Business narrative to support Powerlink's 2023-27 Revenue Proposal

Purpose

This business narrative has been developed to provide a broader context to Powerlink's 2023-27 Revenue Proposal, including our long-term view about our operations, challenges and opportunities and how we plan to deliver better value for our customers. It is informed by a range of different internal and external plans and strategies, as well as our 30 Year Network Vision.

The pace and complexity of change within the energy sector has increased in recent years and we need to ensure that we are putting in place measures to adapt and be flexible within this increasingly uncertain operating environment.

Changes are occurring across a range of different key drivers that will influence our 2023-27 Revenue Proposal, such as:

- Customers
- Network
- Regulatory and policy
- Financial and economic
- Technology
- Resource capability and capacity.

A brief introduction about our Mission and Vision, the objectives of the 2023-27 Revenue Proposal and outcomes from Powerlink's previous Revenue Determination is also included for context.

Our mission and vision

For more than 50 years Powerlink, and our predecessor companies, have kept the lights on to homes, businesses and industry in Queensland.

As owner and operator of the transmission system in Queensland, we know we have an important responsibility to provide safe, cost-effective and reliable power to more than four million Queenslanders.

We work to drive outcomes that meet our mission to ***enrich lifestyles and power economic growth through electricity transmission and associated solutions*** and our vision to ***be innovative and customer focused with a stronger business and reputation***.

Our Mission recognises the key role that Powerlink plays for the Queensland economy and the importance of reliable and affordable electricity for customers. Our Vision shows our commitment to being a customer focused organisation that will strive to deliver better outcomes through innovation.

These statements are our strategic compass as a business and guide everything we do.

2023-27 Revenue Proposal and 2018-22 Revenue Determination

2018-22 Revenue Determination outcomes
Powerlink's contribution to the average household electricity bill reduced by a third from the 1 July 2017, due to: • Capital expenditure reduced by 35% (or $459m*) compared to actual capital expenditure in the previous regulatory period. • Operating expenditure reduced by 7% (or $63m*) compared to actual operating expenditure in the previous regulatory period. • Maximum Allowed Revenue (MAR) reduced by 24% or $1.15bn[1] • Rate of return reduced from 8.61% to ~6%.

2023-27 Revenue Proposal objectives
• Deliver a Revenue Proposal that is capable of acceptance by our customers, the Australian Energy Regulator (AER) and Powerlink. • Balance the needs for appropriate expenditure to manage the network, a reasonable price for customers and appropriate returns to shareholders. • Meaningfully engage with our customers and stakeholders. • Ensure the Network Vision is considered within determination forecasts and plans. • Improve efficiency and robustness of determination process for Powerlink, customers, stakeholders and the AER.

Customer drivers

Engagement

Our engagement goal is to build a culture of trust, empowerment, accountability and customer focus, internally and with our external customers. We have a dedicated Customer Strategy to help drive a customer-centric culture.

Our organisation is shifting from a 'technical' organisation to a 'learning' organisation, with greater importance placed on how we engage with our customers to gain insights and improve our decision making.

We aim to build relationships with customers connected directly to the transmission network, through a dedicated team that manages those relationships and works to meet those customers' needs.

Our relationships with households and small business (our indirect customers) have traditionally been less visible due to our position in the energy system behind retailers and the distribution networks. We are working hard to increase the level of customer involvement in our business, through important business-as-usual activities such as our Customer Panel, Transmission Network Forum, webinars and other engagement forums.

We are also a foundation signatory to the Energy Charter and recently published our first Energy Charter Disclosure Statement. The Energy Charter has seen businesses across the energy supply chain come together and commit to a disclosure framework to deliver a more affordable, reliable and sustainable energy system. We are also committed to working across the sector on a range of

[1] *Figures in $16/17.*

"Better Together" initiatives, which are intended to improve customer service across the energy supply chain.

Affordability

The cost of electricity remains a key concern for customers. Customers expect us to do what we can to place downward pressure on prices and deliver value for money, including through our Revenue Proposal process.

We have an ongoing focus to ensure that regulated assets are effectively and efficiently managed and that our Revenue Proposal only requests prudent and efficient expenditure that is necessary to meet the future needs of the electricity network. We expect and welcome input from our customers and the AER throughout the Revenue Proposal process to ensure that we have a proposal that is capable of acceptance..

