

AER

Determination

Marinus Link Stage 1, Part A (Early works)

December 2023

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Tel: 1300 585 165

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Executive Summary

The Australian Energy Regulator (AER) exists to ensure energy consumers are better off, now and in the future. Consumers are at the heart of our work, and we focus on ensuring a secure, reliable, and affordable energy future for Australia as it transitions to net zero emissions. The regulatory framework governing electricity transmission and distribution networks is the National Electricity Law and Rules (NEL and NER). Our work is guided by the National Electricity Objective as one of the National Energy Objectives (NEO).

Marinus Link is a proposed 1500MW transmission line between Tasmania and Victoria. The project comprises two undersea High Voltage Direct Current (HVDC) cables running across Bass Strait and converter stations in Tasmania and Victoria.

On 30 June 2022, the Australian Energy Market Operator (AEMO) published the 2022 Integrated System Plan (ISP) that identified significant new transmission requirements to connect renewable generation sources and firming capacity. One transmission project identified is Marinus Link, included in the 2022 ISP as an ‘actionable project’ under the optimal development path (ODP).¹ The ISP recommends commencing operation of cable one in 2029 and cable two in 2031. On 3 September 2023, Marinus Link shareholders announced the project will focus on delivering one cable in the first instance at an estimated cost of \$3.0-3.3 billion, with negotiations to continue on a second cable.²

Marinus Link is a component of ‘Project Marinus’, which also includes the North West Transmission Development (NWTD) project progressed by TasNetworks. While both Marinus Link and the NWTD project are part of ‘Project Marinus’, this decision considers proposed early works expenditure for Marinus Link, as distinct from the NWTD project.

On 1 June 2023, we published our decision to commence a revenue determination process for Marinus Link and the Commencement and Process Paper to apply to the determination.³ This decision was made in accordance with Rule 6A.9 of the NER that provides for an ‘Intending Transmission Network Service Provider’ (Intending TNSP) to request us to commence the process for making a transmission determination for a proposed prescribed transmission service, and to determine the process to apply for making that transmission determination.

The Commencement and Process Paper sets out a staged approach comprising:

- Stage 1, Part A (Early works): a revenue determination for pre-construction activities allowing for better revealed construction costs and stakeholder engagement.
- Stage 1, Part B (Construction costs): a construction cost determination, in which we would determine the cost of constructing Marinus Link.

¹ AEMO, *2022 Integrated System Plan*, June 2022, p. 61.

² The Hon Chris Bowen MP, The Hon Julie Collins MP, The Hon Jeremy Rockliff MP, and the Hon Guy Barnett MP, *Investing in the future of Tasmanian energy with Marinus Link* [joint media release], Commonwealth and Tasmanian Governments, 3 September 2023, accessed 14 November 2023.

³ AER, *Marinus Link Decision: Transmission Determination Commencement and Process Paper*, June 2023.

- Stage 2: a full revenue determination, which, on the basis of the construction cost determination, we would determine all of the matters we are required to under rule 6A.14 of the NER.

The Commencement and Process Paper sets out the decisions to be made under rule 6A.14 of the NER at each stage of the process. The scope of the Stage 1, Part A (Early works) revenue determination is substantially narrower than a standard determination process with key decisions including review of the efficiency and prudence of proposed capital expenditure for early works, the allowed rate of return, and application of incentive schemes.

Stage 1 is a pre-commissioning stage where prescribed transmission services are not provided, and revenues are not recovered from consumers. Costs in Stage 1 are to be rolled into the Regulatory Asset Base (RAB), to be determined in Stage 2. Consistent with the staged approach, the first regulatory control period will commence on 1 July 2025, with the second regulatory control period to commence at Stage 2.

Prior to constructing the Marinus Link interconnector, Marinus Link is undertaking early works to:⁴

- improve the accuracy of forecast construction costs; and
- reduce the risks of project delays.

Marinus Link plan to make a final investment decision on the project in December 2024, with early works critical to informing this decision.

The proposed forecast prudent and efficient capital expenditure (capex) required to deliver early works is \$196.5 million (\$2022-23).⁵

Marinus Link Stage 1, Part A (Early works) – scope of works

We consider the scope of works proposed by Marinus Link are consistent with the Australian Energy Market Commission's (AEMC) definition of early works.⁶ In adopting a staged approach to delivering large transmission projects, the early works component allows for the resourcing of design and planning, quantification of project risks and the building of social licence. Marinus Link's scope of works includes technical design and specifications, project management, environmental impact assessments, community and land owner engagement and procurement strategy and execution. We consider these works critical to improving the accuracy of cost estimates and delivering the project in accordance with AEMO's 2022 ISP.

The forecast costs of undertaking Stage 1 Part A (Early works) are efficient and prudent

The forecast costs that are reasonably required to deliver the project will be rolled into the RAB and will be recovered from consumers once Marinus Link commences providing prescribed transmission services.

⁴ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.28.

⁵ Marinus Link, *Marinus Link – Revenue proposal – Stage 1 part A early works – 31 July 2023*, 31 July 2023, p.5.

⁶ AEMC, [Stage 2 Final Report](#), 27 October 2022, p. 41. Refer to section 2 for the full definition.

Marinus Link proposed \$196.5 million (\$2022-23) in forecast capex for early works.⁷ We have examined Marinus Link's proposed capex forecast and our view is that the amount proposed is reasonable, prudent and efficient to deliver early works for the Marinus Link project. We accept Marinus Link's forecast.

In particular, we consider that:

- as noted above, the scope of Marinus Link's capex is consistent with the AEMC's definition of early works
- the majority of expenditure is on acquiring expert services and advice from external sources – we consider Marinus Link's procurement procedures are appropriate to deliver efficient procurement outcomes
- the proposed staff costs are in line with cost expectations based on analysis of Australian Bureau of Statistics (ABS) data
- overheads are slightly higher than, but still in line with, projects of a similar scale – we consider this is explained by the cost of establishing and operating a single asset network, versus the multi-asset network of the other ISP projects.

