Introduction

01

Powerlink's annual planning review and Transmission Annual Planning Report (TAPR) are central to ensuring the Queensland transmission network continues to meet the needs of customers and National Electricity Market (NEM) participants into the future. This chapter outlines Powerlink's planning obligations and role in Queensland's power supply industry.

Key highlights

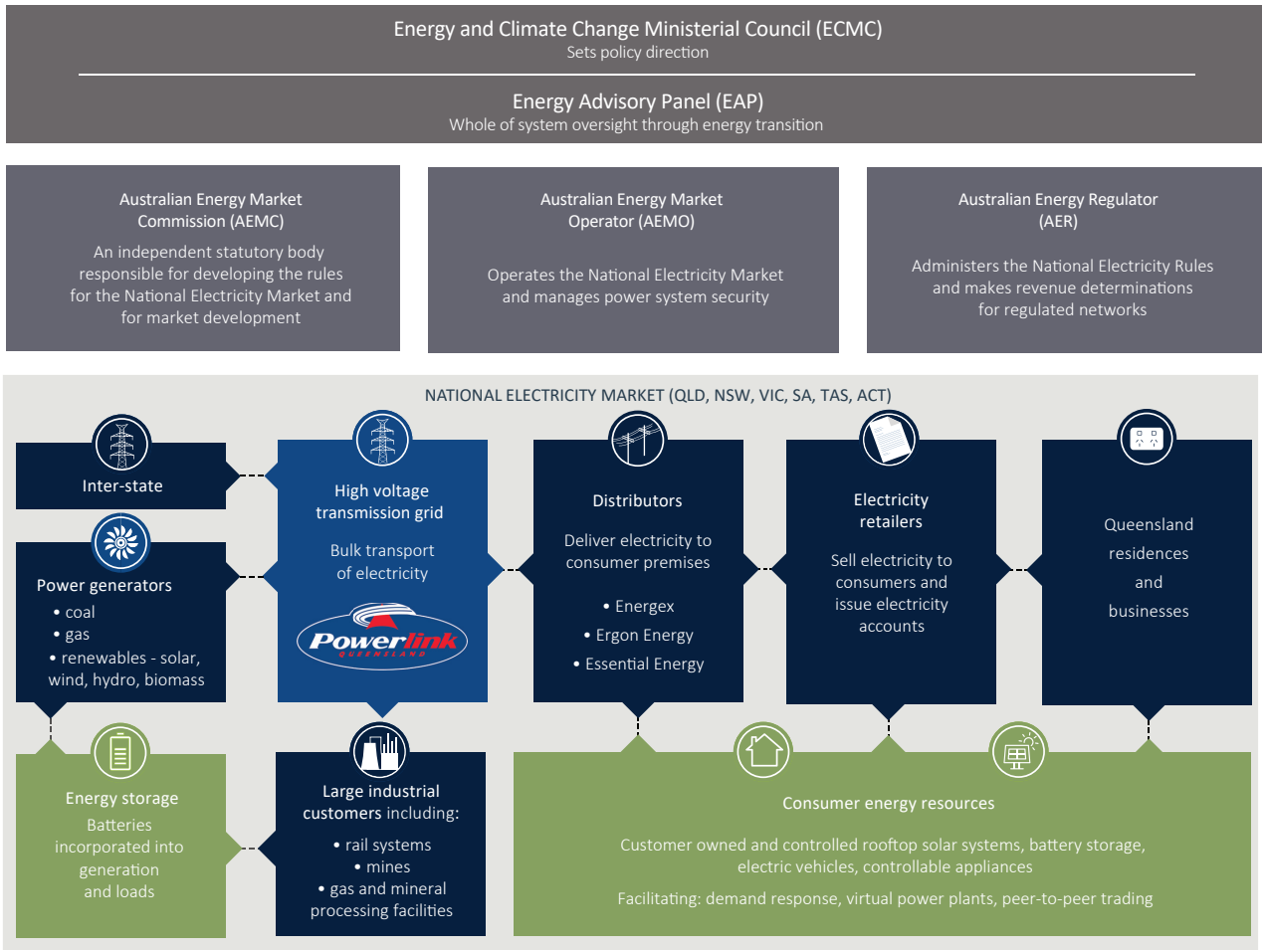
- Powerlink owns, develops, operates and maintains the high voltage electricity transmission network in Queensland, which provides electricity to more than five million Queenslanders and 241,000 businesses.
- The TAPR provides information about the Queensland transmission network, including key areas forecast to require investment in the 10-year outlook period.
- Powerlink is committed to effective, targeted engagement with customers, communities, First Nations Peoples and other stakeholders to share information on activities and use feedback received to improve decision making.