This will ensure long-term affordability and value for customers, represented through appropriate investment decisions.

Network drivers

Evolution and change in the network

Customer uptake of rooftop solar and growth in large-scale renewable generation has changed how the transmission network operates. Since 2016, more than 1,600MW of renewable generation capacity has been added to the transmission network alone.

These changes create challenges in the operation of the network, such as the increased constrained network flow from Central Queensland to Southern Queensland and system strength impacts, particularly in North Queensland. We are working with proponents, suppliers, AEMO and our customers to identify, understand and appropriately respond to these challenges.

Our 30 year Network Vision is helping us plan for and navigate changes that may occur and outlines a range of potential scenarios for the energy sector. We developed the Network Vision, with input from customers, stakeholders and energy industry experts, to provide a long-term view across a range of plausible scenarios and understand what services future customers will value.

This long-term view will help us be informed on how to develop the future network with customers interests front of mind. For example, in the future, development and uptake of battery storage, electric vehicles and hydrogen production technology will impact the network. Although the exact timing and impact of these evolving technologies on the network is uncertain and creates greater complexity, we need to consider these future needs as part of our long-term investment decision-making.

The network of the future will need to achieve a balance between customer needs, generation diversity, batteries and storage solutions, demand management and greater interconnection. We see our role in the future as being a platform to enable the provision of these, and many other, energy services for customers.

Demand and energy

Solar and renewable uptake is also driving changes to our demand and energy patterns. Our Transmission Annual Planning Report (TAPR) provides detailed information about key factors that impact network development and operations. This includes our 10-year demand and energy forecast, which is an important consideration when determining network expenditure that may be required.

In February 2019, a new demand record of 10,044MW was set on the transmission network. Maximum demand growth is expected to grow at an average annual rate of 0.5% over the next ten years (based on a medium economic outlook). There is also a trend of a shorter, but higher, maximum demand later during the day. This trend creates challenges for how we plan and develop the network in the future, as we want to ensure we do not augment the network to meet demand levels for a few hours a day, on only a few days a year.

Another emerging issue for the power system which we are considering is how to best manage minimum demand levels. Demand patterns resulting from a range of factors including large scale PV generation and rooftop PV are driving demand levels during the day to levels (approx. 3,500MW or lower) that impacts on the capacity for baseload generation through the day, but still requires significant peak period generation to meet demand.

Conversely, delivered energy is expected to decline at an average annual rate of 0.7% over the next 10 years, primarily due to a current and proposed future solar and wind farms connecting directly to the distribution networks. Reduced energy delivered across our network can increase customer prices, due to the cost of our network being shared among a smaller number of customers.

We are considering a range of options to address the potential short and long-term issues presented by declining energy consumption and minimum system demand. For example, to respond to declining energy, we are investigating better pricing signals and, in collaboration with Energy Queensland, how to ensure appropriate timing of charging of electric vehicles.

Network investment

A significant portion of Powerlink's assets were built between the 1960s and 1980s. This includes an intense period of interconnection over a four year period between 1978 and 1981, during which 20 per cent of Queensland's transmission towers were constructed. Many of these transmission line assets, and other assets, are approaching the end of technical service life.

This means that, in line with our asset age profile, the bulk of the capital spend in our current regulatory period and into the next ten years, is on reinvestment – i.e. works to extend service life. As part of our reinvestment works, we look at alternatives such as non-network solutions, decommissioning and other reinvestment opportunities that provide better customer value.

Future investment may also be driven by a need for greater interconnection between Queensland and other NEM states. This is a focus of AEMO's 2020 Actionable Integrated System Plan, which highlights the potential need for further expansion of the transfer capacity on the interconnector between Queensland and New South Wales.

We will continue to ensure robust assessment and analysis of all potential investments, that appropriate customer protections are put in place and that risks (and costs) are placed with those who can best manage them.

Regulatory and policy drivers

Regulation

Our regulatory environment is also changing significantly. Key consultations underway include Transmission Ring Fencing, the Coordination of Generation and Transmission Investment (COGATI) reforms and the Energy Security Board Post 2025 Market Design.