Incentive schemes, cost pass throughs and rate of return

Pursuant to the process established in the Commencement and Process Paper, key decisions for the Stage 1, Part A (Early works) include the application of incentive schemes, cost pass throughs and the rate of return (ROR). Our decisions on these matters are as follows:

- Our preference at this stage is to apply the capital expenditure sharing scheme (CESS). However, the decision on whether the CESS will apply is to be deferred until we know more about the full costs and risks of the project, following submission of the Stage 1, Part B (Construction costs) proposal. The demand management innovation allowance mechanism (DMIAM) and the small-scale incentive scheme (SISS) will not apply to Stage 1, Part A (Early works). Section three discusses incentive schemes.
- We accept the additional pass through events as proposed by Marinus Link and will set materiality threshold for cost pass throughs based on Marinus Link's calculation of the maximum allowed revenue for each regulatory year. Approved cost pass throughs will be recovered by adding them to the RAB until Marinus Link commences providing prescribed services. Section four discusses cost pass throughs.
- We will apply the AER's 2022 Rate of Return Instrument to set Marinus Link's ROR, noting Marinus Link proposed using TasNetworks' ROR. We note in suggesting the application of TasNetworks' ROR, Marinus Link were not seeking to bypass the application of the Rate of Return Instrument, but rather proposed to apply the ROR that was calculated when the Rate of Return Instrument was applied to TasNetworks. Section five discusses ROR, including the reasoning for our decision.

⁷ Marinus Link, *Marinus Link – Revenue proposal – Stage 1 part A early works – 31 July 2023*, 31 July 2023, p.5.

Next steps

The capital expenditure we have approved in this determination will be rolled into Marinus Link's opening RAB value, to be established in Stage 2 plus or minus any adjustments allowed for by the NER.

The next stage of the project will be important in ensuring that Marinus Link determines the accurate cost of constructing the full project and obtains all necessary approvals to deliver the project on time. This will ensure that AEMO has all the necessary information when undertaking the ISP feedback loop, and the Stage 1, Part B (Construction cost) revenue proposal includes an accurate updated forecast for the costs reasonably required to construct the project.

We expect that Marinus Link will have resolved outstanding issues relating to the implementation of the project by the completion of the Stage 1, Part A (Early works) process, including land costs, environmental impacts and biodiversity offsets and project design.

We also expect that Marinus Link demonstrate the benefits of its early works activities as part of its Stage 1, Part B (Construction cost) proposal, including through risk identification and mitigation and social licence.

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1 Marinus Link actionable ISP project

Marinus Link is a proposed \$3.8 billion⁸ (\$2022-23) interconnector between Tasmania and Victoria with a capacity of 1500MW and involves approximately 255 kilometres of undersea High Voltage Direct Current (HVDC) cable and approximately 90 kilometres of underground HVDC cable in Victoria. It also includes converter stations in Tasmania and Victoria.

Marinus Link is included in the AEMO 2022 ISP ODP as a 'staged actionable project'. The ISP considers four scenarios of future plausible market developments to capture uncertainty regarding the pace of energy transformation on the path to reach net zero by 2050.⁹ Under the ISP, AEMO considers that the optimal timing for Marinus Link is a target delivery date of 2029-32, with early works delivered in two parts. AEMO released the 2024 draft ISP on 15 December 2023. While the final 2024 ISP will have implications for Project Marinus, including optimal timing for delivery, the Stage 1, Part A (Early works) is considered in the context of the 2022 ISP.

1.1 Marinus Link proposal

On 30 June 2022, the AEMO published the 2022 Integrated System Plan (2022 ISP).¹⁰ The 2022 ISP identifies significant new transmission requirements to connect new renewable generation sources as well as firming capacity. One transmission project identified is Marinus Link. The ISP recommends commencing operation of cable one in 2029 and cable two in 2031. To meet AEMO's recommended timeframes, Marinus Link advises that construction must commence in 2025.

Marinus Link plans to make a final investment decision on the project in December 2024 so that it can commence construction in 2025 and meet AEMO's timelines. To inform this investment decision, Marinus Link is seeking to understand the revenues it may recover were it to be regulated by a transmission determination made by us under the NER. To this end, Marinus Link has submitted that we should commence (and determine the process for) determining a transmission determination that would apply to it. In support, Marinus Link submits:

- the Marinus Link project is an 'actionable ISP project'
- the project has been subject to investment analysis and a regulatory investment test for transmission (RIT-T) process
- the Victorian, Tasmanian and Commonwealth government have provided support for the project
- Marinus Link has been registered as an Intending TNSP by AEMO.

1.2 Rule requirements

Rule 6A.9 of the NER provides for an 'Intending TNSP' to request us to commence the

⁸ AEMO, *2022 Integrated System Plan*, 30 June 2022, p. 67. We note estimated construction costs have increased since publication of the 2022 ISP.

⁹ AEMO, *2022 Integrated System Plan*, June 2022, p. 25.

¹⁰ AEMO, *2022 Integrated System Plan*, June 2022.

process for making a transmission determination for a proposed prescribed transmission service, and to determine the process to apply for making that transmission determination.¹¹

An 'Intending TNSP' is defined as:¹²

...

- (a) an *Intending Participant* who intends to provide *prescribed transmission services* by means of its *proposed transmission system*; or
- (b) a *Market Network Service Provider* who intends to provide *prescribed transmission services* by means of its converting transmission system,

and ... includes that person once registered as a *Network Service Provider* for the provision of *prescribed transmission services* by means of its *transmission system*.

A 'proposed prescribed transmission service' is defined as:¹³

...

prescribed transmission services to be provided by means of:

- (a) a proposed *transmission system*; or
- (b) a converting transmission system.

Further, an 'Intending Participant' is defined as '[a] person who is registered by [the Australian Energy Market Operator] as an Intending Participant under Chapter 2 [of the NER]'.¹⁴

If an Intending TNSP then requests us to commence the process for making a transmission determination for a proposed prescribed transmission service, the NER affords us broad discretion in determining that request. Relevantly, clause 6A.9.2(e) of the NER provides:

In determining whether to commence the process for making a *transmission determination* requested by an Intending TNSP under [clause 6A.9.2(a)] the AER may have regard to any matters it considers appropriate, including:

- (1) whether the Intending TNSP intends to deliver an *actionable ISP project* or a project that is not an *actionable ISP project* but has been subject to the *regulatory investment test for transmission*;
- (2) the likelihood of the Intending TNSP delivering that project; and
- (3) in the case of a converting transmission system, the Intending TNSP's application to the AER to determine the service to be a *prescribed transmission service*.

