

2. Business and Operating Environment

2.1 Introduction

This chapter sets out the key external drivers that currently impact Powerlink, or are expected to impact Powerlink, over the 2023-27 regulatory period and beyond.

This chapter builds on our Business Narrative which we developed early in our customer engagement process for our Revenue Proposal (refer Chapter 3 Customer Engagement and Appendix 2.01 Business Narrative).

Key highlights

- Affordability remains a key concern for customers. We recognise customers expect us to do what we can to ensure affordable services and value for money.
- There are significant changes occurring in energy markets as we transition to a low-carbon future. Decarbonisation, decentralisation, demand disruption, and digitisation necessitate changes to our patterns of operation.
- We are in an uncertain economic environment, driven primarily by COVID-19, which has placed pressure on our business and also on our customers and stakeholders.
- The level of uncertainty that exists means it is more difficult to forecast into the 2023-27 regulatory period.
- We have prepared our Revenue Proposal with regard to the business and operating environment factors in this chapter and have proposed expenditure forecasts and revenue requirements that reasonably reflect the efficient costs of a prudent operator and a realistic expectation of demand and cost inputs.
- We consider our forecasts are capable of acceptance by our customers, the Australian Energy Regulator (AER) and ourselves.

2.2 Our approach

Our business and operating environment continues to present challenges and opportunities for Powerlink. Our priority remains to deliver safe, secure, reliable and cost-effective electricity transmission services to our customers. We also see a shift in our focus to take a more active role in guiding the energy market in Queensland, during what is a highly dynamic and uncertain energy environment.

We have identified six key business and operating environment drivers. These drivers influence our day-to-day business, as well as elements of our Revenue Proposal, and are discussed in further detail in the following sections. They are:

- our customers;
- COVID-19;
- the energy market;
- the economy and financial markets;
- government policy and regulation; and
- the environment.

2.3 Customer drivers

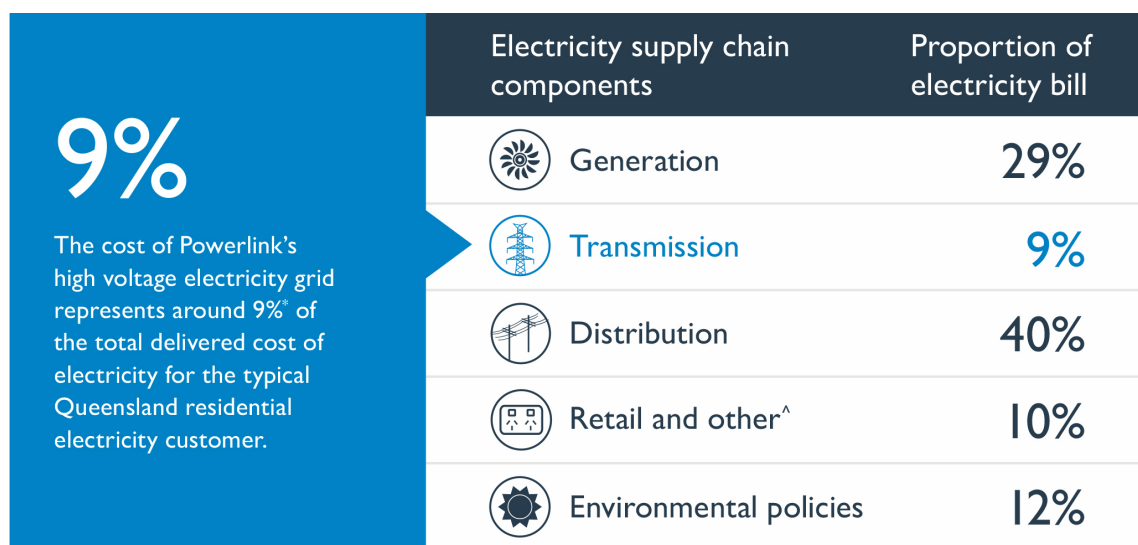
We are a foundation signatory to The Energy Charter and are committed to customer-focused responses to the challenges and opportunities that lie ahead. We are committed to being a customer-centric business and recognise this is an ongoing journey for the business. Our aim is to embed our customers' needs, views and priorities in our day-to-day business activities, and in key decision-making such as the development of our Revenue Proposal.

The following sections outline the three key customer drivers that have influenced our Revenue Proposal: affordability, price signals and customer choice. More detail on our engagement approach and response to customer feedback on our Revenue Proposal is included in Chapter 3 Customer Engagement.

