

11 March 2026



Addressing the Risk of 275kV Current Transformer Premature Failures in Queensland

Project Assessment Draft Report



Preface

Powerlink Queensland is a Transmission Network Service Provider that owns, develops, operates and maintains Queensland's high-voltage electricity transmission network. The network transfers bulk power from Queensland generators to electricity distributors Energex and Ergon Energy (part of the Energy Queensland Group), and to a range of large industrial customers.

This Project Assessment Draft Report has been prepared in accordance with version 243 of the National Electricity Rules (NER), and the Regulatory Investment Test for Transmission (RIT-T) [Instrument](#) (November 2024) and RIT-T [Application Guidelines](#) (November 2024). The RIT-T Instrument and Application Guidelines are made and administered by the Australian Energy Regulator.

The NER requires Powerlink to carry out forward planning to identify future reliability of supply requirements, which may include replacement of network assets or augmentations of the transmission network. Powerlink must then identify, evaluate and compare network and non-network options (including, but not limited to, generation and demand side management) to identify the preferred option which can address future network requirements at the lowest net cost to electricity customers.

Powerlink also has obligations under the NER to address power system security requirements identified by the Australian Energy Market Operator in its annual [Transition Plan for System Security](#).

This document provides details of the identified risks and need associated with this project, credible options, technical characteristics of non-network options, and categories of market benefits likely to impact selection of the preferred option. In particular, it encourages submissions from potential proponents of feasible non-network options to address the identified need.

This document also provides customers, stakeholders and communities with information on the potential investment/s (network and non-network) that are required in the near-term to meet an identified need, and offers the opportunity to provide input into the future development of the transmission network in Queensland.

More information on how Powerlink applies the RIT-T process is available on Powerlink's [website](#).

A copy of this report will be made available to any person within three business days of a request being made. Requests should be directed to the Manager Network and Alternate Solutions by phone (07 3860 2111) or email (networkassessments@powerlink.com.au).

Disclaimer

While care was taken in preparation of the information in this document, and it is provided in good faith, Powerlink accepts no responsibility or liability (including without limitation, liability to any person by reason of negligence or negligent misstatement) for any loss or damage that may be incurred by any person acting in reliance on this information or assumptions drawn from it, except to the extent that liability under any applicable Queensland or Commonwealth of Australia statute cannot be excluded. Powerlink makes no representation or warranty as to the accuracy, reliability, completeness or suitability for particular purposes, of the information in this document.

Powerlink acknowledges the Traditional Owners and their custodianship of the lands and waters of Queensland and in particular, the lands on which we operate. We pay our respect to their Ancestors, Elders and knowledge holders and recognise their deep history and ongoing connection to Country.

Contents

Preface.....	2
Contents	3
Executive Summary	4
1. Introduction	6
2. Identified Need	8
3. Required technical characteristics for non-network options	14
4. Potential credible network options to address the identified need.....	16
5. Economic Analysis of the Base Case	17
6. Cost-benefit Analysis and Identification of Preferred Option	19
7. Final Recommendation	22
8. Reopening Triggers	22
9. Submission Requirements and Next Steps	24
Appendix 1: RIT-T Process	26
Appendix 2: Powerlink’s Approach to Engagement	27
Appendix 3: Market benefits that are not material for this RIT-T assessment	29
Appendix 4: Sensitivity Analysis	30
Appendix 5: Compliance Checklists	33

Executive Summary

Premature failures of 275kV current transformers requires Powerlink to take action

Powerlink has identified premature failures of a particular make and model of 275kV current transformers installed across the network (current transformer subset). These current transformers perform functions such as revenue metering, power system monitoring, telemetry, and protection system performance which are key to managing the network. Failures can result in network and load interruptions as well as loss of containment of oil and sand.

Powerlink has 451 of the 275kV oil-filled current transformer subset installed at 23 substation sites throughout the transmission network. Since 2011, there have been fourteen failures of this current transformer subset. The failed 275kV current transformers had been in service for between 10 to 24 years, well before the 40-year lifespan expected of a typical current transformer. Seven failed routine maintenance testing, and seven failed while energised, demonstrating an elevated risk associated with sites where the current transformer subset is installed.

The correlation between time in service and likelihood of failure presents a risk to network reliability and operational stability, increasing the probability of unplanned outages and safety risks.

Powerlink must therefore take action to:

- avoid the increasing likelihood of unserved energy arising from failures of the current transformer subset in Queensland;
- avoid network and load interruptions due to loss of critical revenue metering, power system monitoring, telemetry, and protection system performance functions associated with failures of the current transformer subset; and
- remove the need for restricted access zones (RAZ) which hinder routine operational and maintenance activities supporting reliable operation of the network.

Powerlink has implemented measures to manage safety risks

Powerlink has established RAZs of 30 metres around each current transformer subset while they are energised to manage safety risk in the vicinity. The RAZs ensure that no personnel approach an energised current transformer subset and be exposed to risk of injury.

Powerlink is required to apply the Regulatory Investment Test for Transmission (RIT-T)

The estimated capital cost of the proposed credible option to address the network and safety risks associated with the current transformer subsets in northern, central and southern Queensland meets the minimum threshold (currently \$8 million) to apply the RIT-T. As the identified need for the proposed investment is to meet reliability and service standards specified within Powerlink's Transmission Authority, guidelines and standards published by the Australian Energy Market Operator (AEMO), and Powerlink's ongoing compliance with Schedule 5.1 of the National Electricity Rules (NER), it is classified as a reliability corrective action under the NER.

Powerlink commenced this RIT-T with the publication of a Project Specification Consultation Report (PSCR) in August 2025 to outline the risks arising from the premature failure of the current transformer subset across the network. As no submissions were received in response to the PSCR, no additional credible options have been identified as a part of this RIT-T consultation.

Powerlink has developed one credible network option to address the identified need

The table below details the credible network option and shows that the option has a positive Net Present Value (NPV) relative to the base case.

Summary of Credible Option

Option	Description	Total Costs (\$m, 2025)	NPV relative to the base case (\$m, 2025)
1	Replacement of identified current transformer subset across the network by 2029	122.52	375.81

Note: Total costs exclude risk and contingency.

Given that the functions performed by current transformers are essential for Powerlink to meet its regulatory and operational compliance obligations as a Transmission Network Service Provider and cannot be fully replicated or eliminated through alternative options, replacement of the current transformer subset was the only credible network option identified at the PSCR stage. This option directly addresses the risks resulting from premature failure of the current transformer subset installed across the network.

Non-network options are not expected to address the identified need for this RIT-T

Powerlink does not consider non-network options are likely to be able to meet the identified need to address the risk of the current transformer subset premature failures. A non-network solution would be unable to fully replicate the functionality that current transformers provide in the operation of the transmission network. However, for completeness, this Project Assessment Draft Report (PADR) has included information on the required technical characteristics for non-network options.

Lodging a submission with Powerlink

Powerlink is seeking written submissions on this PADR, on or before **8 May 2026** particularly on the credible option presented in this PADR.

Please address submissions to:

Manager Network and Alternate Solutions
 Powerlink Queensland
 PO Box 1193
 VIRGINIA QLD 4014
 Telephone: (07) 3860 2111
 Email: networkassessments@powerlink.com.au

1. Introduction

1.1. Powerlink asset management and obligations

Powerlink's approach to asset management delivers value to customers and stakeholders by optimising whole of life cycle costs, benefits and risks, while ensuring compliance with relevant legislation, regulations and standards. This is underpinned by Powerlink's corporate risk management framework, risk assessment guidelines and methodologies.

1.2. Overview of the Regulatory Investment Test for Transmission

The purpose of a Regulatory Investment Test for Transmission (RIT-T) is to identify the preferred investment option that meets the identified network need. The preferred option maximises the present value of economic benefits, taking into account changes to Australia's greenhouse gas emissions where relevant. If the identified need is for a reliability corrective action, the preferred option may have a net economic cost.¹

Powerlink applies the RIT-T to potential prescribed (regulated) investments in the transmission network where the estimated capital cost of the most expensive option exceeds \$8 million.²

Powerlink commenced this RIT-T with publication of a [Project Specification Consultation Report](#) (PSCR) on 29 August 2025. The PSCR identified a single option, involving the replacement of the identified current transformers, as the preferred option to address the risks across the network. The PSCR stated that the indicative capital cost was \$86.35 million in 2025/26 prices, and that design work would commence in late 2025 with a staged installation and commissioning of the plant completed by July 2031.

This Project Assessment Draft Report (PADR) is the second step in the RIT-T process. The PADR includes:

- a description of each credible option Powerlink has assessed;
- a quantification of the costs, including a breakdown of operating and capital expenditure, and classes of material market benefit for each credible option;
- the reasons why Powerlink has determined that a class or classes of market benefit are not material;
- the results of Net Present Value (NPV) analysis for each credible option assessed, together with accompanying explanatory statements;
- the identification of the proposed preferred option, including details of the technical characteristics and the estimated construction timetable and commissioning date; and
- proposed triggers to reopen this RIT-T.³

More information on the RIT-T process is provided in Appendix 1. Powerlink's compliance with RIT-T requirements in the National Electricity Rules (NER) and the RIT-T Application Guidelines is set out in Appendix 5.