¹¹ NER, cl. 6A.9.2.

¹² NER, cl. 6A.9.1(b).

¹³ NER, cl. 6A.9.1(b).

¹⁴ NER, ch 10.

An ‘actionable ISP project’ is defined as:¹⁴

A project:

- (a) that relates to a *transmission asset* or *non-network option* the purpose of which is to address an *identified need* specified in an *Integrated System Plan* and which forms part of an *optimal development path*; and
- (b) for which a *project assessment draft report* is required to be published in the *Integrated System Plan* that identifies that project.

Marinus Link delivers value on a scenario weighted basis.¹⁵

Marinus Link’s Stage 1, Part A (Early works) of \$196.5 million (\$Nominal) in forecast capex is for the early works. Early works projects were introduced as part of the staging of large transmission projects. Our guidance note on the regulation of actionable ISP projects identified staging as a means to reduce the risks of actionable projects and increase flexibility to respond to changing market conditions.¹⁶ Early works allows for investing time in the planning and design phase. It can help identify and quantify project risks, and enable innovative and cost effective design.¹⁷

Early works is a relatively recent addition to the regulatory framework. We consider early works projects is an evolving area. Where different cost types are proposed, we would be open to considering those to the extent that the early work would promote the long term interests of consumers. We are committed to being flexible within the regulatory framework and to assist the timely delivery of ISP projects, and we consider that early works should produce reliable cost estimates and expenditure forecasts for later project stages. We expect Marinus Link to provide information on how early works has assisted in the delivery of the multi-stage project.

¹⁵ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p. 3; AEMO, *2022 Integrated System Plan*, 30 June 2022, p. 73.

¹⁶ AER, *AER – Final - Guidance Note – Regulation of actionable ISP projects*, March 2021, p. 25.

¹⁷ AER, *AER – Final - Guidance Note – Regulation of actionable ISP projects*, March 2021, p. 26.

2 Prudent and efficient project expenditure

This section outlines our assessment of Marinus Link’s proposed forecast capital expenditure (capex) for Marinus Link early works Stage 1, Part A. Marinus Link will not provide transmission services until Stage 2, during the second regulatory period as set out in the Commencement and Process Paper, and will not recover revenue from customers until that time. Consequently, all of Marinus Link’s expenses are treated as capital expenditure that will be accrued in a regulatory asset base (RAB) until Marinus Link commences prescribed services.

2.1 Forecast capital expenditure

Marinus Link’s proposal forecasts that Stage 1, Part A will require \$196.5 million (\$nominal) in capex.¹⁸ Table sets out the proposed expenditure for early works.

Table 1 Proposed expenditure for early works activities (\$m nominal)

Category	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Landowner and community engagement programs, including Traditional Owners, and stakeholder relations	4.0	6.0	9.0	4.1	23.2
Land and easement acquisition	2.6	1.8	2.5	1.1	8.0
Environmental impact assessments	2.7	7.4	9.9	4.6	24.5
Technical designs and specifications	17.4	12.2	11.7	2.6	43.9
Procurement strategy and execution ⁵	2.4	4.6	8.8	3.1	18.9
Program and project management	4.5	8.2	10.4	4.7	27.8
Corporate costs and support	6.6	13.9	21.0	8.7	50.2
Sub-total	40.1	54.2	73.3	28.9	196.5
Less Grant funding	-9.4	-27.2	-19.4	-11.6	-67.6
Net expenditure	30.7	27.1	53.9	17.2	128.9

Source: Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, pp.4-5.

Note: Numbers may not sum exactly due to rounding.

We have accepted Marinus Link’s proposed forecast capex of \$196.5 million for 2021-22 to 31 December 2024. Table 2 AER determination of forecast capex (\$m nominal) sets out our

¹⁸ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.5.

determination on the total capex required for the early works in each year of the regulatory control period.

Table 2 AER determination of forecast capex (\$m nominal)

	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Proposed capex	40.1	54.2	73.3	28.9	196.5
AER decision	40.1	54.2	73.3	28.9	196.5

Source: Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.5.

Note: Numbers may not add up due to rounding. Excludes equity raising costs.

Marinus Link has proposed \$128.9 million (nominal) of capex for its early works activities after a deduction of grant funding of \$67.6 million. Marinus Link included an independent review in support of this proposed expenditure in its proposal.¹⁹ In assessing the proposal, we reviewed Marinus Link's initial submission, identified and issued several information requests to better understand the structure and cost of the proposal, met with Marinus Link to discuss the proposal, and took into account stakeholder views. On the basis of this review, we consider Marinus Link's early works expenditure is prudent and efficient.

Scope and prudence of the early works proposal

We consider the scope of works proposed by Marinus Link are consistent with the AEMC's definition of early works.

The AEMC defines early works as:²⁰

Any activity which commences prior to the construction of the preferred option can be considered early works if the activity can be justified as being necessary to:

- *improve the accuracy of project cost estimates, and*
- *ensure that a project will be delivered within the time frames specified by the most recent ISP.*

Such as:

- *activities to build social licence, including works to provide community benefits,*
- *completion of environmental approvals,*
- *construction works to test engineering design, and purchasing easements and equipment.*

We are satisfied the proposed scope of works meets this criteria. The early works investments should enable it to mitigate cost, technical, social licence and permitting risks, and to establish an organisation capable of delivering the project. The scope of works is also

¹⁹ Aurecon Australasia Pty Ltd, *Marinus Link - Attachment 02 - Aurecon report - 31 July 2023*, 31 July 2023.

²⁰ AEMC, [Stage 2 Final Report](#), 27 October 2022, p. 41.

consistent with the preferred option from the Project Assessment Conclusion Report (PACR).²¹ Therefore we consider that the proposed scope of works are prudent.

Efficiency of the expenditure proposal

The second part of our assessment is to determine whether Marinus Link's proposed early works capex is efficient. To do this, we have reviewed the total proposed capex against similar ISP projects, and also assessed the efficiency of the component parts of the proposal.