1.1 Powerlink's role in Queensland's power supply

Powerlink owns, develops, operates and maintains Queensland's high voltage electricity transmission network. The network extends from Cairns to the New South Wales (NSW) border and comprises 15,559 circuit kilometres (km) of lines and 154 substations and provides electricity to more than five million Queenslanders and 241,000 businesses.

Powerlink connects large generators to end use customers through the distribution networks owned by Energex and Ergon Energy (part of the Energy Queensland Group), and Essential Energy (in northern NSW), and provides electricity directly to large industrial customers such as rail companies, mines and mineral processing facilities.

Figure 1.1 Powerlink's role in the Queensland power supply industry



1.2 Purpose of the TAPR

The purpose of Powerlink's TAPR is to provide information about the Queensland transmission network to those interested or involved in the NEM. The TAPR also provides customers, communities and other stakeholders with an overview of Powerlink's planning processes and decision making on future investment.

Readers should note this document and supporting TAPR Templates and TAPR Portal are not intended to be relied upon explicitly for the evaluation of customer investment decisions. Interested parties are encouraged to contact Powerlink directly for more detailed information[1].

1.3 Context of the TAPR

Powerlink undertakes an annual planning review in accordance with the requirements of the National Electricity Rules (NER) and publishes the findings of this review in the TAPR, and associated templates made available in the TAPR Portal[2].

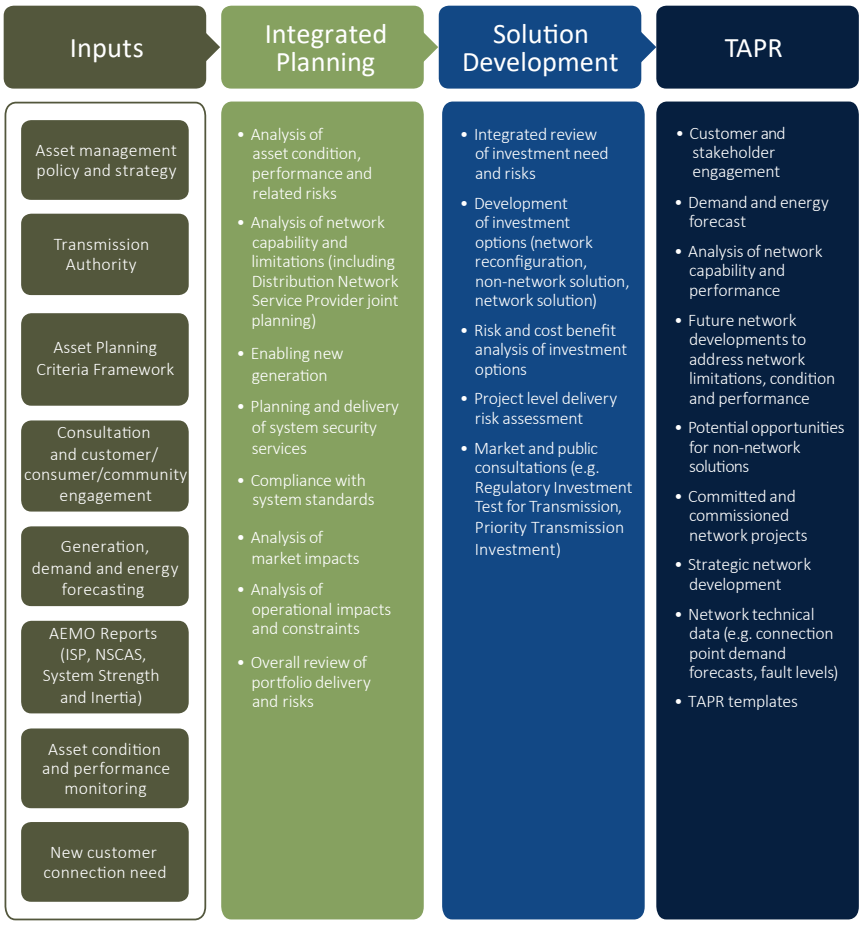
Powerlink provides information from its annual planning reviews to the Australian Energy Market Operator (AEMO) to assist in the preparation of its Integrated System Plan (ISP). The ISP sets out an essential infrastructure plan for the eastern and south-eastern seaboard's power system over the next two decades. The ISP identifies actionable and future projects requiring regulatory consultation, and informs market participants, investors, policy makers and customers about a range of potential future development opportunities.

