Non-network solutions

4.1 The role of non-network solutions in transmission planning
4.2 How Powerlink identifies potential opportunities
4.3 How non-network options are formally considered
4.4 Where to find potential opportunities
4.5 Near-term needs highlighted for early market visibility
4.6 How to engage with Powerlink

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Non-network solutions form part of Powerlink's integrated approach to providing safe, reliable, secure and cost-effective transmission services for customers. Where suitable, non-network solutions can address all or part of an identified need, influence the form, scale, timing or staging of network investment, complement network development, provide network support or power system security services, and preserve flexibility as requirements evolve. This chapter helps interested parties understand Powerlink's approach, identify potentially relevant needs and opportunities across the TAPR, and how to engage with Powerlink.

Key highlights

- Powerlink considers potential network, non-network and operational responses to identified needs.
- Non-network solutions can address all or part of a need, improve the use of existing network capability, influence the timing or staging of investment, or contribute to broader system security requirements.
- The TAPR and supporting resources provide early, indicative information on potential needs and service requirements to help interested parties assess where a capability may be relevant.
- Powerlink welcomes early engagement to clarify published needs and indicative service requirements, and to discuss where a capability may be relevant.
- Where a formal consultation process applies, Powerlink considers and, where applicable, assesses non-network options under the relevant regulatory or legislative requirements. Published documents set out the relevant requirements, key dates and submission arrangements.
- Early engagement, including requests to join the Non-network Engagement Stakeholder Register, should be directed to NetworkAssessments@powerlink.com.au.

Chapter guide

Sections 4.1 to 4.3 explain the role of non-network solutions and the relevant planning, consultation and assessment pathways. Sections 4.4 and 4.5 explain where to find information on potential opportunities in the TAPR, and Section 4.6 explains how interested parties can engage with Powerlink.

4.1 The role of non-network solutions in transmission planning

Queensland's transmission system is being reshaped by growth in generation and energy storage, changing demand profiles, emerging large loads, evolving system security requirements and the progressive reinvestment in existing network assets in response to condition and performance risks. As the system evolves, non-network solutions can play an important role in addressing transmission network and system security needs.

To identify appropriate responses to identified needs, Powerlink considers network, non-network and operational approaches, including combinations of these approaches. Non-network solutions can be considered as standalone responses, as alternatives to network investment or as components of a broader response. Potential non-network options include demand management, energy storage and generation services, as well as capabilities that provide or support inertia, system strength, network support and control ancillary services, and voltage control.

Where suitable, a non-network option can address all or part of an identified need, make more effective use of existing network capability, or influence the form, scale, timing or staging of network investment. It may also complement network development and preserve flexibility as future requirements evolve. In these ways, non-network options may contribute to prudent and efficient outcomes for customers, either independently or as part of an integrated response.

Whether a potential non-network option is suitable will depend on the identified need and factors including location, service capability, availability, operating performance, delivery timing, proposed performance arrangements and commercial feasibility.

Non-network solutions in planning and practice

Powerlink's experience illustrates how non-network solutions can be used or assessed in response to identified transmission network and power system needs:

- Powerlink has entered into agreements for reactive power support in Southern Queensland and system strength services in Northern Queensland.
- Powerlink continues to engage with potential proponents on non-network solutions that may contribute to future system strength requirements across Queensland.
- The Gladstone Project Priority Transmission Investment (PTI) assessment considered network and non-network options as part of an integrated response to interrelated reliability, transfer capability and system security needs. Further information is provided in Section 7.3.2.

Emerging non-network opportunities

Powerlink continues to assess how emerging technologies, technical capabilities and delivery approaches may broaden the range of responses available for future transmission network and system security needs.

Powerlink's Unlocking Battery Potential, published in November 2025, provides information for battery energy storage system developers on technical capabilities and strategic siting to support more efficient network utilisation and lower total system costs. The guidance is intended to inform early project development but does not alter Powerlink's obligations under the National Electricity Market's (NEM) open-access framework.

4.2 How Powerlink identifies potential opportunities

Through our annual planning review, Powerlink identifies emerging transmission network and power system needs across the 10-year outlook. The TAPR and supporting resources provide early visibility of where non-network capabilities may be relevant, including available information on the location, nature and indicative timing of potential or emerging needs and, where available, indicative service requirements.

Early visibility supports preliminary market assessment and provides an opportunity for Powerlink to better understand potentially relevant market capability as planning develops.