2.3.1 Affordability

The cost of electricity remains a key concern for customers. While our transmission network charges comprise around 9% of the average residential household bill (refer Figure 2.1), our focus does not stop here. We will continue to influence the external environment to minimise overall system costs for electricity users. In particular, we are well placed to help facilitate lower cost bulk supply electricity production, while the market transitions to a lower carbon future.

Figure 2.1: Breakdown of typical Queensland household electricity bill



*2020 Residential Electricity Price Trends Report – SEQLD supply chain components 2021/22.

[^]Includes costs associated with retail, metering, losses and errors in the estimated value of all other supply chain cost components. The AEMC 2020 Residential Price Trends Report refers to this overall component as residual.

Customers expect us to do what we can to ensure affordable services and value for money. Over the current 2018-22 regulatory period we are responding to customer affordability concerns, through the forecast delivery of a 35% decrease in capital expenditure and a 7% decrease in operating expenditure compared to the 2013-17 regulatory period.

During the current regulatory period, our Regulatory Asset Base (RAB) has declined in real and nominal terms. In the 2023-27 regulatory period we expect this trend to continue as a result of our forecast 3% decrease in capital expenditure. This demonstrates the prudence of our approach to asset management, which is discussed further in Chapter 5 Forecast Capital Expenditure.

We have also proposed a target of no real growth in operating expenditure for the 2023-27 regulatory period. This will be a challenge for our business to meet, but is the right approach in the context of affordability and the current and mid-term economic climate, and was directly influenced by feedback from our customers on affordability concerns. We discuss this further in Chapter 6 Forecast Operating Expenditure.

We recognise our impact on customer affordability is not limited to the prices we charge for transmission services. As the platform that connects electricity generators with electricity customers, we play a key role in ensuring customers have access to the lowest cost electricity, when they need it. Constraints and congestion on the transmission network can lead to higher wholesale prices as more expensive generation is required to operate to meet customer demand.

As part of the economic assessment for major new transmission network investments, we analyse these potential benefits of improved operation of the wholesale market. In this way we seek an appropriate overall outcome for everyone who produces, transports and consumes electricity. We also support the goal of co-optimisation of generation and transmission development in the long-term interests of customers.

We also have regard to Australian Energy Market Operator's (AEMO's) Integrated System Plan (ISP), which presents an integrated approach to the development of renewable energy resources in the National Electricity Market (NEM) and a roadmap for Australia's eastern power system for the next 20 years. While the aim of the ISP is to set out a long-term optimal development path for the NEM, its success depends on the market's confidence in that plan. In particular, this requires demonstration of a development process that is robust, transparent and enabled by effective stakeholder engagement. As customers are expected to pay for significant system investments over the next 20 years, it is important to have transparency around the robustness of AEMO's analysis, the efficiency of costs and the impact on customers.

It is not in the best interests of our customers for electricity prices to reflect allowances that include costs for projects or initiatives whose scope, timing and/or cost remains uncertain. For this reason, we pursued the concept of contingent reinvestment projects in the development of our Revenue Proposal. The reason we pursued this was to ensure the cost of these uncertain but probable projects was not borne by customers within the ex-ante capital expenditure allowance and hence the revenues determined by the AER up-front.

Feedback from customers, the AER and the AER's Consumer Challenge Panel (CCP23) on the concept of contingent reinvestments primarily related to a concern that the triggers associated with contingent reinvestment may not be 'objectively verifiable'¹, which is a key requirement for contingent projects, and that further engagement on this point between Powerlink, customers and the AER is needed. Based on this feedback, we ultimately decided not to include any contingent reinvestment projects in our Revenue Proposal. However, we consider that the concept of contingent reinvestment projects remains appropriate and will seek to pursue this concept outside our Revenue Proposal process.

The commitment we have made to The Energy Charter is to make ourselves accountable to our customers across all aspects of our operations, which includes improved energy affordability. Consistent with that commitment, we have worked to ensure that our forecast expenditure for the 2023-27 regulatory period is prudent, efficient and essential to the delivery of safe, secure and reliable electricity supply.

2.3.2 Price signals

We understand that our directly-connected customers want price signals that better reflect the costs of using our network at different times and in different locations. Such changes could also potentially benefit all customers over the long-term, as more cost reflective price signals incentivise more efficient use of the network. This in turn can ease pressure on the network in periods of high demand, and therefore reduce future network costs.

