



# Chapter I: Introduction

- I.1 Introduction
- I.2 Context of the TAPR
- I.3 Purpose of the TAPR
- I.4 Role of Powerlink Queensland
- I.5 Overview of approach to asset management
- I.6 Overview of planning responsibilities and processes
- I.7 Powerlink's asset planning criteria
- I.8 Stakeholder engagement

## Key highlights

- The purpose of Powerlink's Transmission Annual Planning Report (TAPR) under the National Electricity Rules (NER) is to provide information about the Queensland electricity transmission network.
- Powerlink is responsible for planning the shared transmission network within Queensland.
- Since publication of the 2016 TAPR, Powerlink has continued to proactively engage with stakeholders and seek their input into Powerlink's objectives, network operations and investment decisions.
- The 2017 TAPR contains detailed discussion on key areas of the transmission network requiring future expenditure.

## 1.1 Introduction

Powerlink Queensland is a Transmission Network Service Provider (TNSP) in the National Electricity Market (NEM) and owns, develops, operates and maintains Queensland's high voltage electricity transmission network. It has also been appointed by the Queensland Government as the Jurisdictional Planning Body (JPB) responsible for transmission network planning for the national grid within the State.

As part of its planning responsibilities, Powerlink undertakes an annual planning review in accordance with the requirements of the NER and publishes the findings of this review in its TAPR.

This 2017 TAPR includes information on electricity energy and demand forecasts, the existing electricity supply system including committed generation and transmission network reinvestments and developments, and forecasts of network capability. Risks associated with the condition and performance of existing assets, as well as emerging limitations in the capability of the network, are identified and possible solutions to address these are discussed. Interested parties are encouraged to provide input to identify the most economical solution (including non-network solutions provided by others) that satisfies the required reliability standard to customers into the future. This 2017 TAPR explores the potential for the connection of variable renewable electricity (VRE) generation to Powerlink's transmission network.

Powerlink's annual planning review and TAPR play an important part in planning Queensland's transmission network and helping to ensure it continues to meet the needs of participants in the NEM and Queensland electricity consumers.

## 1.2 Context of the TAPR

All bodies with jurisdictional planning responsibilities in the NEM are required to undertake the annual planning review and reporting process prescribed in the NER<sup>1</sup>.

Information from this process is also provided to the Australian Energy Market Operator (AEMO) to assist in the preparation of its National Electricity Forecasting Report (NEFR), Electricity Statement of Opportunities (ESOO) and National Transmission Network Development Plan (NTNDP).

The ESOO is the primary document for examining electricity supply and demand issues across all regions in the NEM. The NTNDP provides information on the strategic and long-term development of the national transmission system under a range of market development scenarios. The NEFR provides independent electricity demand and energy forecasts for each NEM region over a 10-year outlook period. The forecasts explore a range of scenarios across high, medium and low economic growth outlooks.

The primary purpose of the TAPR is to provide information on the short-term to medium-term planning activities of TNSPs, whereas the focus of the NTNDP is strategic and long-term. The NTNDP and TAPR are intended to complement each other in informing stakeholders, promoting efficient outcomes and investment decisions. In supporting this complementary approach, information from the NTNDP is considered in this TAPR, and more generally in Powerlink's planning activities.

---

<sup>1</sup> For the purposes of Powerlink's 2017 TAPR, Version 91 of the NER in place from 2 May 2017.

Interested parties may benefit from reviewing Powerlink's 2017 TAPR in conjunction with AEMO's 2017 NEFR, ESOO and NTNDP, which are anticipated to be published in June, August and December 2017 respectively.

### 1.3 Purpose of the TAPR

The purpose of Powerlink's TAPR under the NER is to provide information about the Queensland electricity transmission network to everyone interested/involved in the NEM including AEMO, Registered Participants and interested parties. The TAPR also provides broader stakeholders with an overview of Powerlink's planning processes and decision making on future investment.