Marinus Link's early works capex is approximately 5% of the total cost of the Marinus Link project.²² This benchmarks well with other large transmission projects such as HumeLink and the Victoria to New South Wales Interconnector West (VNI West).²³ We consider that on this top-down metric, Marinus Link's early works expenditure appears reasonable.

We also note that, at the time of the Stage 1, Part A (Early works) proposal, more than two thirds of early works capex has already been incurred.²⁴ Marinus Link incurred this expenditure without the added certainty of the regulatory process and the mechanisms it provides for cost recovery. We consider this has provided an additional incentive for Marinus Link to contain its early works costs to an efficient level.

We have evaluated Marinus Link's expenditure on direct costs, direct cost overheads, corporate overheads, as well its establishment costs and its various fees and charges. We have found that Marinus Link's capex benchmarks well with other large transmission projects, such as HumeLink and VNI West by category.

Direct costs

Marinus Link's early works does not include the installation of network assets, but rather, involves several establishment and design processes required to commence the project. The major component of Marinus Link's expenditure is to acquire expert advice and reports, and to engage staff and acquire facilities necessary to begin building network assets. Consequently, the majority of Marinus Link's direct costs are for goods and services acquired from external sources. Marinus Link, as a wholly owned subsidiary of TasNetworks, has utilised TasNetworks' tendering and procurement processes to acquire these services. We assessed TasNetworks' tendering and procurement processes during our revenue determination and we consider them to be prudent and efficient.²⁵ We consider they will also deliver prudent and efficient outcomes for Marinus Link.

The remaining component of direct cost relates to internal labour. In response to an information request around labour cost, Marinus Link noted:²⁶

The majority of resources and skillsets required to develop the Marinus Link project are specialised with high global demand, especially for development of HVDC type assets.

²¹ TasNetworks, [PACR: Project Marinus](#), 30 June 2021.

²² AER analysis. Marinus Link, [Revenue Proposal Stage 1– Part A \(Early works\)](#), 31 July 2023, p.5; AEMO, [2022 Integrated System Plan \(ISP\)](#), 30 June 2022, p. 73.

²³ AER analysis. AEMO, [Integrated System Plan Feedback Loop Notice – HumeLink \(Early Works\)](#), 19 May 2023, p. 1; Transgrid, [A.1_VNI West Draft CPA-1_Principal Application_1 September 2023 Public](#), September 2023.

²⁴ AER analysis. This is expenditure before grant funding.

²⁵ AER, [TasNetworks Electricity Transmission Draft Determination Attachment 5 Capital Expenditure](#), September 2023, p.5.

²⁶ Marinus Link, [Marinus Link – information request #003 – Labour and corporate costs, service provider costs, and other miscellaneous – 20230923 – Public](#), 13 October 2023.

...

While MLPL has its main office in Hobart, staff are based across Australia, including in all major capital cities, as well as New Zealand. To attract and retain staff, MLPL has had to remunerate key staff on market-based remuneration. We have experienced relatively high turnover that leads to new staff being paid commensurate with increased market rates.

We accept that the labour component of Marinus Link's direct cost compares reasonably with benchmarks of the cost of labour for equivalent projects such as HumeLink and VNI West.²⁷ It also benchmarks well against the ABS Average Weekly Earnings for similarly skilled professional staff.²⁸

Overheads attributed to direct cost

Direct Costs Overheads include several components which would generally be added to direct labour, such as building/office space, facilities, and training. We have benchmarked these costs as a percentage of direct costs against other TNSPs and consider them reasonable to support Marinus Link's direct costs.

Corporate Overhead

As an uplift on Direct Costs, we consider that Corporate Overheads benchmark well against VNI West and HumeLink's early works, considering that Marinus Link is a single project entity.

While the overhead proportion is at the upper end of benchmarks for Corporate Overheads, the uplift appears reasonable for a single project entity, as opposed to an interconnector built under a large umbrella TNSP (i.e., the cost of maintaining a company board, corporate IT system and other functions is spread over one project, rather than many projects). On this basis we consider that the corporate overhead cost is reasonable in the circumstances.

Establishment Costs

Marinus Link, as a new business and intending TNSP, faces costs of business establishment of around \$15.9 million or 8.1% of its proposed early works capex. The Memorandum of Understanding between the Commonwealth and Tasmanian Governments requires Marinus Link to be structured as a separate entity with related necessary costs.²⁹ Consequently, it is not possible for TasNetworks to own and operate Marinus Link under its current transmission licence.

We note in a supporting document provided by Marinus Link, EY identified 269 corporate processes of which 139 or 52% were fully or partly reliant on TasNetworks and will be transitioned to Marinus Link.³⁰ We have assessed the material and agree that the activities are required to establish a business of this type, and are low relative to the cost of the project, such that any overstatement would not be material.

²⁷ AER analysis. Transgrid, A.5 - TransGrid - Labour and Overhead Costs for VNI - CONFIDENTIAL, December 2020; Transgrid, HumeLink Stage 1 (early works) - Regulatory models A.7 - Labour and Indirect Cost Model - CONFIDENTIAL, April 2022.

²⁸ Australian Bureau of Statistics, Average Weekly Earnings, Australia, May 2023.

²⁹ Marinus Link, Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023, 31 July 2023, p. 11.

³⁰ Aurecon Australasia Pty Ltd, Marinus Link - Attachment 02 - Aurecon report - 31 July 2023, 31 July 2023, p. 48.

Conclusion on Early Works capital expenditure

We are satisfied that Marinus Link's Stage 1, Part A (Early works) capital expenditure is prudent and efficient. We accept Marinus Link's capex forecast.

3 Incentive Schemes

Pursuant to the process the AER has established in the Commencement and Process Paper, for Stage 1, Part A, we must make decisions on the following incentive schemes:

- the small-scale incentive scheme (SSIS);
- the demand management innovation allowance mechanism (DMIAM); and
- the capital expenditure sharing scheme (CESS).

