

Foreword

Network planning has never been as complex and important as it is now. The widening of the gap between minimum and maximum demand, changes in the mix of energy generation and the delivery of system security services are just some of the challenges Powerlink continues to address as the energy system evolves.

Our Transmission Annual Planning Report (TAPR) connects the technical complexities of planning to the changing energy landscape, and is central to our commitment to provide safe, reliable and cost-effective electricity services to our customers. This year's TAPR outlines how we are updating our investment planning to enable the Queensland Energy Roadmap and our Revenue Proposal for the 2027-32 period, to align to the Australian Energy Market Operator's (AEMO) 2026 Integrated System Plan (ISP), and to deliver important programs of work.

Energy and Demand

Powerlink's 2026 forecasts continue to show a long-term increase in both electricity consumption and network demand, reflecting Queensland's growing economy and the continued electrification of homes, businesses and industry. These forecasts form an important foundation for Powerlink's forward planning and investment assessments and are used throughout the TAPR to evaluate future network performance, emerging challenges and potential development pathways for the transmission network.

Central Queensland

Central Queensland is essential to Queensland's energy and economic future, and the Gladstone Project will strengthen the region's electricity network ahead of the potential closure of the Gladstone Power Station in March 2029. The Gladstone Project has been declared a Priority Transmission Investment (PTI), as notified in the Queensland Government Gazette in August 2026. Following this declaration, Powerlink was issued PTI directions, facilitating the project's construction. Comprising two stages of work, Stage 1, construction of a new 275 kilovolt (kV) line from Calvale to Calliope River, is to be completed by March 2029. Stage 2 includes establishing a new Gladstone West Substation by June 2029 and construction of a new 275kV line from Bouldercombe to Gladstone West by August 2030.

We are also replacing the system security services provided by the Gladstone Power Station. In March we signed an agreement with Hitachi Energy to supply and install four synchronous condensers in Central Queensland by 2029 to provide system strength and maintain power system stability and inertia.

Actionable ISP projects

The 2026 ISP included two new actionable ISP projects for Queensland; Central to North Queensland Reinforcement (Stage 1), and Brisbane Area 275kV Reinforcement. These projects aim to increase transmission network capability and enable new generation to connect to the network. Project Assessment Draft Reports for both needs are due in June 2028, and we are assessing the costs and benefits of options to deliver projects to maximise value for customers.

Engagement

Powerlink is committed to effective early engagement with customers, communities, First Nations Peoples and other stakeholders to share information and use feedback received to improve decision-making. Maintaining and building social licence, and giving regional communities who host transmission infrastructure a voice, is fundamental to delivering safe, reliable and cost-effective electricity. More than 500 stakeholders attended Powerlink's annual Transmission Network Forum in November 2025, and over 200 people attended our second regional Transmission Network Forum in Gladstone in August 2026. These forums provide valuable opportunities for Powerlink to exchange insights with industry, government and community stakeholders to improve our planning of the network.

By strengthening and increasing the capacity of our transmission network, Powerlink is ensuring a resilient supply of electricity to deliver wider economic benefits, meet future industrial energy needs and attract new businesses to Queensland.

Powerlink is actively working with customers and stakeholders in response to new planning laws, introduced by the Crisafulli Government in 2025. The new requirements make solar and wind farms impact assessable, create a stronger role and decision-making for local government in the assessment process and strengthen social licence across renewable energy developments, ensuring communities affected by projects have a meaningful say.

TAPR Enhancements

Powerlink has made several enhancements to the TAPR Portal to improve the user experience and general navigation. Historical feeder flow data has been added to the portal, allowing the market to conduct more informed preliminary self-assessments of project concepts and potential network connections. Our future network investment opportunities are also visualised in region-based maps as a summary snapshot of key projects in the region.

Network connections

Powerlink has completed connection of 41 new generation and battery energy storage system (BESS) projects in Queensland, adding 9,242 megawatts (MW) of generation and storage capacity to the grid since 2017. A further 45,630MW of connection enquiries and applications for new generation and storage capacity have been received and are at varying stages of progress. We have also seen a significant increase in interest over the last six months to connect data centres to the Powerlink network.

Managing this scale of demand requires careful planning, streamlined processes, and ongoing engagement with proponents to ensure timely, cost-effective delivery of new connections that meet customer and market needs.

We are committed to transparent and efficient connection services and continue to work collaboratively with market participants and interested parties to better understand the potential for new generation and load connections. In July 2026, a Connections Guarantee was introduced for Powerlink, which focuses on our connection application performance for large-scale generation, storage and loads. The Connections Guarantee will enable greater transparency of the work Powerlink is doing to help customers connecting, or wanting to connect, to our network.

In addition to completing new connection assets, Powerlink supported 26 projects to reach a new or altered Generator Performance Standard agreement with AEMO in the last 12 months.

Looking Ahead

Powerlink's approach to asset management, investment planning and timing is driven on a principle of prudent investment and innovation to prepare Queensland's network for the opportunities and challenges ahead.

We remain focused on building a resilient, future-ready transmission network that supports Queensland's energy future and delivers lasting value for our customers, communities and the state.

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