It aims to provide information that assists to:

- identify locations that would benefit from significant electricity supply capability or demand side management initiatives
- identify locations where major industrial loads could be connected
- identify locations where capacity for new generation developments exist (in particular VRE generation)
- understand how the electricity supply system affects their needs
- understand the transmission network's capability to transfer quantities of bulk electrical energy
- provide input into the future development of the transmission network.

Readers should note this document is not intended to be relied upon explicitly for the evaluation of participants' investment decisions.

### 1.4 Role of Powerlink Queensland

Powerlink has been nominated by the Queensland Government as the entity with transmission network planning responsibility for the national grid in Queensland, known as the JPB as outlined in Clause 5.20.5 of the NER.

As the owner and operator of the electricity transmission network in Queensland, Powerlink is registered with AEMO as a TNSP under the NER. In this role, and in the context of this TAPR, Powerlink's transmission network planning and development responsibilities include:

- ensuring the network is able to operate with sufficient capability and if necessary, is augmented, to provide network services to customers in accordance with Powerlink's Transmission Authority and associated reliability standard
- ensuring the risks associated with the condition and performance of existing assets are appropriately managed
- ensuring the network complies with technical and reliability standards contained in the NER and jurisdictional instruments
- conducting annual planning reviews with Distribution Network Service Providers (DNSPs) and other TNSPs whose networks are connected to Powerlink's transmission network, that is, Energex, Ergon Energy<sup>2</sup>, Essential Energy and TransGrid
- advising AEMO, Registered Participants and interested parties of asset reinvestment needs within the time required for action
- advising AEMO, Registered Participants and interested parties of emerging network limitations within the time required for action
- developing recommendations to address emerging network limitations through joint planning with DNSPs and consultation with AEMO, Registered Participants and interested parties, with potential solutions including network upgrades or non-network options such as local generation and demand side management initiatives

---

<sup>2</sup> Energex and Ergon Energy merged under the parent company of Energy Queensland on 1 July 2016.

- examining options and developing recommendations to address transmission constraints and economic limitations across interconnectors through joint planning with other TNSPs and network service providers, and consultation with AEMO, Registered Participants and interested parties, with potential solutions including network upgrades, development of new interconnectors or non-network options
- assessing whether or not a proposed transmission network augmentation has a material impact on networks owned by other TNSPs, and in assessing this impact Powerlink must have regard to the objective set of criteria published by AEMO in accordance with Clause 5.21 of the NER
- undertaking the role of the proponent for regulated transmission augmentations in Queensland.

In addition, Powerlink participates in inter-regional system tests associated with new or augmented interconnections.

## 1.5 Overview of approach to asset management

Powerlink's asset management framework captures significant internal and external drivers on the business and sets out initiatives to be adopted. The Asset Management Policy forms the foundation of the Asset Management Strategy as discussed below.

The principles set out in these documents guides Powerlink's analysis of future network investment needs and key investment drivers. Other factors that influence network development, such as energy and demand forecasts, generation development (including potential generation withdrawal), and risks related to the condition and performance of the existing asset base are also analysed collectively in order to form an integrated network investment plan over a 10-year outlook period.

### 1.5.1 Asset Management Policy

Powerlink's Asset Management Policy sets out a commitment to sustainable asset management practices that ensures Powerlink provides a valued transmission service to its customers by managing risk, optimising performance and managing expenditure on assets through the whole of asset life cycle. The policy includes the principles that are applied to manage Powerlink's entire transmission network, as well as telecommunications and business infrastructure assets.

### 1.5.2 Asset Management Strategy

Powerlink's Asset Management Strategy identifies the systems and processes that guide the development of investment plans for the network, including such factors as expected service levels, investment policy and risk management.

### 1.5.3 Asset risk management

Powerlink's approach to risk management requires a structured approach, applying contemporary and best practice asset risk management practices.