The outcomes of these regulatory reforms could have material impacts on our operations, such as formal or legal separation of regulated and non-regulated activities, changes to funding models for future network investment and the way revenue is collected.

We proactively provide input into these processes from a transmission perspective, however the outcome will be determined by the various bodies involved. We will implement the necessary changes as required.

Within the context of the Revenue Proposal, we are discussing with our customers and the AER how the regulatory framework can enable better consideration of uncertainty. For example, we are interested in exploring the concept of contingent replacement projects for those projects that have a degree of uncertainty related to investment and needs.

Government policy

Government energy policies such as the Queensland Government's 50% Renewable Energy Target (RET) and Powering Queensland Plan, and the Federal Government's Fair Deal on Energy policy, establish broad frameworks which can have important implications for market participants and customers.

As a Government Owned Corporation, Powerlink must also be responsive to any specific requirements and policy settings of its shareholder, the Queensland Government.

Economic and financial drivers

In its recent Mid-Year Economic and Financial Review (MYEFR), the Queensland Government noted that international and national economic conditions have weakened recently, with Gross Domestic Product (GDP) growth slowing to its lowest rate since the Global Financial Crisis (GFC). Queensland's short-term economic growth outlook is 2.5% (2019-20) and 2.75% (2020-21). Economic growth factors are an important consideration in Powerlink's forecast of flat electricity demand growth.

From a financial perspective, Australia is in an extended period of low inflation and low Government bond rates, both of which are key factors that impact Powerlink's Rate of Return, Maximum Allowed Revenue (MAR) and returns to its shareholders.

An additional factor contributing to Powerlink's lower MAR outlook is Powerlink's Regulated Asset Base (RAB). Since 2014-15, Powerlink's RAB has been declining in real terms ($21/22), and is forecast to continue declining into the future. This is primarily due to reduced augmentation of the network occurring as a result of lower electricity demand growth.

We are considering the implications of the low Rate of Return environment and MAR during the development of the Revenue Proposal. Related to this, customers have raised concerns that, after

the 2023-27 regulatory period, there could be increases in prices if Government bond rates rise in the future. Powerlink is also considering the implications of the low WACC environment on returns to its shareholders over the next regulatory period.

We are interested in exploring with customers and the AER opportunities to address customers' concerns, while ensuring reasonable returns for shareholders, for example through 'smoothing' revenue impacts over multiple regulatory periods. This is potentially achievable given the context of a low risk free rate environment.

Technology drivers

In the future, the services provided by Powerlink to customers will need to be even more tailored to align with different customer needs and expectations. Technology will give customers more choice and control in their energy decisions, with the opportunity for networks to provide differentiated service levels.

An important long-term project already underway, which will assist us to manage the complex and significant changes to our network, is our Next Generation Network Operations (NGNO) project.

The first stage of this project is underway and involves implementation of an advanced Energy Management System (EMS) to replace our current EMS, which will no longer be viable past December 2022. The replacement EMS underpins 24/7 management and operation of the transmission network across the state.

Over a longer, 15-year period, the NGNO project will transform our system, people and processes to ensure we are well placed to operate our network into the future. Rolling out in three stages of five years each, the second and third stages will focus on data, predictive technology and artificial intelligence to help us deliver better outcomes for our customers.

We also need to ensure our operating and IT systems are resilient to the increasing risk of cyber attack. We are working with AEMO and other TNSPs as part of the Australian Energy Sector Cyber Security Framework (AESCSF) in this regard.

Resource capability and capacity

Australia has a limited resource pool for large electricity infrastructure investments, and there is a potentially significant period of transmission work to occur across the NEM if proposed projects within the Draft ISP proceed as planned. This work is in addition to existing capital and operating expenditure work.

Powerlink will be considering how potential competition for scarce resources could impact on delivery of the 2023-27 capital and operating expenditure programs and what implications this could have in terms of project timings and costs.

Conclusion

Our operating environment is changing rapidly and this business narrative only reflects a portion of the challenges and opportunities facing our business.

We will engage with customers on this narrative, and update it as more information becomes available to inform the basis of our 2023-27 Revenue Proposal, due in January 2021.