1.4 Powerlink's planning obligations and process

1.4.1 Overview

An overview of Powerlink's TAPR planning process is presented in Figure 1.2.

Figure 1.2 Overview of Powerlink's TAPR planning process



Detail on Powerlink's planning criteria, responsibilities and processes is available in Appendix A.

1 Unless stated otherwise, the information published in the 2025 TAPR is current as at 30 September 2025.
2 National Electricity Rules (NER), rule 5.12. For Powerlink's 2025 TAPR, Version 231 (effective 1 July 2025) of the NER has been applied.

1.5 Overview of network connections

Interest in new transmission network connections in Queensland continues to grow.

1.5.1 Summary of connection projects

Table 1.1 provides an overview of the development of connection projects undertaken or being undertaken by Powerlink since 2017.

Table 1.1 Summary of connection projects

Projects	2025 TAPR Status	
Total completed to date	34	6,736MW
Under construction	9	2,660MW
Current connection applications	103	42,368MW

Notes:

(1) MW denotes megawatts.

(2) To date Powerlink has completed eight storage projects, totalling 3,190 megawatt hours (MWh) of energy storage and a further 4,935MWh are under construction.

1.5.2 Status of connection projects

Since 2017, Powerlink has completed connection of 34 large-scale solar, wind farm and Battery Energy Storage System (BESS) projects in Queensland, adding 6,736MW of generation capacity to the grid. A significant number of formal connection applications, totalling 42,368MW of new generation and storage capacity, have been received and are at varying stages of progress.

During 2024/25, 1,027MW[3] of semi-scheduled generation capacity has been committed in the Queensland region.