¹ National Electricity Rules (NER), clause 5.15A.1(c) and chapter 10, glossary ('net economic benefit').

² NER, clauses 5.15.3(a) and (b)(2) set the threshold at \$5 million. The Australian Energy Regulator's (AER) latest [cost threshold review](#) increased the value to \$8 million for three years from 1 January 2025.

³ NER, clause 5.16.4(k). As Powerlink did not receive any submissions in response to the PSCR for this RIT-T, this PADR does not include a summary of and commentary on submissions received.

1.3. Consumer and Non-network Engagement

Powerlink undertakes a considered and consistent approach to ensure an appropriate level of stakeholder engagement is undertaken for each individual RIT-T consultation. The scope of engagement activities is dependent upon various considerations, such as the characteristics and complexity of the identified need and potential credible options.

For all RIT-Ts, members of Powerlink's Non-network Engagement Stakeholder Register receive email notifications of publication of RIT-T reports. For projects where Powerlink identifies material or significant market benefits, additional activities such as webinars or dedicated engagement forums may be appropriate. For more information, see Powerlink's [RIT-T stakeholder engagement matrix](#).

Additionally, Powerlink takes a proactive approach to engagement generally. This includes:

- The Transmission Network Forum – Powerlink's annual customer engagement event.
- Collaboratively working with Powerlink's customers, including regular consultation on RIT-Ts with our Customer Panel ([Powerlink Customer Panel | Powerlink](#))
- Transparency on future network requirements, such as our Transmission Annual Planning Report (TAPR)

Powerlink has assessed that extensive community engagement is not required given the scope of works under consideration for the proposed network option to meet the identified need will be within existing Powerlink substation sites.

Appendix 2 provides more detail on Powerlink's engagement approach.

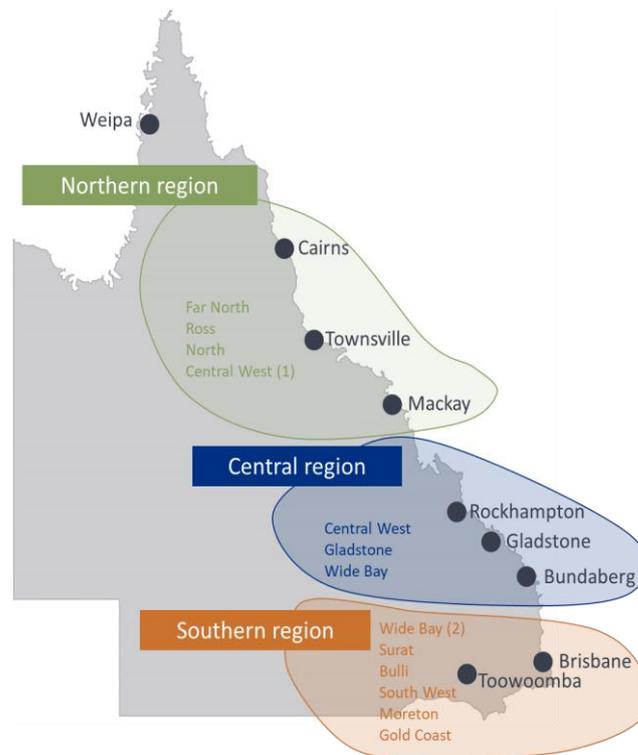
2. Identified Need

The identified need is the objective the RIT-T proponent seeks to achieve by investing in the network.⁴ Powerlink has identified the need to treat the risk associated with a current transformer subset across the network. The primary driver is plant reliability leading to premature failures which will lead to network interruptions, unserved energy to customers, the need to replace the current transformers under emergency conditions, as well as potential safety implications. Powerlink has introduced interim measures to maintain community safety prior to removal from the network, as discussed below.

2.1. Geographical overview

Figure 2.1.1 provides an overview of the northern, central and southern regions of Powerlink’s network. Table 2.3.2 shows the regions where the current transformers are located within these regions. The delivery of the project is proposed to be run as three regional programs per the regions below.

Figure 2.1.1: Overview of current transformer subset locations across the network



Notes:

- (1) Geographical zones as described in Powerlink’s TAPR
- (2) Southern region includes substation sites within the Surat and Moreton zones

⁴ NER, chapter 10 (definition of ‘identified need’).

2.2. Description of identified need

Powerlink's Transmission Authority requires it to plan and develop the transmission network in accordance with good electricity industry practice, having regard to the value that end users of electricity place on the quality and reliability of electricity services. It allows load to be interrupted during a critical single network contingency, provided the maximum load and energy will not exceed 50 megawatts (MW) at any one time, or will not be more than 600 megawatt hours (MWh) in aggregate.⁵ The Transmission Authority is also subject to a broader obligation under the *Electricity Act 1994* (the Electricity Act) that Powerlink operate, maintain (including repair and replace if necessary) and protect its transmission grid to ensure the adequate, economic, reliable and safe transmission of electricity.⁶

Premature failures of the current transformer subset present a risk to network reliability and operational stability, increasing the probability of unplanned outages and network disruptions.

This presents Powerlink with a range of reliability of supply and safety risks which put at risk Powerlink's ongoing compliance with the reliability and service standards set out in the NER, Powerlink's Transmission Authority and applicable regulatory instruments.

Powerlink must therefore take action to:

- avoid the increasing likelihood of unserved energy arising from failures of the current transformer subset in Queensland;
- avoid network and load interruptions due to loss of critical revenue metering, power system monitoring, telemetry, and protection system performance functions associated with failures of the current transformer subset; and
- remove restricted access zones (RAZs) put in place to manage safety risks with the current transformer subset that however hinder routine operational and maintenance activities that support the reliable operation of the network.

As the proposed investment is to meet reliability and service standards arising from Powerlink's Transmission Authority and to ensure Powerlink's ongoing compliance with Schedule 5.1 of the NER, it is a reliability corrective action under the NER.⁷ Powerlink has undertaken a cost benefit analysis that shows a positive NPV, demonstrating net benefits to its customers.

2.3. Description of asset condition and risks

Current transformers are installed at substations to measure and monitor the current flowing through transmission lines. They are a crucial component of the transmission network that perform functions including revenue metering, power system monitoring, telemetry, and protection system performance. These functions are critical in helping Powerlink meet its regulatory and operational compliance obligations as a Transmission Network Service Provider.

Current transformers can be of many different types and constructions (toroidal, optical, dry type, post type, etc.). The majority of post type current transformers in transmission networks are either gas-insulated sulphur hexafluoride (SF6) or oil-filled. A typical current transformer has an expected service life of approximately 40 years and are tested every three years as part of routine maintenance. Failure of a current transformer can lead

⁵ Transmission Authority No. T01/98, section 6.2(c).

⁶ *Electricity Act 1994* (Qld), section 34(1)(a).

⁷ NER, clause 5.10.2 (definition of 'reliability corrective action').

to network interruptions and involuntary load curtailment for customers because Powerlink may need to de-energise parts of the network being monitored by the failed current transformer. Containment failure can also damage nearby equipment and cause potential harm to nearby environment and individuals.

There have been fourteen premature failures of the current transformer subset. Seven were identified through routine maintenance testing to be at high risk of failure and immediately removed from service. The failure details are shown in Incident Numbers 2 to 7 and 9 in Table 2.3.1.

There have been a further seven in-service failures of this current transformer subset since 2011. These failures resulted in the loss of containment of oil and sand up to a diameter of 17 metres. These incidents did not result in any personnel injury, as no one was within range of the oil and sand at the time of failure. The failure details are shown in Incident Numbers 1, 8, 10, and 11 to 14 in Table 2.3.1.

Table 2.3.1: Details of current transformer subset failures on Powerlink's network

Incident Number	Failure type	Years in service	Date of failure	Consequence	Consequence comment
1	Loss of containment	10	30/10/2011	N/A	N/A
2	Testing failure	23	31/10/2011	N/A	N/A
3	Testing failure	23	18/04/2013	N/A	N/A
4	Testing failure	23	18/01/2016	N/A	N/A
5	Testing failure	24	10/06/2016	N/A	N/A
6	Testing failure	23	02/06/2018	N/A	N/A
7	Testing failure	24	09/11/2018	N/A	N/A
8	Loss of containment	17	26/11/2019	Fire	Debris (approximately 5 metres)
9	Testing failure	23	1/07/2020	N/A	N/A
10	Loss of containment	13	19/08/2020	Oil spill	Oil and sand (distance not recorded)
11	Loss of containment	18	29/11/2023	Fire	Debris and oil spray (approximately 16 metres)
12	Loss of containment	18	23/01/2024	Oil spill	Oil and sand only (approximately 2 metres)
13	Loss of containment	18	27/07/2024	Fire	Debris (approximately 17 metres)
14	Loss of containment	19	11/06/2025	Fire	Debris (approximately 10 metres)

Table 2.3.2 lists the quantity of current transformer subset per substation site in each region.