We also know our customers are changing the way they use our network, as transformational changes take place throughout the energy system. To help identify where we could improve our transmission pricing arrangements, we have undertaken consultation on these issues to inform our Proposed Pricing Methodology.

As a result of this consultation, we have proposed one key amendment to our existing Pricing Methodology. This amendment will progressively transition customers locational charges to be based on peak demand only. This transition will occur over the next two regulatory periods (or 10 years), commencing 1 July 2022.

Chapter 16 Pricing Methodology discusses our consultation and Proposed Pricing Methodology changes in further detail.

2.3.3 Customer choice

Customers want a greater say in how they access, use and pay for electricity as our energy system transitions. Consistent with trends across all aspects of our daily lives, a 'one size fits all' model is not appropriate. Technologies such as Distributed Energy Resources (DER), battery storage and smart home automation systems have the potential to fundamentally transform the way households and communities manage their energy needs. This necessitates flexibility and adaptability in responding to these different needs, which could also change through time.

Delivery of a more flexible network has implications for our business. For example, the operation of our network is more complex due to added power system security constraints. We are exploring innovative technology applications to improve the flexibility of our operating practices in response to market changes, such as the use of Phasor Monitoring Units (PMUs) to improve our ability to monitor and respond to the changing characteristics of the power system as more Inverter-Based Resources (IBR) connect to the network.

The implications of the changing energy market for our business is explored further in Section 2.5.

2.4 COVID-19

Additional challenges have been presented by the COVID-19 pandemic, not only for Powerlink but for our customers and stakeholders. It is impossible to predict the likely path and duration of the pandemic.

Our first and foremost commitment during the pandemic is the protection of the health, safety and wellbeing of our people, contractors and the communities in which we operate. The adversity of responding to COVID-19 has also provided further impetus for us to develop and implement new ways to manage our business and respond to challenges, as well as opportunities for innovation.

We have summarised the impacts of the pandemic on our business that have occurred, and/or could impact us in the 2023-27 regulatory period, in Table 2.1.

¹ National Electricity Rules, clause 6A.8.1(c).

Table 2.1: COVID-19 impacts

Area	Impact
Affordability	<p>We recognise that COVID-19 has had and may continue to have a very significant impact on the livelihoods and economic security of our customers.</p> <p>Affordability of supply for our customers during these uncertain economic times is a key goal of ours. For the remainder of the current regulatory period, this means that we must manage our capital and operating expenditure within the AER's allowance.</p> <p>For the 2023-27 regulatory period, we have proposed no real growth in our operating expenditure and a 3% reduction in our capital expenditure compared to actuals/forecast in the current regulatory period as two key measures to respond to customer concerns about affordability.</p>
Engagement	<p>We have adjusted our engagement approach (e.g. greater use of digital technology) to be able to effectively conduct our consultation remotely. This has occurred for our business-as-usual engagement, and for engagement on our Revenue Proposal.</p> <p>We think this approach has been successful, all things considered. We will look to integrate greater digital engagement, along with more traditional face-to-face engagement, post-COVID to enable wider engagement from customers and stakeholders across Queensland.</p>
Economic impacts	<p>COVID-19 has had significant and pervasive impacts on both the domestic and global economies. These impacts affect our customers, suppliers and the broader communities in which we operate. Australia has fared comparatively well and recent economic data has been better than previously expected⁽¹⁾. However, the economic recovery path remains uncertain and impacts include:</p> <ul style="list-style-type: none"> Economic activity: Queensland experienced a 5.9% fall in domestic economic activity in the June quarter of 2020. However, the State budget notes that Queensland has fared better than other states. It forecast flat Gross State Product (GSP) to 2020/21, which is expected to rebound in 2021/22. It also forecast average unemployment of 7.5% in 2020/21 will improve steadily over the coming years, falling to 6.5% by 2022/23⁽²⁾. Inflation: we have observed a volatile and low/negative inflation environment in 2019/20 and so far in 2020/21. Inflation is a key input across a number of elements of our Revenue Proposal and persistently low, volatile or negative periods of inflation mean this is a difficult input to accurately forecast in the current environment (refer Chapter 9 Rate of Return, Taxation and Inflation). Interest rates: COVID-19 has impacted Government bond yields (i.e. the risk-free rate), as well as the debt risk premium. This has contributed to a significant reduction in our rate of return between the current and next regulatory periods, which impacts on our overall financial sustainability (refer Chapter 9 Rate of Return, Taxation and Inflation). Wages growth: we anticipate COVID-19 to have an impact on wage growth and the Wage Price Index (WPI), which is a key trend factor for operating expenditure. This is discussed further in Chapter 7 Escalation Rates and Project Cost Estimation.
Demand and energy	<p>AEMO has observed short-term reductions in both peak demand and energy consumption as living and working habits changed across Australia. These factors cast a degree of uncertainty on electricity demand forecasts in the short-term, acknowledged by the AEMO's 2020 Electricity Statement of Opportunities (ESOO)⁽³⁾.</p>
Capital expenditure	<p>COVID-19 has caused delays in the delivery of network capital expenditure in 2019/20 and may also result in further delays into 2020/21. At this time we anticipate that we will be able to catch-up some of this delay during 2021/22. This is discussed further in Chapter 4 Historical Capital and Operating Expenditure.</p>
Operating expenditure	<p>We have adjusted maintenance practices in 2019/20 in response to the pandemic and some routine maintenance activities have been replaced with condition-based maintenance activities, particularly in areas where it was possible to travel.</p> <p>The main impact from COVID-19 on operating expenditure has been in the balance of expenditure between categories. This has influenced the choice of our operating expenditure base year (refer Chapter 6 Forecast Operating Expenditure).</p>
Insurance	<p>Our insurance brokers, Marsh, have highlighted the unprecedented impact of COVID-19 on the global insurance industry⁽⁴⁾. This includes significant potential upward pressure on premiums, which we will need to actively manage in the 2023-27 regulatory period (refer Chapter 6 Forecast Operating Expenditure).</p>