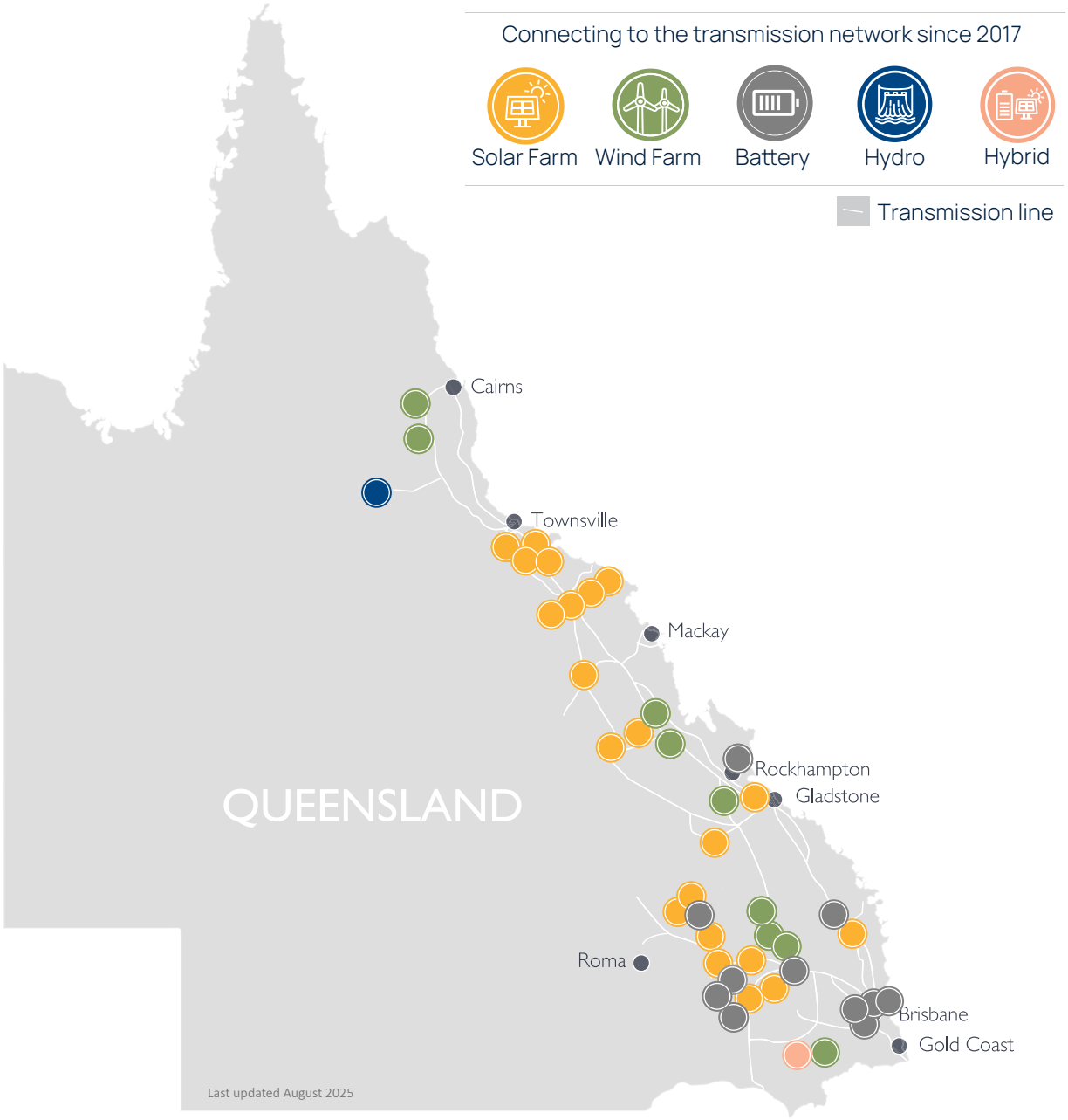
Approximately 1,494MW of embedded semi-scheduled generation projects exist or are committed to Energy Queensland's network. In addition to the large-scale generation development projects, rooftop solar photovoltaic (PV) in Queensland exceeded 7,200MW in June 2025.

Figure 1.3 shows the location and type of generators connected and committed to connect to Powerlink's network[4].

[3] Comprised of Aldoga Solar Farm, Punchs Creek Solar Farm and Wandoan Solar Farm Stage 2 (Powerlink).

[4] Refer to Table 6.1 for the available generation capacity of power stations connected or committed to be connected to Powerlink's transmission network.

Figure 1.3 Existing and committed connection projects since 2017



1.6 Connecting to our network

1.6.1 The connections process

Participants wishing to connect to the Queensland transmission network include new and existing generators, storage, major loads and other Network Service Providers (NSPs). New connections or alterations to existing connections requires Powerlink and the connecting party to negotiate an Offer to Connect and Connection and Access Agreement (CAA), and the specification and compliance of the generator or load to the required technical standards. The process of agreeing to technical standards also involves AEMO. The services provided can be prescribed for Distribution NSPs (regulated), negotiated or non-regulated services in accordance with the definitions in the NER or the framework for provision of such services.