Table 2.3.2: Quantity of 275kV current transformer subset per substation in each region

Region	Substation	Quantity
Northern	Nebo	18
	Ross	6
	Chalumbin	3
	Strathmore	27
	Subtotal	54
Central	Broadsound	8
	Calvale	4
	Wurdong	9
	Larcom Creek	21
	Subtotal	42
Southern	Tarong	81
	Braemar	14
	Millmerran	3
	Halys	60
	Western Downs	15
	South Pine	5
	Belmont	18
	Mudgeeraba	4
	Woolooga	36
	Palmwoods	6
	Mt England	29
	Middle Ridge	18
	Goodna	12
	Abermain	12
	Teebar Creek	21
Greenbank	21	
Subtotal	355	
Total Quantity		451

2.3.1. Powerlink has implemented measures to manage safety risks

Powerlink has established RAZs of 30 metres around each current transformer subset while they are energised to manage safety risks. However, these RAZs create significant access challenges at the affected substations, hindering routine operational and maintenance activities and further exacerbating the network reliability risks associated with this subset.

In addition, Powerlink has developed a refined work methodology, including the use of shields that can reduce the restricted access zone to 10 metres minimising network outages in adjacent feeders. These reduce the safety risk, but do not eliminate network reliability risks.

2.4. Consequences of failure

Powerlink has assessed the consequences of failure and risk scenario on a case-by-case basis, taking into account the type of asset, location of the asset, network connectivity, and operating and environmental conditions.

For the current transformer subset requiring replacement under this RIT-T, the following safety, network, financial and environmental potential consequences have been identified.

Safety

- potential safety impacts to field personnel working in the vicinity of current transformers when loss of containment occurs

Network

- interruptions to supply and extended outages
- reduced transfer limits and different patterns of generation dispatch

Financial

- replacement of a failed asset in an emergency manner
- damage to adjacent items of plant in the event of oil and sand release or fire
- clean-up and remediation of oil and other contaminants
- costs associated with alternate sources of supply during prolonged outages
- delays to projects, rescheduling of planned works, and other business disruption costs

Environmental

- loss of containment of oil and sand leading to contamination of nearby ground and drainage systems
- fire leading to smoke by-products and runoffs impacting nearby air, soil and drainage systems

3. Required technical characteristics for non-network options

The information provided in this section is intended to enable interested parties to formulate and propose genuine and practicable non-network solutions.

A non-network solution that would allow Powerlink to avoid replacement of the current transformer subset must be able to replicate the functionality, capacity, and reliability of the entire substation where these current transformers are located.

Powerlink is not aware of any technically feasible non-network options that are capable of meeting the identified need, but invites submissions from proponents of such options.

3.1. Common criteria for proposed network support services

Powerlink has identified the following common criteria that must be satisfied if proposed network support services are to meet supply requirements.⁸

Size and location

- Proposed solutions must be large enough, individually or collectively, to avoid replacement of current transformers at the substations described in Table 2.3.2. However, the level of support depends on the location and type of network support offered.
- Due to the bulk nature of the transmission network, aggregation of sub 10MW non-network solutions will be the sole responsibility of the non-network provider.
- Notwithstanding the location of any solution, each proposal would require assessment in relation to technical constraints pertinent to the network connection, such as impacts on intra-regional transfer limits, fault level, system strength, maintaining network operability and quality of supply.

Operation

- A non-network option would need to be capable of operating on a continuous basis over a period of years and would be required to provide notice of cessation of network support services several years in advance to allow Powerlink to address the identified need in time to meet its reliability of supply obligations.
- If a generation service is proposed (either standalone or in conjunction with other services), such operation will be required regardless of the market price.
- Proponents of generation services are advised that network support payments are intended for output that can be demonstrated to be additional to the plant's normal operation in the NEM.
- Where there are network costs associated with a proposed non-network option, including asset decommissioning, these costs form part of the scope of a non-network option and will be included in the overall cost of a non-network option as part of the RIT-T cost-benefit analysis.

Reliability

- Proposed services must be capable of reliably meeting electricity demand under a range of conditions and must meet all relevant NER requirements related to grid connection, if a generator.

⁸ Powerlink's [Network Support Contracting Framework](#) provides a general guide to assist potential non-network solution providers. This framework outlines the key contracting principles that are likely to appear in any network support agreement.

- Powerlink has obligations under the NER, its Transmission Authority and connection agreements to ensure supply reliability is maintained to its customers. Failure to meet these obligations may give rise to liability. Proponents of non-network options must also be willing to accept any liability that may arise from its contribution to a reliability of supply failure.

Timeframe and certainty

- Proposed services must be able to be implemented in sufficient time to meet the identified need as outlined in Section 2, using proven technology and, where not already in operation, provision of information in relation to development status such as financial funding and development timeline to support delivery within the required timeframe must be provided.

Duration

- The agreement duration for any proposed service will provide sufficient flexibility to ensure that Powerlink is pursuing the most economic long run investment to address the risks arising from the current transformer subset.

4. Potential credible network options to address the identified need

Powerlink has developed one credible network option to address the identified need. This option addresses the risks associated with current transformer subset premature failures through a state-wide replacement program of the current transformer subset in the network. Design and construction works will commence in 2026, and commissioning will be completed by 2029.

A summary of this option is shown in Table 4.1.

Table 4.1: Summary of credible option

Option	Description	Breakdown of costs (\$m, 2026)	Total Cost of option (\$m, 2026)	Indicative annual O&M costs (\$m, 2026)
1	Replacement of identified current transformer subset across the network by 2029 in 3 regional programs			
	• Northern Queensland	12.92	122.52	0.45
	• Central Queensland	11.81		
	• Southern Queensland (Surat and Metro)	97.79		

Note

1. O&M denotes operations and maintenance.
2. The capital cost has been updated from the \$86M indicative estimate in the PSCR to \$122M based on refined Class 3 engineering scoping. Refer Section 6.1 for further details.

The credible option addresses the major risks resulting from the identified current transformer subset to allow Powerlink to meet its reliability of supply and safety obligations under its Transmission Authority, the Electricity Act and Schedule 5.1 of the NER, by the replacement of the current transformer subset across Powerlink's network.

5. Economic Analysis of the Base Case

Powerlink has developed a risk modelling framework consistent with the RIT-T Application Guidelines. An overview of the framework is available on Powerlink's [website](#) and the principles of the framework have been used to calculate the monetised risk, termed risk costs, in the National Electricity Market context for the base case. The framework includes the modelling methodology and general assumptions underpinning the analysis.

5.1. Modelling a base case under the RIT-T

The base case is the situation in which the RIT-T proponent does not implement a credible option to meet the identified need and continues with business-as-usual (BAU) activities.⁹

The assessment undertaken in this RIT-T compares the costs and benefits of the credible option to address the risks arising from the identified need with a base case. As characterised in the RIT-T Application Guidelines, the base case reflects a situation in which the network reliability and safety risks arising from the current transformer subset premature failures are only addressed through standard operational activities, with resultant safety, financial, environmental and network risks.¹⁰

In the base case, the existing reliability and safety issues are managed by undertaking operational maintenance or operational measures only. This results in overall risk levels increasing with the age of current transformer subset over time. These risk levels are assigned a monetary value that is used to evaluate the credible options designed to offset or mitigate these risk costs.

The base case therefore includes the costs of work associated with operational maintenance and the costs associated with the failure of the current transformer subset. The costs associated with failures are modelled in the risk cost analysis and are not included in the operational maintenance costs.

The base case acts as a benchmark and provides a reference point in the cost-benefit analysis to compare and rank the credible options against each other over the same timeframe.

5.2. Quantifiable Risk Costs for the Base Case

The NER requires RIT-T proponents to quantify a number of classes of market benefits for each credible option, unless the proponent can demonstrate that a specific category(ies) is/are unlikely to materially affect the outcome of the assessment of credible options.¹¹ In line with Powerlink's framework, three key risk costs have been quantified in the cost benefit analysis in response to the identified need:

- **Network risk cost** – this is the cost of loss of supply that results from an in-service failure of the identified equipment and is typically known as unserved energy. For an in-service failure of a current transformer, a loss of supply would occur where there is a coincident feeder or transformer trip events within the wider area at the same time. The Queensland wide average Value of Customer Reliability (VCR) of \$25,700/MWh, published within the 'Value of customer reliability – Final report on VCR values' by the AER (updated in December 2024) has been used to quantify this risk.

⁹ AER, *Regulatory Investment Test for Transmission*, November 2024, glossary ('base case').