As the reinvestment in assets approaching end of technical or economic life forms a substantial part of Powerlink's future network investment plans, the assessment of emerging risks related to the condition and performance of these assets is of particular importance. Such assessments are underpinned by Powerlink's corporate risk management framework and the application of a range of risk assessment methodologies set out in AS/NZS ISO31000:2009 Risk Management<sup>3</sup>. In order to inform risk assessments, Powerlink undertakes a periodic review of network assets which considers a broad range of factors, including physical condition, capacity constraints, performance and functionality, statutory compliance and ongoing supportability.

## 1.6 Overview of planning responsibilities and processes

### 1.6.1 Planning criteria and processes

Powerlink has obligations that govern how it should address forecast network limitations. These obligations are prescribed by *Queensland's Electricity Act 1994* (the Act), the NER and Powerlink's Transmission Authority.

---

<sup>3</sup> AS/NZS ISO 31000:2009 is an international Risk Management standard.

The Act requires that Powerlink “ensure as far as technically and economically practicable, that the transmission grid is operated with enough capacity (and if necessary, augmented or extended to provide enough capacity) to provide network services to persons authorised to connect to the grid or take electricity from the grid”.

It is a condition of Powerlink’s Transmission Authority that it meets licence and NER requirements relating to technical performance standards during intact and contingency conditions. The NER sets out minimum performance requirements of the network and connections, and requires that reliability standards at each connection point be included in the relevant connection agreement.

New network developments and reinvestments are proposed to meet these legislative and NER obligations. Powerlink may also propose transmission investments that deliver a net market benefit when assessed in accordance with the Regulatory Investment Test for Transmission (RIT-T).

The requirements for initiating solutions to forecast network limitations, including new regulated network developments or non-network solutions, are set down in Clauses 5.14.1, 5.16.4 and 5.20.5 of the NER. These clauses apply to different types of proposed transmission investments.

While each of these clauses prescribes a slightly different process, at a higher level the main steps in network planning for transmission investments subject to the RIT-T can be summarised as follows:

- publication of information regarding the nature of the network limitation and need for action which examines demand growth and its forecast exceedance of the network capability
- consideration of generation and network capability to determine when additional capability is required
- consultation on assumptions made and credible options, which may include network augmentation, local generation or demand side management initiatives, and classes of market benefits considered to be material which should therefore be taken into account in the comparison of options
- analysis and assessment of credible options, which include costs, market benefits and material internetwork impact
- identification of the preferred option that satisfies the RIT-T, which maximises the present value of the net economic benefit to all those who produce, consume and transport electricity in the market
- consultation and publication of a recommended course of action to address the identified future network limitation.

#### **1.6.2 Integrated planning of the shared network**

Powerlink is responsible for planning the shared transmission network within Queensland, and inter-regionally. The NER sets out the planning process and requires Powerlink to apply the RIT-T promulgated by the Australian Energy Regulator (AER) to transmission investment proposals. The planning process requires consultation with AEMO, Registered Participants and interested parties, including customers, generators, DNSPs and other TNSPs. Section 4.4 discusses current consultations, as well as anticipated future consultations, that will be conducted in line with the processes prescribed in the NER.

Significant inputs to the network planning process are the:

- forecast of customer electricity demand (including demand side management) and its location
- location, capacity and arrangement of new and existing generation (including embedded generation)
- condition and performance of assets and an assessment of the risks associated in allowing assets to remain in-service
- assessment of future network capacity to meet the required planning criteria and efficient market outcomes.

## Introduction

The 10-year forecasts of electrical demand and energy across Queensland are used, together with forecast generation patterns, to determine potential flows on transmission network elements. The location and capacity of existing and committed generation in Queensland is sourced from AEMO, unless modified following advice from relevant participants and is provided in Table 5.1. Information about existing and committed embedded generation and demand management within distribution networks is provided by DNSPs.