While the pipeline of connection projects far exceeds the expected requirements for the next 10 years, not all projects will meet their financial investment decision timeframes. For example, there are 12 projects for which Powerlink has completed Generator Performance Standards assessments since December 2023 that are yet to reach committed status. For the significant majority of these projects, the delays are due to factors outside Powerlink's control.

1.6.2 Categories of connection assets

Dedicated Connection Assets

All new Dedicated Connection Asset (DCA) services, including design, construction, ownership, and operation and maintenance are non-regulated services.

Identified User Shared Assets

Identified User Shared Asset (IUSA) services are either negotiated or non-regulated services, depending on specific requirements set out in Chapter 5 of the NER. Powerlink remains accountable for operation and maintenance of all IUSAs as part of the transmission network.

Designated Network Assets

Designated Network Assets (DNA) include radial transmission extensions greater than 30km in length. Unlike DCAs, DNAs are part of the transmission network, with design, construction, and ownership as non-regulated services. Powerlink remains accountable for the operation and maintenance of all DNAs[5].

Powerlink remains committed to transparent and efficient connection services and will continue to work collaboratively with market participants and interested parties to better understand the potential for new generation and load connections, and to identify opportunities and emerging limitations as they occur. The NER (rule 5.3) prescribes procedures and processes that NSPs must apply when dealing with connection enquiries.

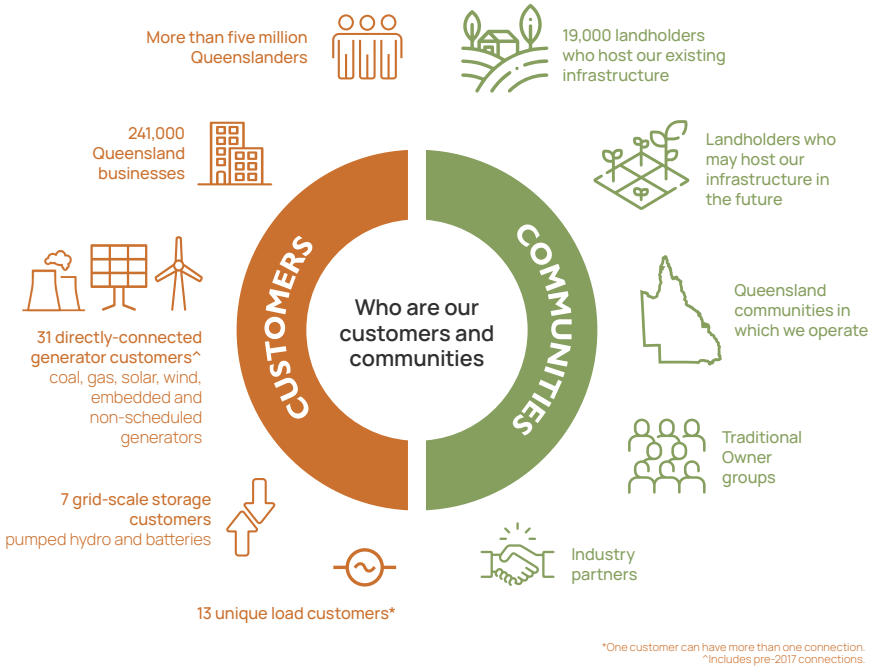
Figure 1.4: Overview of Powerlink's existing network connection process

Proponents who wish to connect to Powerlink's transmission network are encouraged to contact connections@powerlink.com.au. For further information on Powerlink's network connection process refer to Powerlink's website.

1.7 Customer, stakeholder and community engagement

Powerlink is committed to effective, targeted engagement with customers, communities, First Nations Peoples and other stakeholders to share information on activities and use feedback received to improve decision making.