¹⁰ AER, *Application Guidelines, Regulatory Investment Test for Transmission*, November 2024, page 21. See AER, *Regulatory Investment Test for Transmission*, November 2024, paragraph 24 and AER, *Application Guidelines, Regulatory Investment Test for Transmission*, November 2024, pages 32-35 for a definition and discussion of states of the world in a RIT-T.

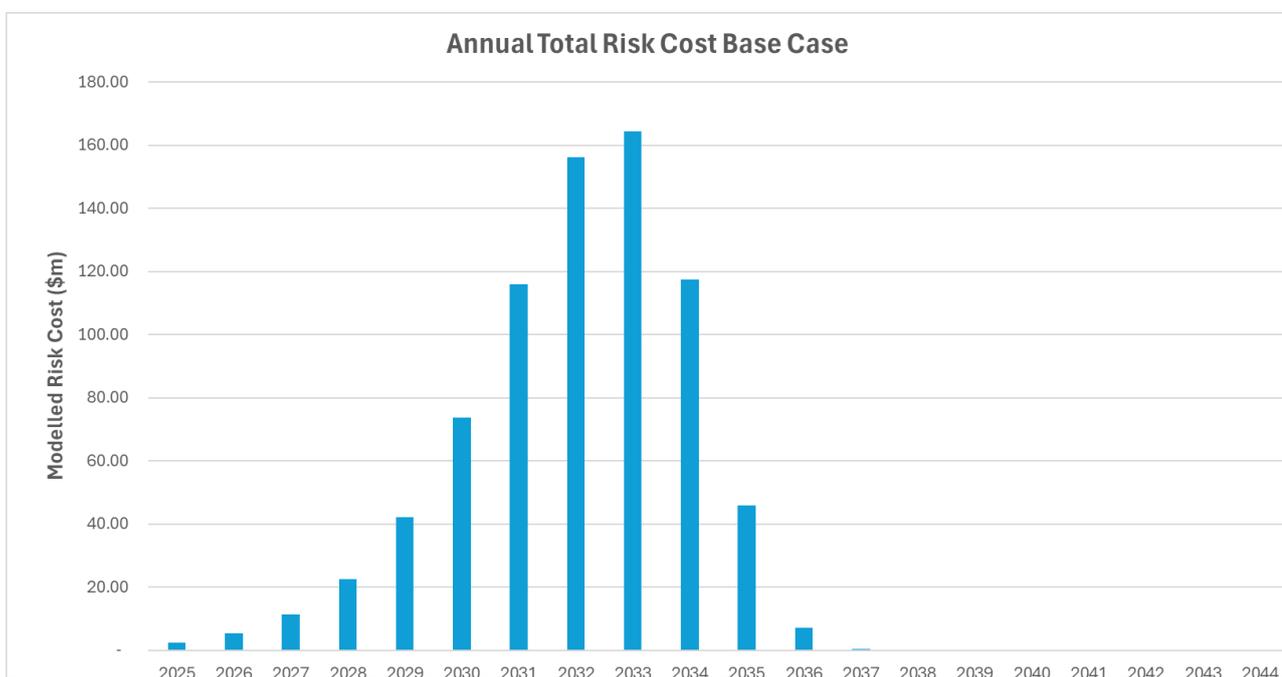
¹¹ NER, clauses 5.15A.2(b)(4), (5) and (6). See also AER, *Regulatory Investment Test for Transmission*, November 2024, paragraphs 10 to 13.

- **Financial risk cost** – this is the cost associated with rectifying the failure of an in-service current transformer subset. A typical unit cost for replacement of current transformers has been utilised, with a premium applied to represent the increased costs associated with replacement work completed under emergency conditions.
- **Safety risk cost** – this is the assessed safety impact that may result from the unlikely event of a catastrophic in-service failure of a current transformer subset. Powerlink utilises guidance from the Department of Prime Minister and Cabinet to assess and quantify this risk.

Appendix 3 outlines the market benefits that Powerlink has assessed as not having a material impact on the options analysis.

The 20-year forecast of risk costs for the base case is shown in Figure 5.2.1.

Figure 5.2.1: Modelled base case and option residual risk costs



Based upon the assessed condition of the fleet of current transformer subset, the total value of monetised risk is projected to increase from around \$2.5 million in 2025 to \$164.5 million in 2033.

The main areas of risk costs are network risks that involve reliability of supply through a current transformer subset failure modelled as probability weighted USE¹² and financial risk costs associated with the replacement of failed assets in an emergency.

Over time, as the fleet of current transformer subset ages and its condition deteriorates, the likelihood of failure rises and increases the risk costs. At a certain point, the majority of the fleet of current transformer subset have failed and been replaced, after which the risk costs start to rapidly decrease.

¹² USE is modelled using a VCR consistent with that published by the AER in its *Values of Customer Reliability, Final Report and Appendices A-D, 2024*.

6. Cost-benefit Analysis and Identification of Preferred Option

6.1. Cost Estimation

Basis of Estimation

The basis for the estimation of costs for the credible option presented in Table 4.1 of this PADR is as described in Powerlink's Cost Estimation Methodology.¹³ The estimates are informed by the level of specific project information available across the program of work and to the extent practicable for individual sites at the time of PADR publication.

Key inputs and assumptions

Option 1: Replacement of current transformers in Northern, Central and Southern Region by 2029

A Class 3 Estimate has been produced for Option 1 (see Table 4.1) with an accuracy range of -20% to +30%.

Powerlink has made the following scope assumptions in producing this estimate:

- The new current transformers will be post-type, have polymer insulators and be replaced on the existing foundations using either new structures or adaptor plates.
- All identified current transformers will be replaced under outage conditions.
- Due to operational complexities at certain substation sites, shielding plans will be put in place to maintain safe approach distances between adjacent equipment during construction.
- A refined work methodology, including the use of blast and diverter shields to minimise network outages in adjacent feeders, has been developed and factored into the cost estimate.

Powerlink's Cost Estimation Methodology also provides context to the class of estimate discussed in this section.

Cost Estimate Refinement

The initial estimate of \$86 million in the PSCR was a Class 5 estimate with an accuracy range of -50% to +100% for early consultation.

Following further site-specific scoping and a Class 3 engineering assessment, the estimate is now \$122 million. This revision reflects the progression of estimate maturity, which has incorporated the following:

- Refinement of Scope: Transitioning from conceptual banding to a detailed engineering estimate.
- Market Pricing: Updated pricing for key long-lead materials, including current transformers.
- Workforce Requirements: Refinement of the labour costs required to perform the work safely across a geographically diverse program of work.
- Site Methodology: Improved clarity on the approach to site-specific access restrictions and safety mitigation measures.

As the revised estimate now exceeds the \$103 million threshold, Powerlink has included proposed Reopening Triggers in Section 8 to manage future cost uncertainty.

¹³ The methodology is available on the [RIT-T Consultations](#) page of Powerlink's website.

6.2. Modelling assumptions

The proposed option has been scoped to manage the major risks arising in the base case and to maintain compliance with all statutory requirements, NER and AEMO standards. The residual risk is calculated based upon the implementation strategy of the option. This is included with the capital and operational maintenance cost to develop the NPV inputs.

Powerlink has undertaken the RIT-T analysis over a 20-year period, from 2025 to 2044. A 20-year period considers the scale of the current transformer subset replacement program. There will be remaining asset life by 2044, at which point a terminal value is calculated to account for capital costs under the option.

Powerlink has adopted a real, pre-tax commercial discount rate of 7% as the central assumption for the NPV analysis.¹⁴ Powerlink has tested the sensitivity of the results to changes in this discount rate assumption, and specifically to the adoption of a lower bound discount rate of 3% and an upper bound discount rate of 10%.¹⁵

6.3. Sensitivity Analysis

Powerlink has considered capital cost, discount rate and risk cost sensitivities and found that none of the parameters has an impact on the ranking of the results. Table 6.3.1 outlines the sensitivities that have been assessed.

Table 6.3.1: Reasonable sensitivity parameters

Key parameter	Central Scenario
Capital cost	100% of base capital cost estimate
Maintenance cost	100% of base maintenance cost estimate
Discount rate	7.0%
Risk cost	100% of base risk cost forecast

¹⁴ This indicative commercial discount rate of 7% is based on AEMO, 2025 Inputs, Assumptions and Scenarios Report, August 2025, page 158.

¹⁵ A discount rate of 3% lower bound discount rate is based on AEMO's 2025 Inputs, Assumptions and Scenarios Report, August 2025, page 158.

6.4. NPV analysis

Table 6.4.1 outlines the NPV and the corresponding ranking of each credible option relative to the base case.

Table 6.4.1: NPV of credible option relative to the base case

Option	Description	Central scenario NPV relative to Base Case (\$m)	Ranking
1	Replace current transformer subset with new insulated current transformers by 2029	375.81	1

Figure 6.4.1 sets out the breakdown of capital cost, routine and corrective maintenance cost and total risk cost for base case and Option 1 in NPV terms under the central scenario. Note that the non-credible base case consists of operational maintenance and total risk costs and does not include any capital expenditure.