Marinus Link submitted that the DMIAM and the SSIS should not apply to its early works expenditure. As the Marinus Link interconnector is neither operational nor providing services during early works, DMIAM cannot apply. As for the SSIS, Marinus Link notes that this scheme has only been applied to DNSPs.³¹ We agree with Marinus Link that these schemes are not appropriate for an early works proposal before prescribed services commence. We agree the DMIAM and the SSIS do not to apply to Marinus Link, Stage 1, Part A.

Marinus Link proposes that the CESS should not apply to its Stage 1 Part A expenditure. Marinus Link contends applying the CESS would discourage risk-taking and increased expenditure that could benefit consumers in the long-term. Further, it contends that early works are especially prone to forecasting error, so over- or under-spending its approved capex estimate could be outside its control.³²

Marinus Link notes that, should the CESS apply, and given it will not earn revenue until 2029, any resulting adjustment to its revenue would be need to capitalised and included in its opening RAB.³³ That is, an underspend would directly result in a lower RAB, but the CESS reward would increase the RAB, and vice versa for an overspend.

The main precedent regarding the application of CESS to the early works of large transmission projects is HumeLink.³⁴ We included HumeLink's capex forecast in Transgrid's CESS targets. However, we viewed it as too early to commit to the application of the CESS at an early works stage before seeing the full capex proposal, and suggested we would fully assess the application of the CESS at stage 2 when we know about the full costs and risks of the project.³⁵

We note the AER has previously shown a preference to apply the CESS for large transmission projects. Although we have deferred the decision to HumeLink stage 2, our

³¹ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, pp. 46-49.

³² Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, pp. 47-48.

³³ Marinus Link, *Marinus Link – information request #002 – Clarification of CESS time period – 20230922 – Public*, 28 September 2023; Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p. 42.

³⁴ There are distinctions. HumeLink was a single project contributing to Transgrid's CESS, while the Marinus Link project would be the entirety of Marius Link's CESS. Further, the determination for HumeLink (stage 1 part 1) was published before the revised CESS guidelines, which provides guidance for large transmission projects. HumeLink (stage 1 part 2) was published with the new CESS guidelines.

³⁵ AER, *AER - Determination - HumeLink - August 2022*, August 2022, p. 10; AER, *AER - Determination - HumeLink Stage 1 (part 2) - August 2023*, August 2023, pp. 7, 12.

default position would be to apply the CESS to HumeLink.³⁶ We have applied the CESS to Project EnergyConnect.³⁷

In deciding whether to apply the CESS to a large transmission project, we follow the updated CESS guideline. The CESS guideline states that our default position is to apply the CESS and we will be careful in making exclusions, taking into consideration:³⁸

- *the TNSP's CESS and capital expenditure proposals*
- *benefits to consumers from the exemption*
- *the size of the project*
- *the degree of capital expenditure forecasting risk*
- *stakeholder views.*

We are not persuaded by Marinus Link's arguments to exclude early works expenditure from the CESS. As stated, Stage 1 Part A expenditure is largely actual (already incurred). The remaining expenditure that would be subject to CESS is a small portion of the total early works proposed expenditure. Further, as stated, as a proportion of the size of Marinus Link as a whole, the early works are small component of expenditure (around 5%). We consider the expenditure in Stage 1 Part A is relatively predictable and appropriate procurement processes can provide effective cost control. Our view is that an incentive mechanism is necessary so that Marinus Link continues to have incentives to make efficient decisions. We are not convinced that Marinus Link's suggested potential benefits of increased spending and risk-taking would outweigh those incentives. Of the stakeholders who provided submissions, only Marinus Link's Consumer Advisory Panel (CAP) commented on the CESS. The CAP considers the CESS should apply to incentivise cost control.³⁹

As with HumeLink we believe forecast capex should be added to Marinus Link's CESS capex target, but that the decision on whether the CESS should apply should be deferred to when we know more about the full costs and risks of the project, following submission of the Stage 1, Part B (Construction costs) proposal. Adding the forecast capex to CESS capex target leaves us the option to apply CESS in that later period.

³⁶ AER, *AER - Determination - HumeLink Stage 1 (part 2) - August 2023*, August 2023, p. 12.

³⁷ AER, *AER - Transgrid 2023-28 - Final Decision - Attachment 9 Capital expenditure sharing scheme - April 2023*, April 2023, p. 5.

³⁸ AER, *AER – Final decision – Capital expenditure incentive guideline – 28 April 2023*, 28 April 2023, p.7.

³⁹ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p. 27.

4 Pass through events

Under the Commencement and Process Paper, we are required to make a decision on the inclusion of pass throughs for Stage 1, Part A (Early works).⁴⁰

The pass through regime in the NER does not directly fit with Marinus Link's Stage 1, Part A (Early works) scenario because it assumes the regulated entity is earning revenue. Materiality is defined by reference to a service provider's revenue. The pass through mechanism assumes costs passed through will be added to revenue.

The Commencement and Process Paper stated that the AER will make a constituent decision on pass through events from the Stage 1, Part A (Early works) stage.

Clause 6A.7.3(a1) of the Rules provides for the following cost pass through events:

- regulatory change event
- service standard event
- tax change event
- insurance event
- inertia shortfall event

In addition to these pass through events, the Rules allow each TNSP to nominate additional pass through events in its revenue proposal. In recent determinations, TNSPs have nominated the following events:⁴¹

- insurance coverage event
- terrorism event
- natural disaster event
- insurer credit risk event.

Marinus Link proposes that these nominated pass through events should apply for Stage 1, Part A (Early works). We do not have any in principle objection to Marinus Link having access to the same pass through events as other TNSPs. However, given the particular circumstances of Marinus Link, there are two matters we must determine: 1) how to set a materiality threshold in the absence of earning revenues 2) how Marinus Link will recover cost pass through amounts in the absence of revenues.

The NER requires that positive pass throughs meet a materiality threshold greater than 1% of maximum allowed revenue (MAR) in a regulatory year.⁴² However, Marinus Link will not have a MAR (because it will not earn revenue) until the Stage 2 decision in 2029.

Marinus Link's proposed solution to this issue is to formulate a proxy Maximum Allowed Revenue (MAR) for each year of Stage 1 for the purposes of formulating a materiality threshold.⁴³ This involves using the return on capital component for each year as a proxy for the MAR.