Powerlink examines the capability of its existing network and the future capability following any changes resulting from committed network projects. This involves consultation with the relevant DNSP in situations where the performance of the transmission network may be affected by the distribution network, for example where the two networks operate in parallel.

Where potential flows could exceed network capability, Powerlink notifies market participants of these forecast emerging network limitations. If the capability violation exceeds the required reliability standard, joint planning investigations are carried out with DNSPs (or other TNSPs if relevant) in accordance with Clause 5.14.1 of the NER. The objective of this joint planning is to identify the most cost effective solution, regardless of asset boundaries, including potential non-network solutions.

In addition to meeting the forecast demand, Powerlink must maintain its current network so that the risks associated with the condition and performance of existing assets is appropriately managed. Powerlink routinely undertakes an assessment of the condition of assets to identify emerging asset related risks.

As assets approach the end of their technical or economic life, Powerlink examines a range of options to determine the most appropriate reinvestment strategy. Consideration is given to optimising the topography and capacity of the network, taking into account current and future network needs. In many cases, power system flows and patterns have changed over time. As a result, the ongoing network capacity requirements need to be re-evaluated. Individual asset reinvestment decisions are not made in isolation, and assets are not necessarily replaced on a like-for-like basis. Rather, asset reinvestment strategies and decisions are made taking into account the inter-related connectivity of the high voltage system, and are often considered across an area or transmission corridor. The consideration of potential non-network solutions forms an important part of this integrated planning approach.

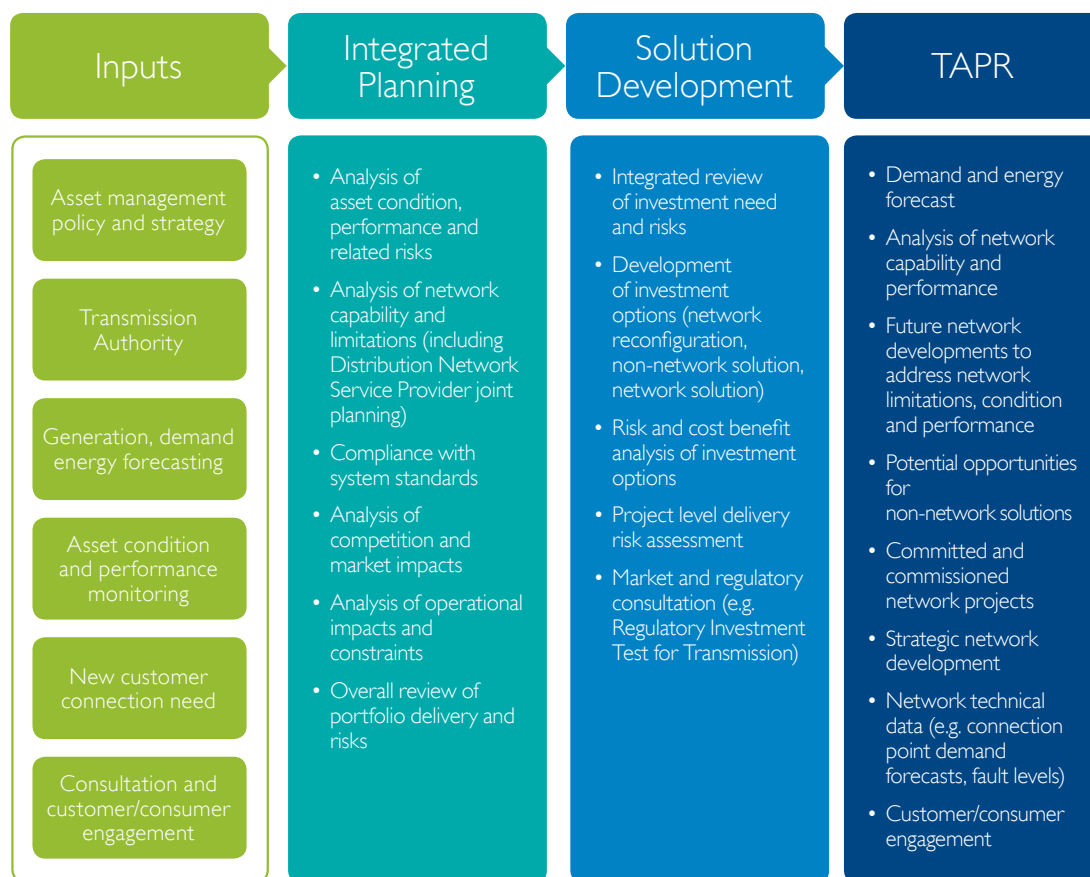
The integration of condition and demand based limitations delivers cost effective solutions that address both reliability of supply and risks associated with assets approaching end of technical or economic life. Powerlink considers a range of strategies and options to address emerging asset related condition and performance issues. These strategies include:

- retiring or decommissioning assets where there is unlikely to be an ongoing future need
- refurbishing to extend the technical life of assets
- replacing assets of different capacity or type
- changing the topography and configuration of the network
- implementing non-network solutions.

Each of these options is considered in the context of future capacity needs.

Furthermore, in accordance with the NER, information regarding proposed transmission reinvestments within the five-year outlook period which meet the required cost threshold of \$6 million must be published in the TAPR. More broadly, this provides information to the NEM, including AEMO, Registered Participants and interested parties (including non-network providers) on Powerlink's planning processes and decision making relating to potential future reinvestments. Further information is provided in Section 4.2.

A summary of Powerlink's integrated planning approach that takes into account both network capacity needs and end of technical or economic life related issues is presented in Figure 1.4.

**Figure 1.4** Overview of Powerlink's TAPR planning process

### 1.6.3 Planning of connections

Participants wishing to connect to the Queensland transmission network include new and existing generators, major loads and DNSPs. Planning of new connections or alterations to existing connections involves consultation between Powerlink and the connecting party to negotiate a Connection and Access Agreement (CAA). Negotiation of the CAA requires the specification and then compliance assessment of the required technical standards. This process also involves AEMO. The services provided can be prescribed (regulated), negotiated or non-regulated services in accordance with the definitions in the NER or the framework for provision of such services. Investments in new prescribed connections, or augmentations to existing prescribed connections costing more than the threshold specified in the NER (currently \$6 million<sup>4</sup>), may be subject to the RIT-T.

### 1.6.4 Planning of interconnectors

Development and assessment of new or augmented interconnections between Queensland and other States, is the responsibility of the respective TNSPs. Information on the analysis of potential interconnector upgrades and new interconnectors is provided in Chapter 6.

<sup>4</sup> Following the Australian Energy Regulator's 2015 Cost Threshold Review, from 1 January 2016, the \$5 million cost thresholds referred to in clauses 5.15.3(b)(1),(2),(3)(4) and (6) of the National Electricity Rules increased from \$5 million to \$6 million.

## 1.7 Powerlink's asset planning criteria

There is a significant focus on striking the right balance between reliability and cost of transmission services. In response to these drivers, the Queensland Government amended Powerlink's N-I criterion to allow for increased flexibility from July 2014. The planning standard permits Powerlink to plan and develop the transmission network on the basis that load may be interrupted during a single network contingency event. The following limits are placed on the maximum load and energy that may be at risk of not being supplied during a critical contingency:

- will not exceed 50MW at any one time
- will not be more than 600MWh in aggregate.

The risk limits can be varied by:

- a connection or other agreement made by the transmission entity with a person who receives or wishes to receive transmission services, in relation to those services or
- agreement with the Queensland Energy Regulator (QER).

Powerlink is required to implement appropriate network or non-network solutions in circumstances where the limits set out above are exceeded or when the economic cost of load which is at risk of being unsupplied justifies the cost of the investment. Therefore, the planning standard has the effect of deferring or reducing the extent of investment in network or non-network solutions required in response to demand growth. Powerlink will continue to maintain and operate its transmission network to maximise reliability to consumers.