Figure 6.4.1: NPV of credible option (NPV \$m)

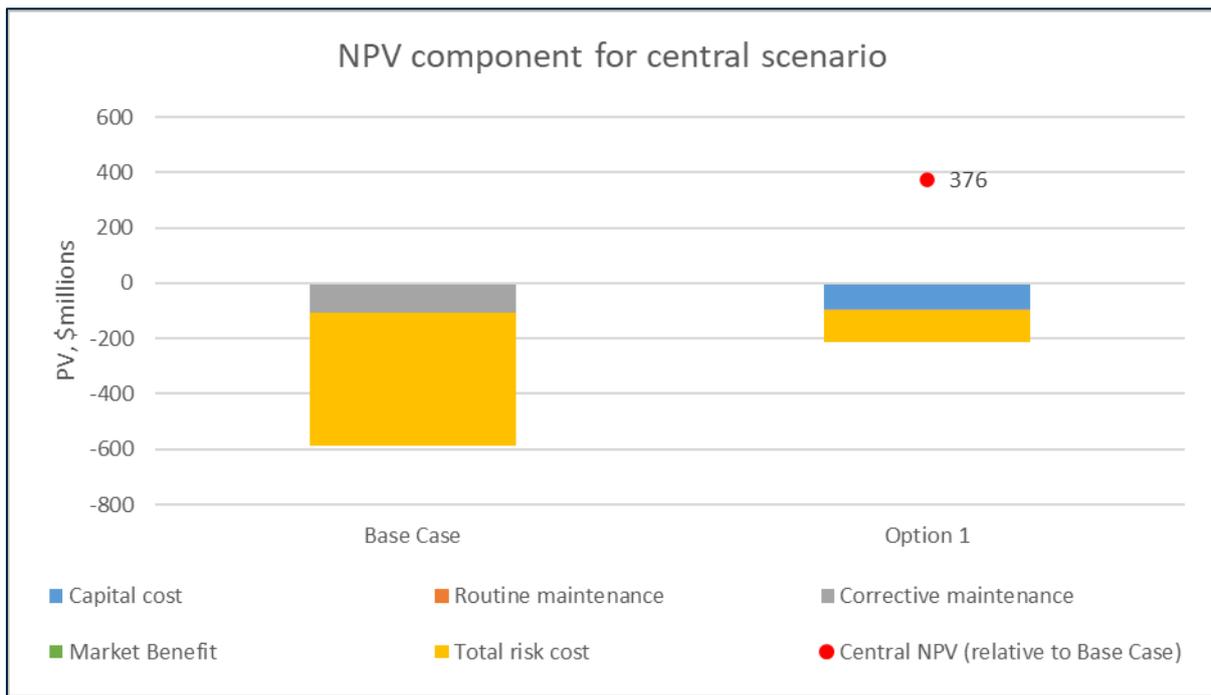


Figure 6.4.1 illustrates that Option 1 has significant reduction of risk cost compared to the Base Case and results in a positive NPV relative to the Base Case.

6.5. Conclusion

The result of the cost-benefit analysis indicates that Option 1 provides the highest net economic benefit (highest NPV relative to base case) over the 20-year analysis period. Sensitivity testing shows the analysis is robust to variations in the capital cost, risk cost and discount rate assumptions.

7. Final Recommendation

Based on the conclusions drawn from the NPV analysis and regulatory requirements relating to the proposed replacement of transmission network assets, it is recommended that Option 1 be implemented to address the risk of current transformer subset premature failures across the network. Implementing this option will also ensure ongoing compliance with relevant standards, applicable regulatory instruments and the NER.

Option 1 involves the replacement of the current transformer subset with new current transformers by 2029. The indicative capital cost of this option is \$122.51 million in 2025/26 prices.

The result of the cost-benefit analysis indicates that Option 1 is the credible option with the highest net economic benefit over the analysis period. Sensitivity testing shows the analysis is robust to variations in the capital cost, operational maintenance cost, risk cost and discount rate assumptions. Option 1 is therefore considered to satisfy the requirement of the RIT-T and is the preferred option.

8. Reopening Triggers

Powerlink welcomes feedback from stakeholders/customers on its proposed reopening triggers in section 8.2 below, as well as any additional factors that should be considered as reopening triggers for this RIT-T.

8.1. Regulatory requirements

Once six months have lapsed after completing the analysis for this RIT-T, Powerlink will be required to monitor developments that could be material to the outcome of this RIT-T and consider whether a material change in circumstances has occurred.¹⁶

A material change in circumstances includes, but is not limited to:

- a change to the key assumptions used to identify the identified need described in the PACR;
- the meeting of any reopening trigger identified in the PACR for this RIT-T; or
- a change in circumstances which, in Powerlink's reasonable opinion, means that the preferred option identified in the PACR may no longer be the preferred option.¹⁷

The NER provides that reopening triggers:

- are the events, factors or circumstances which, if they occur or eventuate, would mean that the RIT-T project may no longer be the preferred option; and
- may include a change in the key assumptions used to identify or rank the credible options.¹⁸

If Powerlink considers that a material change in circumstances has occurred, it must:

- notify the AER in writing, and advise any actions it proposes to take and timeframes within which it proposes to complete any actions; and
- provide information to the AER to support any actions it proposes to take, having regard to
 - whether, in Powerlink's opinion, reapplication of the RIT-T is justified;

¹⁶ NER, clauses 5.16.4(z3) and (z3A). Powerlink is only required to consider whether a material change in circumstances has occurred if it wishes to proceed with the project.

¹⁷ NER, clause 5.16.4(z4). For clarity, TNSPs must consider whether or not a material change in circumstances has occurred for all RIT-T projects, not just those for which the estimated capital cost of the preferred option (at the PADR stage) is greater than \$100 million (escalated over time).

¹⁸ NER, chapter 10 (definition of 'reopening trigger').

- the costs and delay that may result from the actions Powerlink proposes to take as a result of the material change in circumstances; and
- the costs and delay that may result from a full or partial reapplication of the RIT-T.¹⁹

If Powerlink submits a material change in circumstances notification to the AER, the AER will be required to accept or reject any actions proposed by Powerlink and specify reasonable timeframes for completion of actions. If the AER decides to reject the actions and/or timeframes proposed by Powerlink, the AER would be able to specify actions for Powerlink to take which may include reapplying the RIT-T, in whole or in part.²⁰

8.2. Proposed reopening triggers

Powerlink is required to include the RIT-T reopening triggers, if the estimated capital expenditure is greater than \$103 million and AEMO is not the sole RIT-T proponent.²¹

The sensitivity analysis in section 6.3 demonstrates that the proposed preferred option is robust to changes in costs (including assumed risk costs) and the discount rate. Powerlink therefore considers it to be unlikely that the proposed preferred option would change.

However, Powerlink offers the following potential reopening trigger events that may require an altered response and even possibly a new RIT-T.

- Material change in the identified need including:
 - A change in the timing, magnitude, or nature of the identified reliability or security issue, such as changes to the current transformer subset failure rates.
- Identification of a credible alternative network or non-network option where the option:
 - Was not identified during the PSCR or PADR consultation processes, and
 - Is materially different from options previously assessed, and
 - Is capable of addressing the identified need either in full or in part, at a lower cost (under the RIT-T assessment framework) or higher net market benefits than the preferred option.
- Material change in cost estimates or deliverability of the preferred option including:
 - Material increases in capital or operating costs to the extent that the preferred option no longer provides the highest net economic benefit.
 - Material changes in delivery risk, constructability, or implementation timing that affects the net market benefits of the preferred option.

Notwithstanding the list of potential trigger events, Powerlink remains alert to any assumption changes that could alter the preferred option set out in this PADR and would welcome feedback from stakeholders/customers on any additional factors that should be considered as reopening triggers for this RIT-T.

As stated above, Powerlink would notify the AER of the material change in circumstances, and outline (for the AER's approval) the actions Powerlink proposes to undertake.²²

¹⁹ NER, clauses 5.16.4(z3) and (z4A).

²⁰ NER, clause 5.16.4(z5A).

²¹ NER, clause 5.15.3(b)(7) set the threshold at \$100 million. The AER's latest [cost threshold review](#) increased the value to \$103 million for three years from 1 January 2025.

²² NER, clause 5.16.4(z3)(4).

9. Submission Requirements and Next Steps

Powerlink invites submissions and comments in response to this PADR from Registered Participants, AEMO, potential non-network providers and any other interested parties.

This RIT-T is not a tender process – submissions are requested so that Powerlink can fulfil its regulatory obligations to analyse non-network options. In the event that a non-network option appears to be a genuine and practicable alternative that could satisfy the RIT-T, Powerlink will engage with that proponent or proponents to confirm cost inputs and commercial terms.