⁴⁰ AER, *Marinus Link Decision: Transmission Determination Commencement and Process Paper*, June 2023.

⁴¹ For instance: AER, *AER - ElectraNet 2023-28 - Final decision - Attachment 13 - Cost pass through events - April 2023*, April 2023, pp. 4-7.

⁴² NER, Ch. 10, definitions of "positive change event" and "material".

⁴³ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p. 42.

Allowed return on opening RAB = Allowed Return x Opening RAB

Allowed return on annual expenditure and equity raising costs = Allowed rate of return^{0.5} x Expenditure (Early works) net of grant funding plus equity raising costs for 2021-22, 2022-23 and 2023-24, and Allowed rate of return^{0.75} x Expenditure (Early works) net of grant funding plus equity raising costs for 2024-25

Debt raising costs = Debt raising cost rate x Debt gearing ratio x Opening RAB

MAR = Allowed return on opening RAB + Allowed return on annual expenditure and equity raising costs + Debt raising costs

We note that this will result in a small materiality threshold of between \$40,000 and \$70,000 for early works after applying the 1% factor to Marinus Link's proxy MAR estimate. While small, this is not out of step with TNSPs Directlink and MurrayLink, who also have small thresholds. We accept Marinus Link's proposed solution.

Marinus Link will not commence revenue recovery until 2029. Consequently, in the event of a cost pass through, Marinus Link will not have revenue to adjust for the impact of the event. Marinus Link has not proposed a methodology for recovering pass through amounts.

We consider the appropriate mechanism for recovery is to capitalise any adjustments for cost pass throughs. These would remain in the RAB until the full revenue and pricing determination is made in 2029. Additional amounts approved by the AER as part of a cost pass through application will be added to the approved capex forecast in the relevant regulatory year. This is a modification to the existing pass through mechanism because the Marinus Link will not recover revenue in the period covered by this determination. The capitalisation of expenditure calculation is covered in section 6 below.

This is consistent with the process established for intending TNSPs to recover costs incurred before assets are commissioned (i.e., all efficient costs are capitalised and earn a rate of return until Marinus Link commences the supply of prescribed services).

We therefore determine to apply the pass through regime to Marinus Link, during the period for which it begins to earn revenue, as follows.

If Marinus Link applies to pass through a positive pass through amount under cl 6A.7.3(c) of the Rules, and the AER determines that a positive change event has occurred, the approved pass through amount will be added to the regulatory asset base for Marinus Link.

If Marinus Link notifies the AER of a negative change event under cl 6A.7.3(f), or the AER otherwise becomes aware of a negative change event, and the AER determines a negative pass through amount, the negative pass through amount will be deducted from the regulatory asset base for Marinus Link.

5 Rate of return

In this decision, the rate of return is calculated and applied each year for the purposes of capitalising Marinus Link’s early works expenditure for its ‘roll forward model’ to establish its opening regulatory asset base on 1 July 2025.⁴⁴

We are required by the NEL to apply the rate of return instrument (RORI) to estimate an allowed rate of return.⁴⁵ For this decision, we apply the 2022 Rate of Return Instrument (2022 Instrument), which specifies how we will estimate the return on debt, the return on equity, and the overall rate of return. In making an early works decision, we will be imposing regulatory control over Marinus Link and will effectively be setting a regulatory control period for the period from 1 July 2021 to 30 June 2025.

Marinus Link proposed that we should apply TasNetworks’ rate of return.⁴⁶ We disagree with this view and address their arguments in the next section.

Our calculated rate of return in Table would apply to the first 3 years of the 2021–25 period. A different rate of return would apply for 2024-25, the remaining regulatory year. We update the return on debt component of the rate of return each year, in accordance with the 2022 Instrument, to use a 10-year trailing average portfolio return on debt that is rolled-forward each year. We use 2021-22 as the transition year. In subsequent years, only 10% of the return on debt is calculated from the most recent averaging period with 90% from prior periods.

Marinus Link did not nominate a risk-free rate⁴⁷ averaging period or debt averaging periods. We will apply the default risk-free rate averaging period and debt averaging periods in accordance with the 2022 Instrument.⁴⁸ We elaborate on this in Confidential Appendix A.

Table 3 Marinus Link’s rate of return (nominal)

	AER’s decision (2021–22)	AER’s decision (2022–23)	AER’s decision (2023–24)	Allowed return over the regulatory control period
Nominal risk-free rate	1.34% ^a	1.34% ^a	1.34% ^a	
Market risk premium	6.20%	6.20%	6.20%	
Equity beta	0.6	0.6	0.6	
Return on equity (nominal post-tax)	5.06%	5.06%	5.06%	Constant (%)
Return on debt (nominal pre-tax)	2.12% ^b	2.27% ^b	2.70% ^{b c}	Updated annually

⁴⁴ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.41.

⁴⁵ AER, *Rate of Return Instrument 2022*, August 2023. The 2022 Rate of Return Instrument was amended in August 2023. See <https://www.aer.gov.au/publications/guidelines-schemes-models/rate-of-return-instrument-2022/final-decision>.

⁴⁶ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.41.

⁴⁷ This is also known as the return on equity averaging period.

⁴⁸ AER, *Rate of Return Instrument 2022*, cl.7(b), 23(b).

Gearing	60%	60%	60%	Constant (60%)
Nominal vanilla WACC	3.29%	3.39%	3.64% ^c	Updated annually for return on debt

Source: AER analysis.

- (a) Calculated using the default averaging period.
- (b) Calculated using the default averaging period.
- (c) We will update the rate of return for 2024-25 after the averaging period passes.

5.1 Capital raising costs

In addition to compensating for the required rate of return on debt and equity, we provide an allowance for the transaction costs associated with raising debt and equity. Marinus Link proposed debt and equity raising costs based on TasNetworks' 2024-29 determination.⁴⁹ We apply an established benchmark approach for estimating debt and equity raising costs and have estimated an annual total debt raising cost of 8.88 bppa and subsequent equity raising cost of 3.0%. We have used these estimates to calculate the debt and equity raising cost forecasts for this determination.