Powerlink's transmission network planning and development responsibilities include developing recommendations to address emerging network limitations through joint planning. The objective of joint planning is to identify the most cost effective solution, regardless of asset boundaries, including potential non-network solutions. Joint planning - while traditionally focused on the DNSPs (Energex, Ergon Energy and Essential Energy) and TransGrid - can also include consultation with AEMO, other Registered Participants, load aggregators and other interested parties.

Energex and Ergon Energy were issued amended Distribution Authorities from July 2014. The service levels defined in their respective Distribution Authority differ to that of Powerlink's authority. Joint planning accommodates these different planning standards by applying the planning standard consistently with the owner of the asset which places load at risk during a contingency event.

Powerlink has established policy frameworks and methodologies to support the implementation of this standard. These are being applied in various parts of the Powerlink network where possible emerging limitations are being monitored. For example, based on the medium economic forecast in Chapter 2, voltage stability limitations occur in the Proserpine area within the outlook period. However, the load at risk of not being supplied during a contingency event does not exceed the risk limits of the planning standard. In this instance the planning standard is deferring investment and delivering savings to customers and consumers.

The planning standard will deliver further opportunities to defer investment if new mining, metal processing or other industrial loads develop (discussed in Table 2.1 of Chapter 2). These new loads are within the resource rich areas of Queensland or at the associated coastal port facilities but have not yet reached the development status necessary to be included (either wholly or in part) in the medium economic forecast. The loads have the potential to significantly impact the performance of the transmission network supplying, and within, these areas. The possible impact of these loads is discussed in Section 6.2. The planning standard may not only affect the timing of required investment but also in some cases affords the opportunity for incremental solutions that would not have otherwise met the original N-I criterion.



## 1.8 Stakeholder engagement

Powerlink shares effective, timely and transparent information with its stakeholders using a range of engagement methods. Two key stakeholder groups for Powerlink are customers and consumers. Customers are defined as those who are directly connected to Powerlink's network, while consumers are electricity end-users, such as households and businesses, who primarily receive electricity from the distribution networks. There are also stakeholders who can provide Powerlink with non-network solutions. These stakeholders may either connect directly to Powerlink's network, or connect to the distribution networks. The TAPR is just one avenue that Powerlink uses to communicate information about transmission planning in the NEM. Through the TAPR, Powerlink aims to increase understanding and awareness of some of our business practices including load forecasting and transmission network planning.

### 1.8.1 Customer and consumer engagement

Powerlink is committed to proactively engaging with stakeholders and seeking their input into Powerlink's business processes and objectives. All engagement activities are undertaken in accordance with our Stakeholder Engagement Framework that sets out the principles, objectives and outcomes Powerlink seeks to achieve in our interactions with stakeholders. The framework aims to build greater stakeholder trust and social licence to operate, support better business decision making and improve the management of corporate risks and reputation.

A number of key performance indicators are used to monitor progress towards achieving Powerlink's stakeholder engagement performance goals. In particular, Powerlink undertakes a bi-annual stakeholder survey to gain insights about stakeholder perceptions of Powerlink, its social licence to operate and reputation. Most recently completed in November 2016, the survey provides an evidence base to support the Stakeholder Engagement Framework and inform engagement strategies with individual stakeholders.

#### 2016/17 Stakeholder engagement activities

Since the publication of the 2016 TAPR, Powerlink has engaged with stakeholders in various ways through a range of forum and panels as outlined below.

##### Transmission Network Forum

In July 2016, more than 100 customer, consumer, government and industry representatives attended Powerlink's second annual Transmission Network Forum. The forum began with a presentation on Powerlink's 2016 TAPR, followed by interactive breakout sessions on how the transmission network can support large-scale VRE generation and exploring opportunities for improved engagement in developing non-network solutions.