9.1. Submissions from non-network providers

Submissions should be presented in a written form and should clearly identify the author of the submission, including contact details for subsequent follow-up if required. If parties prefer, they may request to meet with Powerlink ahead of providing a written response.

Submissions from potential non-network providers should contain the following information:

- details of the party making the submission (or proposing the service);
- how the proposed solution would meet the identified need described in this PADR;
- technical details of the project (capacity, proposed connection point if relevant, etc.) to allow an assessment of the likely impacts on future supply capability;
- sufficient information to allow the costs and benefits of the proposed service to be incorporated in a comparison in accordance with AER's RIT-T Application Guidelines;
- an assessment of the ability of the proposed service to meet the technical requirements of the NER;
- timing of the availability of the proposed service; and
- other material that would be relevant in the assessment of the proposed service.

Powerlink will publish submissions on the PADR, subject to any claim of confidentiality by the person making the submission. Where confidentiality over part or all of a submission is made, this should be clearly identified. Powerlink may also explore whether a redacted or non-confidential version of the submission can be made available.²³

Powerlink is required to use all reasonable endeavours not to disclose any confidential information it receives. The obligation is subject to a number of exceptions, including that disclosure may be made:

- with the consent of the person providing the information; or
- to the AER, Australian Energy Market Commission or any other regulator having jurisdiction over Powerlink under the NER or otherwise.²⁴

It should be noted that Powerlink is required to publish the outcomes of the RIT-T analysis. If parties making submissions elect not to provide specific project cost data for commercial-in-confidence reasons, Powerlink may rely on cost estimates from independent specialist sources.

²³ AER, *Application Guidelines, Regulatory Investment Test for Transmission*, November 2024, page 70.

²⁴ NER, rule 8.6.

9.2. Next steps

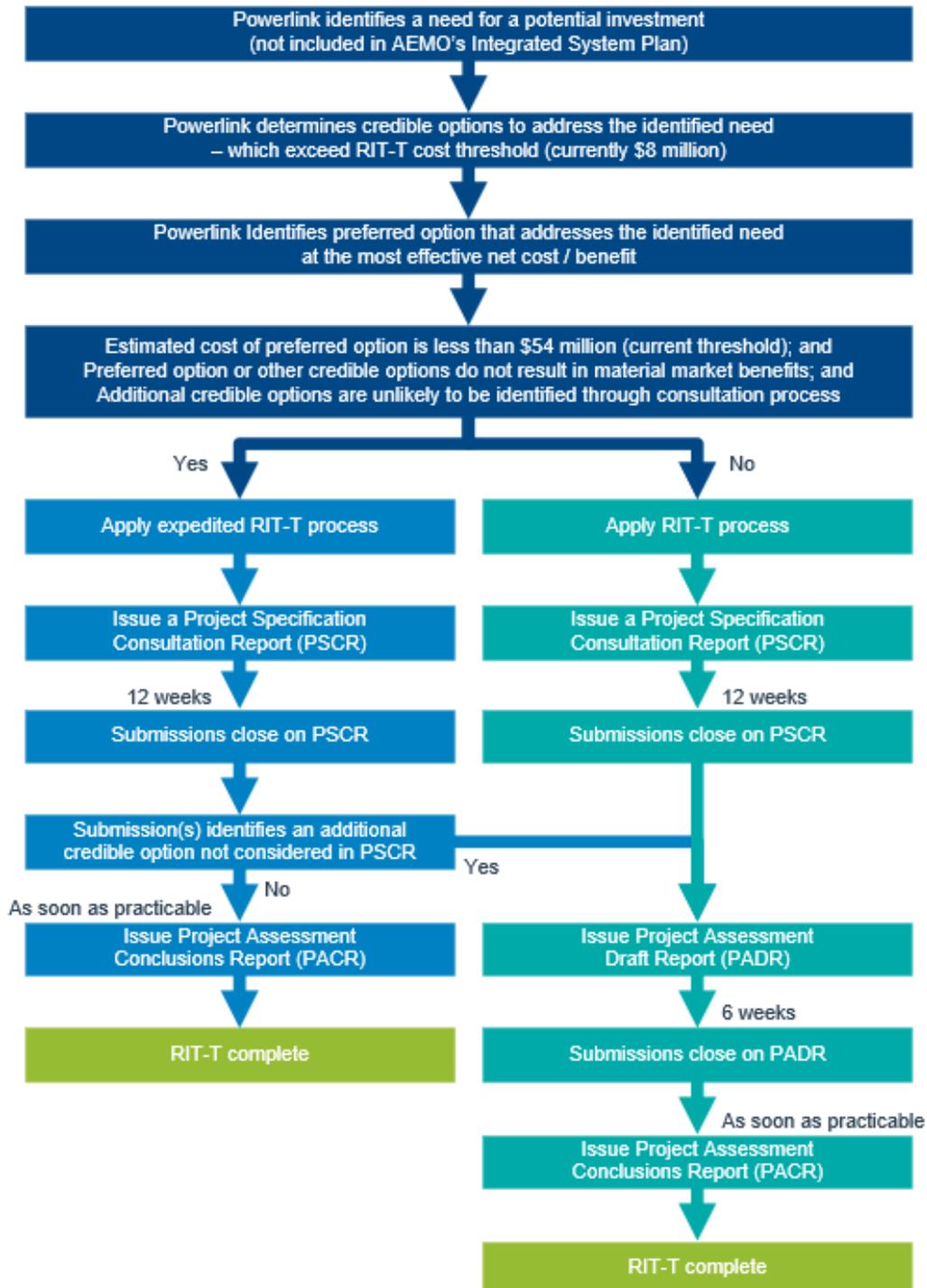
Powerlink intends to carry out the following process to assess what action, if any, should be taken to address future supply requirements.

Part 1	PSCR Publication	29 August 2025
Part 2	Submissions due on PSCR Have your say on the credible options and propose non-network options	28 November 2025
Part 3	PADR Publication	March 2026
Part 4	Submissions due on PADR	8 May 2026
Part 5	Publication of PACR Powerlink's response to any further submissions received and final recommendation on the preferred option for implementation	June 2026

Powerlink reserves the right to amend the timetable at any time. Amendments to the timetable will be made available on the Powerlink website (www.powerlink.com.au/rit-t-consultations).

Appendix 1: RIT-T Process

The flow chart below illustrates the RIT-T process where the need is not an actionable project in AEMO’s ISP.



Appendix 2: Powerlink's Approach to Engagement

More than five million Queenslanders and 241,000 Queensland businesses depend on Powerlink's performance. Powerlink recognises the importance of engaging with a diverse range of customers and stakeholders who have the potential to affect, or be affected by, Powerlink activities and/or investments.

Together with our industry counterparts from across the electricity and gas supply chain, Powerlink has committed to the [Energy Charter](#). The charter is a national CEO-led collaboration that supports the energy sector towards a customer-centric future. Powerlink joins other signatories in committing to progress the culture and solutions needed to deliver more affordable, reliable and sustainable energy systems. Powerlink's [Energy Charter Disclosure Statement for 2024/25](#) shows Powerlink's achievements against the principles of the Energy Charter.

Powerlink takes a proactive approach to engagement

Powerlink regularly hosts a range of activities to provide timely and transparent information to customers and stakeholders within the broader community.

Powerlink's annual Transmission Network Forum (TNF) is a primary vehicle used to engage with the community, understand broader customer and industry views and obtain feedback on key topics. It also provides Powerlink with an opportunity to further inform its business network and non-network planning objectives. TNF participants include customers, landholders, environmental groups, Traditional Owners, government agencies, and industry bodies.

Engagement activities such as the TNF help inform the future development of the transmission network and assist Powerlink in providing services that align with the long-term interests of customers. Powerlink also incorporates feedback from these activities into a number of [publicly available reports](#).

Working collaboratively with Powerlink's Customer Panel

Powerlink's [Customer Panel](#) provides a face-to-face opportunity for customers and consumer representatives to give their input and feedback about Powerlink's decision-making, processes and methodologies. The panel also provides Powerlink with a valuable avenue to keep customers and stakeholders better informed, and to receive feedback about topics of relevance, including RIT-Ts.

The Customer Panel is regularly advised on the publication of Powerlink's RIT-T documents and is briefed quarterly on the status of current RIT-T consultations as well as upcoming RIT-Ts. This provides an ongoing opportunity for the Customer Panel to ask questions and provide feedback to further inform RIT-Ts, and for Powerlink to better understand the views of customers when undertaking the RIT-T consultation process.

Powerlink will continue to provide updates to and request input from the Customer Panel throughout the RIT-T consultation process.

Transparency on future network requirements

Powerlink's annual planning review findings are published in the [Transmission Annual Planning Report](#) (TAPR) and TAPR templates (available via the [TAPR portal](#)). It provides early information and technical data to customers and stakeholders on potential transmission network needs over a 10-year outlook period. The TAPR plays an

important part in planning Queensland's transmission network and helping to ensure it continues to meet the needs of Queensland electricity customers and participants in the National Electricity Market (NEM).²⁵

Community engagement

Powerlink recognises the importance of engaging with stakeholders who may reasonably be expected to be affected by the works required to meet the identified need described in this PACR.

