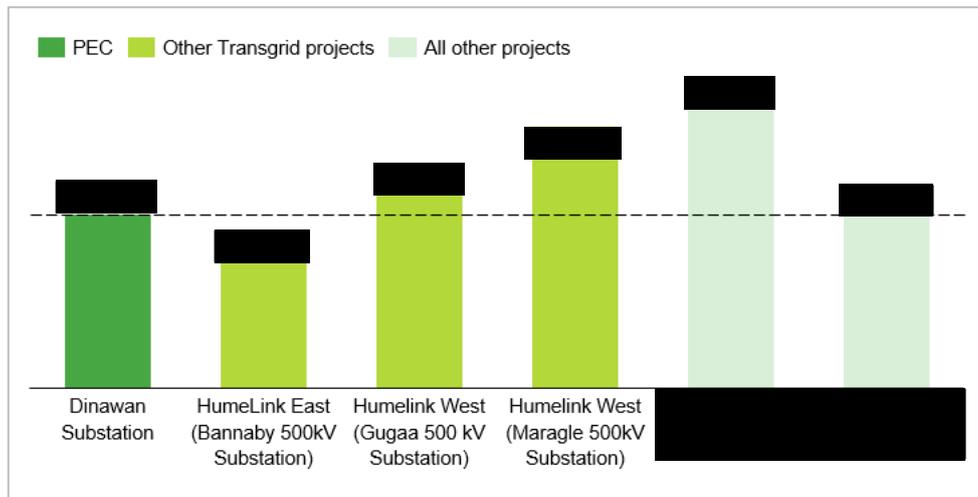


Figure 2: Comparison of 300kV transmission line costs (\$m / km)



- In relation to the substation component of the project, KPMG noted that substations by nature are designed and constructed under different configurations depending on the system requirements of the network. Therefore, the costs of substations widely vary due to these differing factors, including supply of phase-shift transformers (in some cases, this equipment is supplied by the project owner), supply of line shunt reactors, synchronous condensers, size and location of switchyards, switching stations, number of bays and site configurations. These differences make it challenging to conduct comparable benchmarks on a like-for-like basis.
- To normalise the substation data, KPMG adjusted its sample of 330kV and 500kV projects in Australia by excluding synchronous condensers and switching stations. KPMG explained that the international data sets have limited information pertaining to the inclusions and assumptions, therefore making it difficult to compare with Dinawan on a like-for-like basis.
- Figure 3 below shows the results of KPMG’s benchmarking analysis, which shows that the cost for Dinawan compares favourably with other substation projects.

Figure 3: Comparison of substation costs (normalised – excl. synchronous condensers and switching stations, \$m)



KPMG noted the following points in relation to the substation costs:

- After normalising the dataset to ensure a like-for-like comparison, the costs of Dinawan fall within the benchmark range of peer substation projects.
- HumeLink substations have a higher voltage level compared to Dinawan, hence resulting in higher costs for civil and structural works, steel structures, equipment supply and install and secondary systems. Bannaby substation, is a substation upgrade project, hence resulting in a lower total cost than Dinawan, Gugaa and Maragle.

In summary, the benchmarking analysis conducted by KPMG supports the conclusion that the contract cost negotiated with Elecnor Australia is prudent and efficient. As explained above, the terms and conditions obtained by Transgrid also provide significant value to consumers by ensuring that the project will be delivered in accordance with the new timeframes, supported by extensive protection measures against contractor performance issues.

## 5. Appendices

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The following appendices are provided to support the prudence and efficiency of Transgrid's decision-making post-Contract Failure and the resulting contract terms and conditions:

- Appendix 4a: Independent estimate to complete report, Turner & Townsend
- Appendix 4b: Project EnergyConnect New Contract Review, E3 Advisory, and
- Appendix 4c: Project EnergyConnect benchmark report, KPMG.