5.2 The relevance of TasNetworks' rate of return

Marinus Link proposed to apply TasNetworks' rate of return and noted that it can be updated by the AER and readily applied for the purposes of establishing Marinus Link's opening regulatory asset base as at 1 July 2025.⁵⁰

We consider that we are bound by the NEL to apply the RORI.⁵¹ We have consulted with TasNetworks and Marinus Link on this matter. We have received two written submissions⁵² and have also met with them. After reviewing the relevant information, our decision is that we must apply the current RORI to Marinus Link.

The NEL provides that the RORI is binding on the AER, and network service providers, "in relation to the performance or exercise of an AER economic regulatory function or power".⁵³ "AER economic regulatory function or power" is broadly defined in the NEL, and includes a power exercised by the AER under the NEL or Rules in making, or relating to the making of, a transmission determination.⁵⁴ Functions or powers that relate to the economic regulation of services provided by a regulated transmission system operator by means of, or in connection with, a transmission system, also fall within the definition of "AER economic regulatory function or power."⁵⁵

We consider that our decision on Marinus Link's Stage 1 Part A revenue proposal falls within the definition of "AER economic regulatory function or power". This decision is likely a

⁴⁹ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.42.

⁵⁰ Marinus Link, *Marinus Link - Revenue proposal - Stage 1 part A early works - 31 July 2023*, 31 July 2023, p.41.

⁵¹ NEL, s18H.

⁵² Marinus Link, *Response to the AER's staff views on Rate of Return*, 20 October 2023; Marinus Link, *Further response to the AER's staff views on the allowed rate of return*, 30 October 2023.

⁵³ NEL, s18H.

⁵⁴ NEL, s2.

⁵⁵ NEL, s2.

“transmission determination” within the meaning of the NER, or alternatively “a power relating to the making of” a transmission determination. Therefore, we are bound to apply the RORI in making this revenue determination.

Marinus Link does not contest the fact that we are bound by the RORI in making this determination. Marinus Link’s submission regarding our need to comply with the RORI is that it would be consistent with the instrument for it to receive TasNetworks’ rate of return, because TasNetworks’ rate of return was calculated using the RORI.⁵⁶ We disagree with this argument, because it would imply that any TNSP’s rate of return could be applied to Marinus Link, or any other TNSP. In other words, it would not be consistent with the RORI, and would therefore violate section 18H of the NEL, for the AER to apply TasNetworks’ rate of return to Marinus Link. This is not a TasNetworks determination. We consider that the fact that we are bound by the RORI in relation to this determination means that we must determine Marinus Link’s rate of return by applying the RORI to Marinus Link for the Stage 1 Part A period.

Marinus Link made other arguments in support of its submission that it would be appropriate for it to receive TasNetworks’ rate of return. These were:

- As the early works determination relates to a period that pre-dates the commencement of the first regulatory control period, the allowed rate of return provisions in the Rules do not apply for Stage 1, Part A (Early works).⁵⁷
- TasNetworks is financing Marinus Link’s early works, thus it is appropriate for Marinus Link to receive TasNetworks’ rate of return.⁵⁸

We are not persuaded by these other arguments. None of them address the fact that we are bound by the NEL to apply the RORI when making this decision. We do not consider it is necessary to express a view on the other arguments put forward by Marinus Link regarding the rate of return.

⁵⁶ Marinus Link, *Response to the AER’s staff views on Rate of Return*, 20 October 2023, p.7.

⁵⁷ Marinus Link, *Response to the AER’s staff views on Rate of Return*, 20 October 2023, p. 1 and pp.3-5; Marinus Link, *Further response to the AER’s staff views on the allowed rate of return*, 30 October 2023.

⁵⁸ Marinus Link, *Response to the AER’s staff views on Rate of Return*, 20 October 2023, pp.5-6; Marinus Link, *Further response to the AER’s staff views on the allowed rate of return*, 30 October 2023.

6 Capitalisation of expenditure

This section sets out our calculation of the opening RAB as at 1 July 2025 for Marinus Link which includes the escalation of capitalised costs that Marinus Link will recover from customers as an incremental revenue in the first regulatory period commencing after commissioning.

Table below shows the calculation of the approved opening RAB as at 1 July 2025 for Marinus Link, which reflects our decision to accept the proposed early works expenditures capitalised at the allowed rate of return we have determined (section 5). The opening RAB as at 1 July 2025 reflects our approved:

- cost of the land purchases at Heybridge and Mardan Farm prior to 1 July 2021. For each land acquisition, Marinus Link obtained independent expert advice regarding the market value.
- expenditures for early works activities from 1 July 2021 to 31 December 2024
- equity raising cost which is broadly consistent with the method set out in the AER's post-tax revenue model (PTRM)
- return on capital for the above expenditures based on the allowed WACC (section 5)
- debt raising costs which is broadly consistent with the method set out in the AER's PTRM.

In determining the opening RAB as at 1 July 2025, we note the following:

- The benchmark debt and equity raising costs which have been capitalised into the RAB. This approach is consistent with standard regulatory practice, noting that these costs are included in the RAB because no revenue will be recovered relating to these benchmark allowances until prescribed services commence in 2029.
- The opening RAB calculation as at 1 July 2025 does not make any adjustment for depreciation because Marinus Link is not expected to be commissioned until January 2029 and, therefore, depreciation will not commence until 2029.
- Table does not include any forecast construction expenditure incurred prior to 1 July 2025, as this determination is on the Revenue Proposal focused on early works expenditure. We will amend the opening RAB as at 1 July 2025 to include any prudent and efficient construction expenditure forecast to be incurred prior to 1 July 2025 to be submitted by Marinus Link as part of its Revenue Proposal – Stage, 1 Part B (Construction costs).

Table 4 Capitalisation of expenditure calculation – Marinus Link Stage 1 Part A (Early Works) (\$m, nominal)

	2021–22	2022–23	2023–24	2024–25
Opening RAB	5.0 ^a	38.0	66.8	124.1
Expenditure (Early works) net of grant funding ^b	30.7	27.1	53.9	17.2
Equity raising cost ^c	1.6			
Allowed return on opening RAB ^d	0.2	1.3	2.4	4.8

Allowed return on annual expenditure and equity raising costs ^e	0.5	0.5	1.0	0.5
Debt raising costs ^c	0.0	0.0	0.0	0.1
Closing RAB	38.0	66.8	124.1	146.7

Source: AER analysis.