The engagement frameworks and strategies that underpin Powerlink's engagement approach include:

- The International Association for Public Participation (IAP2) spectrum²⁶, noting each stakeholder group has unique needs and requires an individual assessment on the spectrum;
- Powerlink's [Community Engagement Approach](#) and [Reflect Reconciliation Action Plan](#); and
- the Energy Charter [Landholder and Community Better Practice Engagement Guide](#); and [Better Practice Social Licence Guideline](#).

Powerlink assesses the requirement for community engagement based on the identified need

Powerlink undertakes an assessment of the potential for social and environmental impacts of anticipated replacement or augmentation projects well in advance of the identified need timing. Understanding if and when community engagement may be required, as well as the appropriate engagement approach, is an integral component of the early planning analysis needed to inform option identification, consideration of statutory processes (e.g. Ministerial Infrastructure Designation if required) and subsequent project development strategy and engagement plans.

Powerlink's engagement approach is tailored to maximise the accessibility of the proposed project's information to the stakeholder groups and/or communities affected by the project once the need to undertake community engagement is identified. Key stakeholders may include, but are not limited to, directly impacted and adjacent landholders, Traditional Owner groups, local residents, businesses and other organisations such as schools, community organisations and environmental groups, local government authorities and elected representatives within local and state governments.

Assessment and basis of assessment on the need for community engagement

Powerlink has assessed that extensive community engagement is not required given the scope of works under consideration for the proposed network option to meet the identified need will be within existing Powerlink substation sites. Powerlink will provide notifications to nearby residents as required to ensure all affected parties are appropriately informed of project activities.

²⁵ The 2025 TAPR indicated the proposed commissioning date for the current transformer replacement program would be June 2031. See Powerlink, *2025 Transmission Annual Planning Report*, October 2025, page 85.

²⁶ Refer to IAP2's [website](#).

Appendix 3: Market benefits that are not material for this RIT-T assessment

A discussion of each market benefit under the RIT-T that Powerlink considers not to be material is presented below.

- **Changes in patterns of generation dispatch:** replacement of ageing assets under the credible options by itself does not affect transmission network constraints or affect transmission flows that would change patterns of generation dispatch. It follows that changes through different patterns of generation dispatch are not material to the outcome of the RIT-T assessment.
- **Changes in voluntary load curtailment:** replacement of at-risk assets under the credible option by itself does not affect prices in the wholesale electricity market. It follows that changes in voluntary load curtailment will not be material for the purposes of this RIT-T.
- **Changes in costs for other parties:** the effect of replacement of at-risk assets under the credible option considered are localised to the substation they are located at and do not affect the capacity of transmission network assets and therefore are unlikely to change generation investment patterns (which are captured under the RIT-T category of 'costs for other parties')
- **Differences in the timing of expenditure:** the credible option for asset replacement does not affect the capacity of transmission network assets, the way they operate, or transmission flows. Accordingly, differences in the timing of expenditure of unrelated transmission investments are unlikely to be affected.
- **Changes in network losses:** the credible option is not expected to provide any changes in network losses as replacing at risk assets does not affect the characteristics of primary transmission assets.
- **Changes in ancillary services cost:** there is no expected change to the costs of Frequency Control Ancillary Services (FCAS), Network Control Ancillary Services (NCAS), or System Restart Ancillary Services (SRAS) due to credible option under consideration. These costs are therefore not material to the outcome of the RIT-T assessment.
- **Changes in Australia's greenhouse gas emissions:** Powerlink does not consider that the credible option will materially affect Australia's greenhouse gas emissions, and the cost of quantifying any greenhouse gas emission benefits would involve a disproportionate level of effort compared to the additional insight it would provide.
- **Competition benefits:** Powerlink does not consider that the credible option will materially affect competition between generators, and generators' bidding behaviour and, consequently, considers that the techniques required to capture any changes in such behaviour would involve a disproportionate level of effort compared to the additional insight it would provide.
- **Option value:** Powerlink does not consider that the identified need for the option considered in this RIT-T is affected by uncertain factors about which there may be more clarity in future. As a consequence, option value is not a relevant consideration for this RIT-T.
- **Costs associated with social licence activities:** Powerlink does not consider that the cost of social licence activities is material given there is only one credible option under consideration in this RIT-T and therefore not material to the outcome of the RIT-T assessment.

Appendix 4: Sensitivity Analysis

Powerlink has investigated the following sensitivities on key assumptions:

- a range from 3.63% to 10.37% discount rate;
- a range from 75% to 125% of base capital expenditure estimates;
- a range from 75% to 125% of base risk cost estimates; and
- a range from 75% to 125% of base operational maintenance expenditure.

As illustrated in Figures A4.1 to A4.3, sensitivity analysis for the NPV relative to the base case shows that varying the discount rate, capital expenditure, and total risk costs has no impact on the identification of the preferred option. Option 1 is the preferred option under all scenarios tested.