##### Customer and Consumer Panel

Powerlink hosts a Customer and Consumer Panel that provides a face-to-face forum for our stakeholders to give input and feedback to Powerlink regarding our decision making, processes and methodologies. Comprised of members from a range of sectors including energy industry, resources, community advocacy groups, consumers and research organisations, the panel provides an important avenue to keep our stakeholders better informed about operational and strategic topics of relevance. The panel met in October 2016 and May 2017 to discuss and explore topics including the AER's Draft and Final Decisions for Powerlink's transmission determination, opportunities to strengthen Powerlink's customer focus and the application of relevant key insights from the Energy Networks Australia and CSIRO's Electricity Network Transformation Roadmap.

##### Demand and Energy Forecasting Forum

In April 2017, Powerlink held a Demand and Energy Forecasting Forum attended by a wide range of experts from a variety of stakeholder groups. The forum examined the impact of new technologies and tariff reform on demand and energy forecasting on the Queensland transmission network. The forum also explored possible themes for the development of load forecast scenarios. The information provided as a result of this forum has supported the development of this TAPR load forecast and is detailed further in Chapter 2 and Appendix B.

## North Queensland Area Plan Forum

Powerlink also hosted a North Queensland Area Plan Forum in April 2017. Held in Townsville, the forum provided the opportunity for Powerlink to gather strategic input from local stakeholders on views and factors to consider when planning reinvestment in the North Queensland transmission network. Forum participants workshopped the factors that have the potential to impact Powerlink's network in the next 10 years, as well as the key drivers Powerlink should consider when assessing network or non-network solutions for the region. Feedback received will assist with guiding future planning and investment decisions.

## Future Transmission Network webinar

The Future Transmission Network webinar was held in May 2017 for non-network providers. This was the first in a series of webinars intended to inform non-network providers and other stakeholders unfamiliar with Powerlink's transmission network, with an overview of the history, characteristics, most recent understanding of asset condition and ongoing requirements of the transmission network. It is anticipated that the provision and exchange of early information through engagement activities such as this will generate more opportunities for interactions with non-network providers during formal or informal consultation processes.

More information on Powerlink's stakeholder engagement activities is available on our [website](#).

### 1.8.2 Non-network solutions

Powerlink has established processes for engaging with stakeholders for the provision of non-network services in accordance with the requirements of the NER. These engagement processes centre on publishing relevant information on the need and scope of viable non-network solutions to emerging network limitations. For a given network limitation, the viability and specification of non-network solutions are first introduced in the TAPR. Further opportunities are then explored in the consultation and stakeholder engagement processes undertaken as part of any subsequent RIT-T.

In the past, these processes have been successful in delivering non-network solutions to emerging network limitations. As early as 2002, Powerlink engaged generation units in North Queensland to maintain reliability of supply and defer transmission projects between central and northern Queensland. More recently Powerlink entered into network support services as part of the solution to address emerging limitations in the Bowen Basin area which have now ended. This is outlined in Section 4.2.

Powerlink is committed to the ongoing development of its non-network engagement processes and where possible and economically viable, expand the use of non-network solutions:

- to address future network limitations within the transmission network or
- more broadly, in combination with network developments as part of an integrated solution to complement an overall network reconfiguration strategy.

In August 2016, Powerlink concluded the first Non-network Solution Feasibility Study<sup>5</sup> with a focus on further improving consultation with non-network providers and seeking potential alternate solutions for network developments (augmentations and reinvestments) which fall outside of NER consultation requirements. In particular, where technically feasible, the Non-network Solution Feasibility Study process is intended to be applied to augmentations which are below the RIT-T cost threshold of \$6 million and to further explore the potential to expand the use of non-network solutions in relation to network reinvestments which currently do not require RIT-T consultation. This process will assist in achieving the right balance between the reliability and cost of transmission services by providing a mechanism to exchange early information on the viability and potential of non-network solutions and how they may be utilised to integrate with the transmission network to meet current and future capacity needs. Powerlink will also continue to request non-network solutions from market participants as part of the RIT-T process defined in the NER.