Note: The closing RAB as at 1 July 2025 excludes any forecast prudent and efficient construction expenditure incurred prior to 1 July 2025.

- a The opening RAB as at 1 July 2021 reflects amounts spent prior to July 2021 for land acquisition at Heybridge and Mardan Farm.
- b Assumed to be in mid-year December terms except for 2024-25. The 2024-25 expenditure reflects capex over a 6 month period from 1 July 2024 to 31 December 2024, assumed to be in 30 September 2024 dollar term.
- c Updated equity raising cost and debt raising cost to reflect the allowed WACC as set out in section 5
- d Calculated by multiplying the opening RAB with the allowed WACC.
- e Calculated by multiplying the expenditure (early works) net of grant funding (including equity raising cost for 2021-22) with a 6-month WACC for 2021-22 to 2023-24 and a 9-month WACC for 2024-25.

We approve capital expenditure of \$196.5 million inclusive of grant funding. Netting off grant funding of \$67.6 million, we add \$128.9 million net capex into the RAB over the 2021–22 to 2024–25 regulatory period. As a result, we approve an opening RAB as at 1 July 2025 of \$146.7 million.

7 Consumer engagement

While the scope of the Stage 1, Part A (Early works) proposal is substantially narrower than a standard determination process, with the key issue being the prudence and efficiency of proposed early works expenditure, we consider consumer engagement remains an important aspect of the proposal.

Stakeholder engagement will be critical as Marinus Link progresses, both in terms of ensuring future regulatory proposals reflect consumer preferences and to develop and maintain social licence. We note consumer engagement commenced prior to the development of the Stage 1, Part A (Early works) proposal with consultation an important aspect of the Regulatory Investment Test – Transmission (RIT-T) process. The proposed scope of early works will advance stakeholder engagement with expenditure to support landowner and community engagement programs, including Traditional Owners, and stakeholder relations, activities we consider critical to progressing Marinus Link.

A key driver of consumer engagement has been the Consumer Advisory Panel (CAP), which has provided constructive challenge to Marinus Link to ensure its proposal delivers value to consumers. The CAP found the development of the early works proposal was a ‘partnership’, with Marinus Link engaging sincerely and providing comprehensive information when requested by CAP members.⁵⁹

While the CAP noted its support for the Stage 1, Part (Early works) proposal, the report highlights a number of issues that will be critical to ongoing consumer engagement. These issues include the overall cost of Project Marinus for consumers, revenue allocation between jurisdictions and the extent to which consumers are able to influence the project.⁶⁰ We expect these issues will be the subject of going consumer engagement, both to maintain social licence and to inform the development the Stage 1, Part B (Construction cost) and Stage 2 revenue proposals.

Stakeholder submissions

The AER received three submissions on Marinus Link’s Stage 1, Part A (Early works) proposal, from the Electrical Trades Union of Australia (ETU), the Tasmanian Minerals, Manufacturing and Energy Council (TMEC) and the independent Marinus Link CAP report.⁶¹ Submissions raised the following key issues:

- Acknowledged the requirement for early works expenditure and noted the expectation that early works be diligent and minimise cost surprises or overruns during the construction phase.

⁵⁹ Consumer Advisory Panel, *Consumer Advisory Panel Engagement Process Report on the Marinus Link Proposal (Part A – Early Works Stage)*, September 2023, p. 11-12.

⁶⁰ Consumer Advisory Panel, *Consumer Advisory Panel Engagement Process Report on the Marinus Link Proposal (Part A – Early Works Stage)*, September 2023, p. 11-12.

⁶¹ Consumer Advisory Panel, *Consumer Advisory Panel Engagement Process Report on the Marinus Link Proposal (Part A – Early Works Stage)*, August 2023; Electrical Trades Union, *ETU – Submission – Marinus Link – Stage 1 Part A early works – September 2023*, September 2023; Tasmanian Minerals and Energy Council, *TMEC – Submission – Marinus Link Stage 1 Part A early works – 14 September 2023*, September 2023.

- Highlighted corporate costs as the most significant incurred and forecast cost thus requiring further detail on how those costs have been determined to ensure prudent expenditure.
- Noted the importance of securing and maintaining social licence to the successful delivery of Marinus Link, including through ensuring local communities see the economic benefits from the investment, including training and employment opportunities.

We met with stakeholders, including Victorian and Tasmanian consumer peak group organisations and Energy Networks Australia (ENA). Key themes that emerged during those discussions include:

- Consumer groups noted there were questions as to the extent to which they could influence outcomes for large scale transmission projects that had ISP actionable status.
- Consumer groups noted it was difficult to fully appreciate the impact on consumers given uncertainty on key issues including the project cost, cost allocation between jurisdictions and treatment of concessionary finance.
- Acknowledgement that Marinus Link is critical to the National Electricity Market and broader energy transition.

Glossary

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CAP	Marinus Link's consumer advisory panel
CESS	Capital expenditure sharing scheme
CPA	Contingent Project Application
CPP	Commencement and Process Paper
capex	capital expenditure
DMIAM	Demand management innovation allowance mechanism
ENA	Energy Networks Australia
ETU	Electrical Trades Union of Australia
HVDC	High voltage direct current
ISP	Integrated System Plan
MAR	Maximum Allowed Revenue
MLPL	Marinus Link Proprietary Limited
NEL	National Electricity Law
NEO	National Electricity Objective
NER	National Electricity Rules
ODP	Optimal Development Path
PACR	Project Assessment Conclusion Report
PTRM	Post-tax Revenue Model
RAB	Regulatory Asset Base
RIT-T	Regulatory Investment Test for Transmission
ROR	Rate of return

Shortened form	Extended form
RORI	Rate of return instrument
SSIS	Small-scale incentive scheme
TMEC	Tasmanian Minerals, Manufacturing and Energy Council
TNSP	Transmission Network Service Provider
VNI West	Victoria to New South Wales Interconnector West
WACC	Weighted average cost of capital