Figure A4.1: Discount rate sensitivity

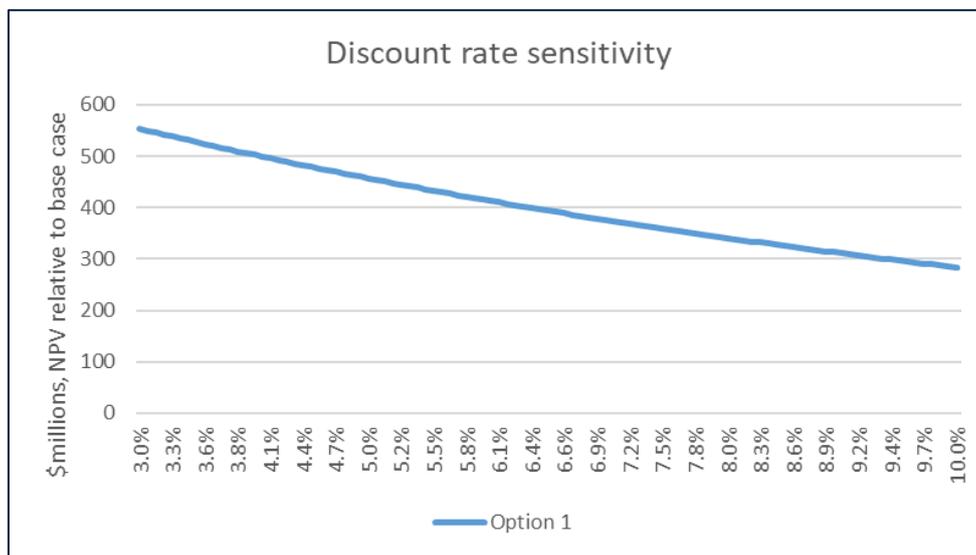


Figure A4.2 Capital cost sensitivity

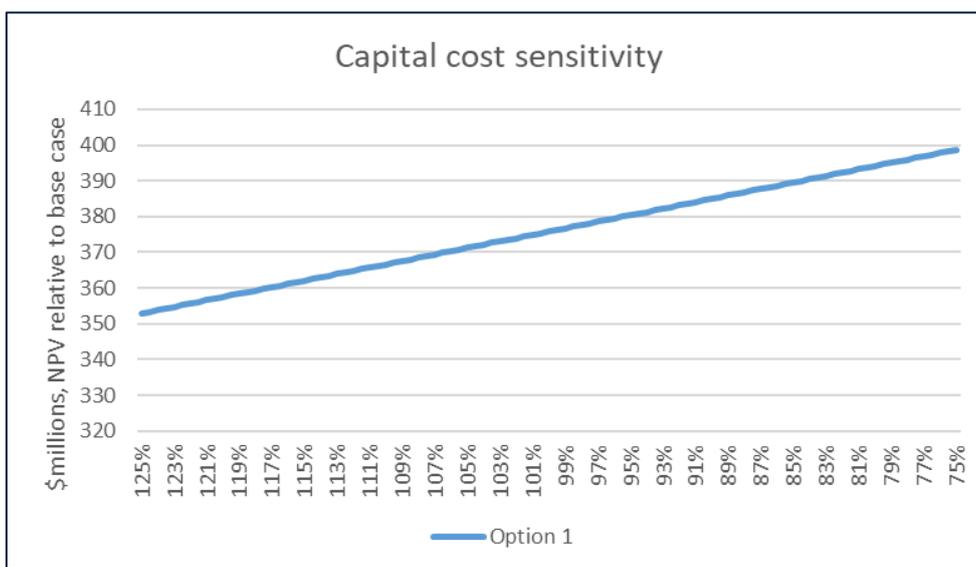
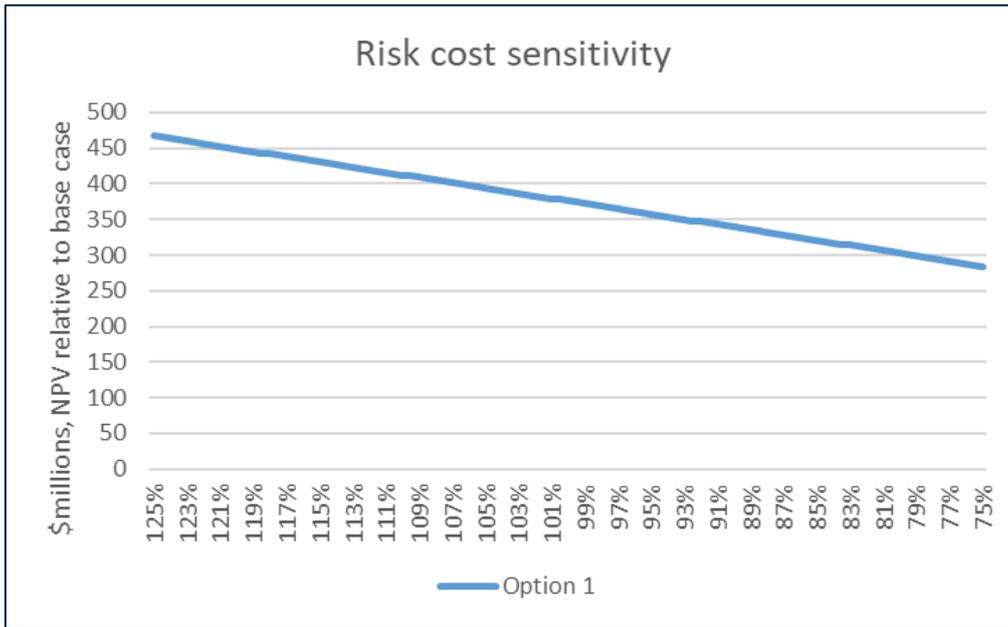
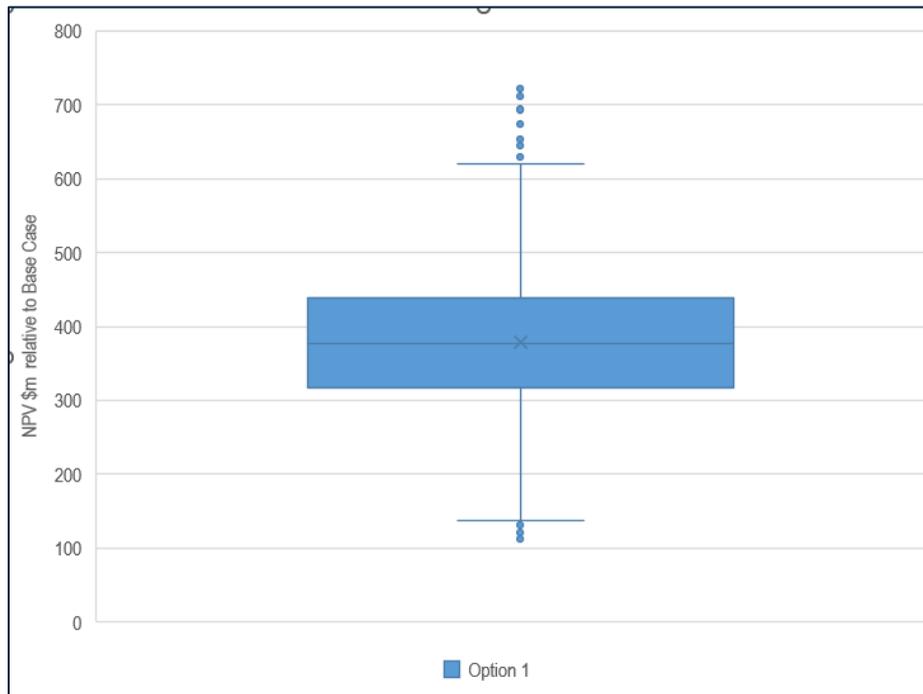


Figure A4.3 Risk cost sensitivity



Powerlink also performed a Monte Carlo simulation with multiple input parameters (including capital cost, discount rate and total risk cost) generated for the calculation of the NPV for each option. This process was repeated over 5,000 iterations, each time using a different set of random variables from the probability function. The sensitivity analysis output is presented as a distribution of possible NPVs for each option, as illustrated in Figure A4.4.

Figure A4.4: NPV sensitivity analysis of multiple key assumptions relative to the base case



Note: The box represents the interquartile interval, where 50% of the data is found. The horizontal line through the box is the median and the mean is represented by the cross (X). The two lines outside the box extend to 1.5 times the interquartile range. Data points that are outside of this interval are shown as dots on the graph.

Option 1 is robust over a range of input parameters in combination.

Appendix 5: Compliance Checklists

NER Requirements for RIT-T

Table A5.1 outlines Powerlink's compliance with PADR content requirements set out in sub-paragraph of clause 5.16.4(k) of the NER.

Table A5.1: NER Compliance Checklist

Sub-para	Requirement	Section of PADR
(1)	Description of each credible option	4
(2)	Summary of and commentary on submissions to the PSCR ²⁷	N/A
(3)	Quantification of costs, including breakdown of operating and capital expenditure Classes of material market benefit for each credible option	5, 6.1, 6.4
(4)	Description of methodologies used to quantify each class of material market benefit and cost	5.2
(5)	Reasons why a class/classes of market benefit are not material	Appendix 3
(6)	Identification and quantification of any class of market benefit estimated to arise outside Queensland	N/A
(7)	Results of NPV analysis for each credible option, and explanation of results	6.4
(8)	Identification of preferred option	6.5, 7
	For the preferred option:	
	(i) details of the technical characteristics	4
(9)	(ii) the estimated construction timetable and commissioning date	4, 6.1
	(iii) an augmentation technical report from AEMO (if required)	N/A
	(iv) a statement that the preferred option satisfies the RIT-T	7
(10)	RIT reopening triggers	8

N/A denotes not applicable.

²⁷ Powerlink did not receive any submissions in response to the PSCR for this RIT-T.

RIT-T Application Guidelines Compliance Checklist

Table A5.2 outlines Powerlink’s compliance with binding requirements included in the RIT-T Application Guidelines.

Table A5.2: RIT-T Application Guidelines Compliance Checklist

Section of Guidelines	Topic	Requirements	Section of PSCR
3.2.5	Social licence principles	Consider social licence issues in the identification of credible options, and include information about when and how social licence considerations have affected the identification and selection of credible options.	Appendix 3
3.4.3	Value of emissions reduction	The VER, reported in dollars per tonne of emissions (CO2 equivalent), is used to value emissions within a state of the world. A RIT-T proponent is required to use the then prevailing VER under relevant legislation or, otherwise, in any administrative guidance.	N/A
3.5	Valuing costs	<p>Costs are the present value of the following direct costs:</p> <ul style="list-style-type: none"> Constructing or providing the credible option; Operating and maintenance costs; Costs of complying with relevant laws, regulations and administrative requirements; and <p>Costs of removing and disposing of existing assets (particularly for asset replacement programs).</p>	4, 5, 6.1
3.5.3	Social licence costs	Provide the basis for any social licence costs, including any reference to best practice	N/A
3.5A.1	Cost estimation accuracy	Outline cost estimation process (as applicable to stage of the RIT-T)	6.1
3.5A.2	Cost estimation information	Details of inputs, assumptions and methodologies for each credible option (as applicable to the stage of the RIT-T) ²⁸	6.1
3.6	Market benefit classes	Apply market benefit classes consistently across all credible options	5.2
3.7.3	Market benefits	Calculation of changes in Australia’s greenhouse gases	N/A
3.8.2	Sensitivities	Sensitivity analysis on all credible options	Appendix 4

²⁸ Although the provisions in section 3.5A.2 of the RIT-T Application Guidelines are not included in the table of binding requirements at Appendix C of the Guidelines, Powerlink has added them to the compliance checklist as the provisions are expressed as being binding in section 3.5A.2 of the Guidelines.

Section of Guidelines	Topic	Requirements	Section of PSCR
3.9.4	Contingency allowance	Details of any contingency allowance included in a cost estimate for a credible option	N/A
3.11.2	Concessional finance	Provide sufficient detail about a concessional finance agreement	N/A
4.1	Community engagement	Description of assessment of requirement for community engagement and, as applicable, how engagement has been undertaken and any relevant concerns sought to be addressed, and how the proponent plans to engage with stakeholder groups.	1.3, Appendix 2

Notes:

N/A denotes not applicable.

Contact us

Registered office	33 Harold St Virginia Queensland 4014 ABN 82 078 849 233
Postal address	PO Box 1193 Virginia Queensland 4014
Telephone	+61 7 3860 2111 (during business hours)
Email	networkassessments@powerlink.com.au
Website	powerlink.com.au
Social	