(1) Statement on Monetary Policy November 2020, Reserve Bank of Australia, page 1.

(2) Queensland Budget 2020-21, Queensland Government, December 2020, pages 34-35.

(3) 2020 Electricity Statement of Opportunities, Australian Energy Market Operator, August 2020.

(4) Minutes of the June 2020 Revenue Proposal Reference Group (RPRG) meeting, <https://www.powerlink.com.au/2023-27-regulatory-period>.

2.5 Energy market drivers

As the NEM continues to transition towards a new energy future, we must navigate a highly dynamic and uncertain environment. The transmission system has changed from one which transports electricity from a small number of large centralised generators to major loads and distributors, to a system that interconnects increasing numbers of generators, loads and storage and transports energy to where it is needed. More homes and businesses also generate their own power through DER technology.

Our annual stakeholder perception survey, undertaken by Deloitte, surveyed 115 of our customers and stakeholders. A summary of the results of this survey for 2020 is included in Appendix 3.06. The survey found that the rapidly changing energy system is a primary concern. A key issue for many of our generator and directly-connected customers was the management of an energy system in transition, in particular system strength. We intend to take a more active role in guiding the Queensland market through this transition. We will adopt an increased focus on planning the broader energy system (generation, energy storage and transmission), undertake more proactive engagement with AEMO and Queensland market participants on key issues and risks in the energy transition, and provide increased support for the Queensland Government in the formulation of future energy policy.

Between 2018 and 2020, we developed our 30 year Network Vision² with input from customers, stakeholders and energy industry experts. The aim of our Network Vision is to provide a long-term view across a range of plausible scenarios and understand what services future customers will value. Our Network Vision has informed our Revenue Proposal.

We have further developed the broad themes of our Network Vision – changing electricity consumption patterns, a lower carbon future and decentralised energy sources – into the ‘four Ds’ discussed in this section:

- decarbonisation;
- decentralisation;
- demand disruption; and
- digitisation.

2.5.1 Decarbonisation

Queensland is in transition to a low carbon future. More than 1,600MW of large-scale renewable generation capacity has been added to the transmission network since 2016. In addition, more than 3,000MW of rooftop solar has been installed at the distribution network level across Queensland.

Figure 2.2 shows the number of completed and committed transmission-connected renewable generation projects as at December 2020. This is provided as context and it is important to note these are non-regulated projects and are therefore not included in our Revenue Proposal expenditure forecasts.

² Network Vision, Powerlink, <https://www.powerlink.com.au/network-vision>.

Figure 2.2: Transmission connections – solar, wind, battery



A higher proportion of renewable generation presents technical challenges in keeping electricity supply and demand balanced, and creates complexity in how we operate and plan the network.

We are involved in joint planning with Distribution Network Service Providers (DNSPs) Energex and Ergon Energy on generator connections within the distribution network that may impact transmission network performance or constraints.