---

<sup>5</sup> Refer to [Powerlink's website](#).

Feedback received from non-network providers during 2016 indicated that the propose/respond model of the Non-network Solution Feasibility Study, while beneficial, could be further enhanced by:

- the provision of very early advice of possible non-network opportunities outside of a defined process
- ensuring that any process implemented was iterative in nature.

As mentioned in Section 1.8.2, a Future Transmission Network webinar was held in May 2017 for non-network providers. Future webinars will also focus on transmission assets approaching their anticipated end of technical or economic life in the medium to longer term in order to share our most up-to-date information with non-network providers as early as possible. The information provided is indicative only and provided in good faith, as confirmation of the investment need and any potential solutions (network and non-network) are tested robustly closer to the anticipated end of technical or economic life of the asset.

Since publication of the 2016 TAPR, Powerlink has continued its collaboration with the Institute for Sustainable Futures<sup>6</sup> and other Network Service Providers regarding the Network Opportunity Mapping project. This project aims to provide enhanced information to market participants on network constraints and the opportunities for demand side solutions. These collaborations further demonstrate Powerlink's commitment to using a variety of platforms to broaden stakeholder awareness regarding possible commercial opportunities for non-network solutions and provide technical information which historically has only been discussed in the TAPR.

The Non-network Solution Feasibility Study process, in conjunction with the publicly available data provided via the Network Opportunities Mapping project and informal information sessions such as the Future Transmission Network webinar, responds to previous feedback Powerlink has received from a number of stakeholders about the need to provide enhanced and earlier information on the potential value and timing of non-network solutions.

#### **Non-network Engagement Stakeholder Register**

In 2014 Powerlink established the Non-network Engagement Stakeholder Register (NNESR) to give non-network providers the details of emerging network limitations and other future transmission network needs which may have the potential for non-network solutions. The NNESR is comprised of a variety of interested stakeholders who have the potential to offer network support through existing and/or new generation or demand side management initiatives (either as individual providers or aggregators).

The NNESR was introduced to serve as a communication tool to achieve the following outcomes:

- leveraging off the knowledge of participants to seek input on process enhancements that Powerlink can adopt to increase the potential uptake of non-network solutions
- to provide interested parties with information prior to the commencement of formal public consultation as part of the RIT-T
- in relation to other augmentation network investments which may fall outside of NER consultation requirements
- with respect to network reinvestments which may have the potential to use non-network solutions.

Potential non-network providers are encouraged to register their interest in writing to [networkassessments@powerlink.com.au](mailto:networkassessments@powerlink.com.au) to become a member of Powerlink's NNESR.

---

<sup>6</sup> Information available at [Network Opportunity Mapping](#)

## **1.8.3 Focus on continuous improvement**

As part of Powerlink's commitment to continuous improvement, the 2017 TAPR focuses on an integrated approach to future network development and contains detailed discussion on key areas of future expenditure.

In conjunction with condition assessments and risk identification, as assets approach their anticipated replacement dates, possible reinvestment alternatives undergo detailed planning studies to confirm alignment with future reinvestment and optimisation strategies. These studies have the potential to deliver new information and may provide Powerlink with an opportunity to:

- improve and further refine options under consideration or
- consider other options from those originally identified which may deliver a greater benefit to stakeholders.

Information regarding possible reinvestment alternatives is updated annually within the TAPR and includes discussion on the latest information as planning studies mature.

The 2017 TAPR:

- continues the discussion on the potential for generation developments (in particular VRE generation) first introduced in 2016 (refer to Chapter 7)
- includes updated information on Powerlink's approach to assisting the development of non-network solutions – specifically, through the ongoing improvement of engagement practices for non-network solution providers and provision of information (refer to Section 1.81 and Section 4.2).