Figure 1.5 Powerlink's customers and communities



There are also stakeholders who provide Powerlink with non-network solutions that can either connect directly to Powerlink's transmission network, or to the distribution network.

[5] Refer to Appendix J for information about which parts of Powerlink's transmission network are DNAs.

Engagement activities

Powerlink's engagement activities are undertaken in accordance with our Stakeholder Engagement Framework and Community Engagement Approach, which set out the principles, objectives and outcomes Powerlink seeks to achieve in our interactions with stakeholders and the broader communities in which we operate. A number of key performance indicators are used to monitor progress towards achieving Powerlink's stakeholder engagement goals. In particular, Powerlink undertakes a comprehensive stakeholder survey to gain insights about stakeholder perceptions of Powerlink, including key factors driving trust and reputation. Most recently completed in August 2025, the survey provides comparisons and year on year trends to inform engagement strategies with stakeholders. More detailed information on Powerlink's engagement activities is available on the Powerlink website.

Community engagement

Engaging with communities is essential to providing transmission services that are safe, reliable and cost-effective. Transmission infrastructure typically stays in service for over 50 years and Powerlink is focused on building positive relationships and partnering with local communities to deliver benefits for the longer term. First developed in 2021, the Community Engagement Approach was refreshed in 2025 to continue driving best-practice engagement and generating lasting benefits for communities. The focus of Powerlink's engagement has not changed – engaging early and often, particularly with communities where Powerlink is building new infrastructure and connecting renewable development projects.

Powerlink also undertook targeted community sentiment research in key areas of the state to gauge community acceptability of renewable development and related transmission infrastructure. The research showed that trust and acceptance had declined modestly on the previous year, and that declining trust reflected challenges in the local value proposition of renewable development for communities[6]. The research findings support Powerlink's future engagement and ensure an ongoing focus on what is important to communities, who remain front and centre in our planning and decision making.

Targeted external engagement

In November 2024, more than 600 customers attended (in person and virtually) Powerlink's annual Transmission Network Forum. The forum provided updates on the state of the network, discussion on project work in Central Queensland and a technical session on the 2024 TAPR. The live stream recordings, presentations, questions and answers are available on Powerlink's website.

In August 2025, more than 100 people attended Powerlink's first regional Transmission Network Forum, held in Gladstone. The forum brought together government, industry and community representatives to discuss the important role that Central Queensland will play in the state's future power system.

Customer Panel

Powerlink hosts a Customer Panel that provides an interactive forum for its stakeholders and customers to give input and feedback to Powerlink regarding decision making, processes and methodologies. The panel comprises members from a range of sectors including industry associations, community advocacy groups, directly connected customers and distribution representatives. It also provides an important channel for Powerlink to keep stakeholders informed about operational and strategic topics of relevance and, most importantly, provides an avenue for their insights on particular activities. The panel met in September 2024, and in April and July 2025, to consider key topics of interest. Members of the Customer Panel also offered their time to be part of Powerlink's new Revenue Proposal Reference Group, as well as an expert panel on the Gladstone Project Priority Transmission Investment (PTI).

Stakeholder engagement for public consultation processes

Powerlink recognises the importance of transparency for stakeholders and customers, particularly when undertaking transmission network planning and engaging in public consultation processes, such as the Regulatory Investment Test for Transmission (RIT-T) or a PTI.

Powerlink is guided by the Australian Energy Regulator (AER) Stakeholder Engagement Framework and Consumer Engagement Guideline for Network Service Providers as the benchmarks when undertaking public consultations.

Since publication of the 2024 TAPR, to ensure transparency and that customers remain up to date with the most recent developments, Powerlink has also held webinars on topics such as transmission network planning and addressing system strength requirements. Webinar recordings and presentations are available on Powerlink's website.

[6] Trust dropped from 3.1 (in a 1-5 range) two years ago to 2.9 in 2024. Similarly, acceptance slipped from 3.2 down to 2.9. These shifts are considered statistically important in terms of sentiment towards Powerlink.