# Non-network solutions



04

# 04. Non-network solutions

*The use of non-network solutions is essential to provide safe, reliable and cost-effective transmission services for customers. This chapter discusses Powerlink's approach and process for engaging with non-network solution providers and provides a summary of potential non-network solution opportunities anticipated to become available over the next five years.*

## Key highlights

- Non-network solutions can assist to address network needs such as inertia, system strength, network support and control ancillary services (NSCAS) and voltage control.
- Non-network solutions, in part or in full, may also contribute to a network development strategy by maintaining a balance between reliability and the cost of transmission services for customers.
- Interested parties are encouraged to contact NetworkAssessments@powerlink.com.au to discuss non-network solutions, and/or to become a member of Powerlink's Non-network Engagement Stakeholder Register.

## 4.1 Introduction

Non-network solutions can assist to address network needs such as inertia, system strength, NSCAS and voltage control. In the past, Powerlink has implemented a range of non-network solutions in various areas in Queensland to assist, support or augment the power transfer capability of the high voltage transmission network.

More recently, Powerlink has entered into agreements for reactive power support in Southern Queensland, and for system strength services in Northern Queensland. Powerlink is also negotiating with a number of proponents of non-network solutions to address system strength requirements in Queensland from December 2025[1].

This chapter discusses Powerlink's approach and process for engaging with non-network solution providers, and identifies potential non-network solution opportunities anticipated to become available over the next five years[2].

## 4.2 Increasing opportunities for 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 National Electricity Rules (NER). For a given network limitation or potential asset replacement, the viability and an indicative specification of non-network solutions are first introduced in the Transmission Annual Planning Report (TAPR) and TAPR Templates. As the identified need date approaches and detailed planning analysis is undertaken, further opportunities are explored in the consultation and stakeholder engagement processes undertaken as part of the Regulatory Investment Test for Transmission (RIT-T).

Powerlink is committed to genuine engagement with providers of non-network solutions and the implementation of these solutions where technically feasible and economic to:

- address inertia, system strength, voltage control and NSCAS requirements
- address future network limitations or address the risks arising from ageing assets remaining in-service within the transmission network
- complement network developments as part of an integrated solution to deliver an overall network development strategy
- provide demand management and load balancing.

Potential non-network solution opportunities within the next five years are described in Table 4.1.

## 4.3 Non-network Engagement Stakeholder Register

Powerlink uses a Non-network Engagement Stakeholder Register to convey the details of potential non-network solution opportunities directly to non-network solution providers. The register is comprised of a variety of interested stakeholders who have the potential to offer network support and/or system security services through alternate technologies, existing and/or new generation or demand side management initiatives (either as individual providers or aggregators).

More information on potential non-network solutions is available on Powerlink's website, including details regarding current RIT-T consultations and Powerlink's Network Support Contracting Framework.

Interested parties are encouraged to contact NetworkAssessments@powerlink.com.au to become a member of the register.

1 Refer Chapter 3 for detail on Powerlink's role as System Strength Service Provider for Queensland.
2 National Electricity Rules (NER), clauses 5.12.1(b)(6) and 5.12.2(c)(5)(vi).

Table 4.1 Potential non-network solution opportunities within the next five years

| Potential project | Indicative cost ($million (m)) (1) | Zone | Indicative non-network requirement | Possible commissioning date | TAPR Reference |
|---|---|---|---|---|---|
| **Substation - transformers** | | | | | |
| Full replacement of secondary systems associated with the static VAr compensator (SVC) at Strathmore | $24m | North | Potential non-network solutions would need to provide dynamic voltage support of up to 260 megavolt-amperes reactive (MVAr) capacitive and 80MVArs inductive. | December 2029 | Section 5.5.3 |
| Replacement of the existing 275/110kV transformer at South Pine | $16m | Moreton | Potential non-network options would need to provide supply to north Brisbane load area of up to 165 megawatts (MW) at peak demand times and up to 1,350 megawatt hours (MWh) a day. | June 2030 | Section 5.7.5 |
| Replacement of the existing 110/33/11kV transformer at Tennyson | $11m | Moreton | Potential non-network options would need to provide supply to the Tennyson area of up to 190MW at peak demand times and up to 2,000MWh a day. | June 2028 | Section 5.7.5 |
| Replacement of the secondary systems, thyristor valve control systems, and cooling control systems for the SVC installed at Greenbank Substation | $23m | Moreton | Potential non-network options would need to provide voltage control and stability services for the transmission network within the greater south-east Brisbane area, and provide stability and power system dampening services more broadly for the high voltage transmission network. | June 2030 | Section 5.7.5 |

Note:

(1) Indicative cost is for the most likely network option.