This information does not pre-determine whether a need will be addressed through a network or non-network response. Some needs remain at an early stage, and their timing, assumptions and potential service requirements may change as planning and technical analysis progress. Table 4.1 outlines the indicative pathway from early visibility through formal consultation and assessment and, where applicable, delivery.

Further information on Powerlink's broader planning and network development approach is provided in chapters 1 and 5, and Appendix A.

Table 4.1 Indicative development and engagement pathway for potential non-network opportunities

Phase	Information provided by Powerlink	How interested parties can participate
Early planning and visibility	Planning information on identified network needs and system security requirements through the TAPR, regional development outlooks, TAPR Templates and TAPR Portal. Where practicable, this includes indicative non-network requirements.	Review published information, consider whether an existing or proposed capability may be relevant, contact Powerlink at NetworkAssessments@powerlink.com.au for an early discussion or to request inclusion on the Non-network Engagement Stakeholder Register.
Formal consultation and assessment	Further information on the identified need, timing, technical requirements and potential options through the applicable published planning, consultation or assessment process. This may include a Regulatory Investment Test for Transmission (RIT-T), an Expression of Interest (EOI) or another applicable process. Members of the Non-network Engagement Stakeholder Register may receive relevant updates, including notification of RIT-T consultation reports.	Review the published documents, seek clarification where needed and provide information or make a submission through the applicable process.
Procurement and delivery	Published assessment outcomes and, where applicable, information on subsequent procurement or delivery arrangements.	Participate in any subsequent procurement or delivery process in line with its published or notified requirements. Powerlink's Network Support Contracting Framework provides information on the contracting principles that may apply where a non-network service is procured.

Note: This table provides an indicative planning and engagement pathway and does not replace any process prescribed by the National Electricity Rules (NER). Inclusion of a need does not confirm that a feasible non-network solution exists or that a solution has been selected.

4.3 How non-network options are formally considered

The regulatory consultation and assessment pathway for an identified need depends on the nature and timing of the need and the relevant regulatory or legislative framework. Depending on the circumstances, non-network options can be considered through:

- a RIT-T
- an EOI or another applicable process for a power system security requirement
- the consultation and assessment arrangements for an actionable Integrated System Plan (ISP) project
- consultation and assessment arrangements applying under Queensland's PTI framework

The applicable requirements, submission arrangements and key dates are set out in the relevant published consultation or assessment documents.

4.3.1 RIT-T consultation

Where the RIT-T applies, Powerlink consults on the identified need and assesses credible network and non-network options. Under the NER, a credible option is an option, or group of options, that addresses the identified need, is commercially and technically feasible and can be implemented in sufficient time to meet the identified need. Information on current and completed RIT-T processes, including the applicable technical requirements and submission arrangements, is available on Powerlink's investment consultations page.

4.3.2 System security services

Power system security requirements may be addressed through network, non-network or integrated responses. Depending on the nature and timing of the requirement and the applicable NER provisions, Powerlink may undertake an EOI process, a RIT-T or another applicable consultation and assessment process. Current system security requirements and associated consultation processes are described in Chapter 3 with further information available on Powerlink's power system security consultations page.

4.3.3 Actionable Integrated System Plan projects

For an actionable ISP project, AEMO consults on potential non-network options in accordance with the NER and provides relevant submissions to the RIT-T proponent for consideration through the actionable ISP project RIT-T process. Information on Queensland's current actionable ISP projects and associated RIT-T processes is provided in Chapter 5.

4.4 Where to find potential opportunities

Potential non-network opportunities can arise in response to transmission network and system security needs identified across the TAPR and supporting planning resources. Interested parties should use these sources together to understand emerging service drivers, identify specific regional needs, monitor formal processes and assess the locational and technical relevance of an existing or proposed capability.

Where to find relevant information

Where to look	What it provides
Chapters 2, 3 and 9	Review demand and storage outlooks, system security requirements, network utilisation and constraints that provide context for emerging system needs and potential service drivers.
Chapter 5	Monitor completed, current and planned regulatory consultations and identify needs progressing through formal consultation or assessment.
Chapters 6, 7 and 8	Review potential regional network needs across the 10-year outlook and the nearer-term five-year investment profiles to assess their location, drivers, potential network response and, where available, indicative service requirements.
Appendix F	Summarises the broader pipeline of possible regional network investments over the 10-year outlook in one consolidated list.
TAPR Templates and Portal	Assess the preliminary locational and technical relevance of a capability using information provided through the TAPR Templates and TAPR Portal, including demand data, potential investment information, historical feeder flow data and geographic context. The TAPR Portal is available from Powerlink's Transmission Annual Planning Report webpage by selecting **Visit the TAPR Portal**.

In assessing whether an existing or proposed capability may be relevant, interested parties should consider the need's location and nature, indicative service requirements and timing, operating conditions, and current planning or consultation status. Further detail should be sought from the applicable regional profile, TAPR Template or published consultation document.

4.5 Near-term needs highlighted for early market visibility

Table 4.2 highlights selected near-term voltage support and transformer reinvestment or augmentation needs. The table summarises the potential network option, indicative service requirement, timing and current planning or consultation status to help interested parties assess whether a capability may be relevant.

Table 4.2 is not a complete list of potential non-network opportunities. Other transmission network and system security needs identified across the TAPR and supporting planning resources should also be considered where an existing or proposed capability may be relevant.

Table 4.2 Near-term network needs highlighted for early market visibility

Identified need	Potential network option	Indicative network option cost	Regional reference	Indicative service requirement and potential non-network contribution	Indicative need timing	Planning and consultation status
Manage voltage levels and transfer capability in North Queensland	Replacement of the Strathmore static VAr compensator (SVC) secondary systems, thyristor valves and cooling system	$24 million	North zone, Table 6.4 (NQ-11)	A minimum of 50MVAr and up to 100MVAr of capacitive voltage support, and a minimum of 80MVAr of inductive voltage support on a continuous basis.	December 2030	Formal consultation – RIT-T in progress
Maintain power-transfer capability and reliability of supply at Tully	Tully 132/22kV Transformer 2 replacement	$10 million	Far North zone, Table 6.2 (FNQ-03)	Up to 18MW and 275MWh per day to support the Tully 22kV network.	June 2029	Early TAPR visibility – formal consultation not commenced
Maintain reliability of supply and transfer capability at South Pine	South Pine 275/110kV Transformer 5 replacement	$16 million	Moreton zone, Table 8.5 (MZ-06)	Approximately 165MW and 1,350MWh per day under network contingency conditions.	December 2030	Early TAPR visibility – formal consultation not commenced
Maintain reliability of supply at Goodna	Goodna third 110/33kV transformer augmentation	$15 million	Moreton zone, Table 8.5 (MZ-03)	Approximately 75MW and 820MWh per day under network contingency conditions.	June 2030	Early TAPR visibility – formal consultation not commenced
Addressing reliability of supply to the southern Gold Coast and Tweed area	Mudgeeraba third 275/110kV transformer	$35 million	Gold Coast zone, Table 8.6 (GCZ-02)	Up to 180MW and 1,100MWh per day under network contingency conditions.	December 2032	Early TAPR visibility – formal consultation not commenced

Notes: This table supports early market consideration and is not a complete list or formal assessment. Inclusion does not confirm that a feasible non-network solution exists or will be progressed or selected. Costs relate to the most likely network option. Regional profiles, TAPR Templates and consultation documents take precedence.

4.6 How to engage with Powerlink

Powerlink welcomes early engagement where an existing or proposed capability may be relevant to a potential or identified need. Early engagement provides an opportunity to seek clarification on published needs and indicative service requirements, discuss whether a capability may be relevant and exchange information that may support Powerlink's ongoing planning. It is exploratory and does not replace any subsequent formal consultation, assessment or procurement process.

Engage with Powerlink on non-network opportunities

Interested parties can contact NetworkAssessments@powerlink.com.au to:

- discuss whether and how a capability may contribute to a potential or identified need, either as a standalone response, through aggregation or as part of an integrated response
- seek clarification or provide information on published needs, service capabilities, locations and development timeframes
- request inclusion on the Non-network Engagement Stakeholder Register to receive relevant updates, including notifications when RIT-T consultation reports are published

A fully developed proposal is not required for early engagement. Where available, high-level information about the capability, location, timing and development maturity may help support an initial discussion.

Formal submissions must be made through the applicable published process.

Where assessment identifies a non-network option for further progression, any subsequent procurement or contracting arrangements will depend on the identified need and the applicable process. Where Powerlink procures a non-network service from a third-party, a Network Support Agreement may be used to document the service, operating, performance and commercial arrangements. Powerlink's Network Support Contracting Framework provides further information on the contracting principles that may apply.

More information on non-network opportunities and Powerlink's approach to non-network solutions is available on Powerlink's website.