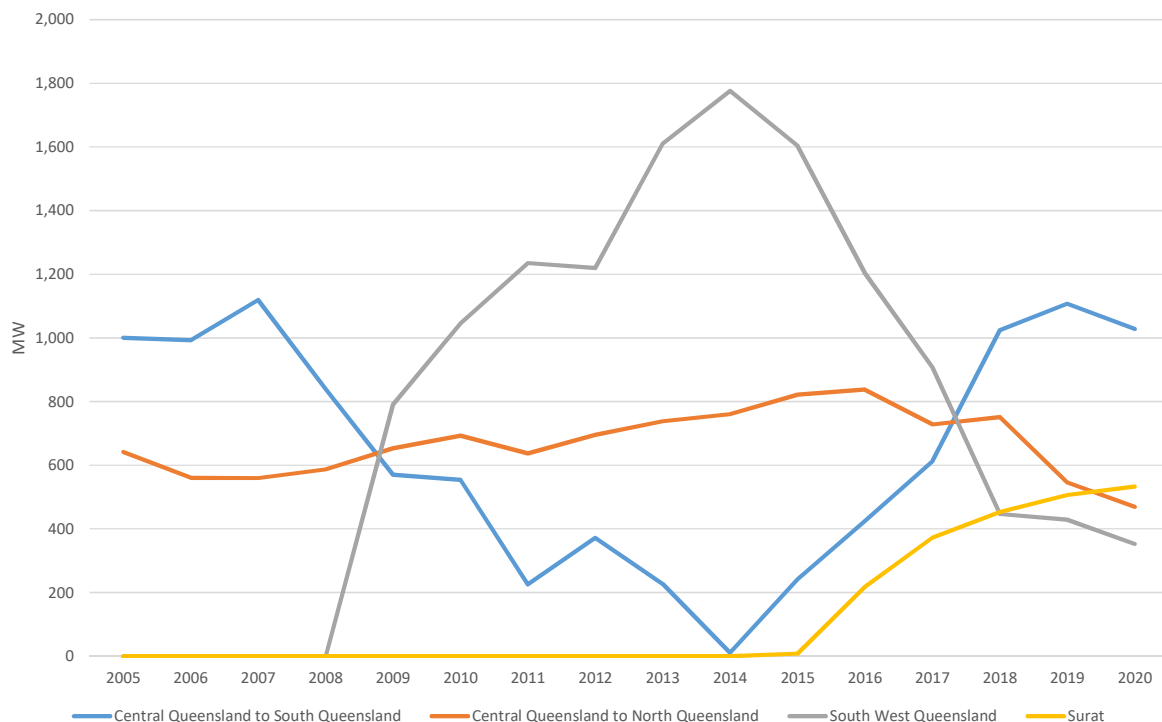
System strength has emerged as a prominent challenge in Queensland (particularly in North Queensland) as well as other parts of the NEM. We are working with customers, regulators, project proponents, suppliers and AEMO to identify, understand and appropriately respond to these challenges.

We have also had regard to AEMO's 2020 ISP. There are currently no 'actionable' projects within the 2023-27 regulatory period under AEMO's ISP. However, one of the key projects identified in the ISP that is currently targeted for completion around 2032 is Queensland/New South Wales Interconnector (QNI) Medium, which involves upgrades to the QNI. Construction of this project would need to commence in the late 2020s, which requires the acquisition of new transmission line easements in the 2023-27 regulatory period (refer Chapter 5 Forecast Capital Expenditure).

2.5.2 Decentralisation

The change in generation mix creates challenges in the operation of our network. Rapid installation of renewables and the forecast closure of ageing coal generation assets across the NEM have driven large changes in power flows across the network, as seen in trends in flows over time in Figure 2.3. This introduces a high degree of uncertainty around the need for investment in major transmission network flow paths.

Figure 2.3: Average annual power flow across major transmission flow paths (MW)



The increasingly constrained network flow from Central Queensland to Southern Queensland (CQ-SQ) is an example of the level of uncertainty that exists and the difficulties we face in planning the network. As shown in Figure 2.3, power flow gradually declined until 2014. Since then CQ-SQ has seen a significant increase in power flows, driven by the investment in new renewable generation in North Queensland.

This part of the network now experiences regular capacity constraints, which means the cheapest sources of electricity cannot always be delivered to customers. Electricity market constraints also impact our ability to effectively manage necessary outages on the network in a way that minimises impacts to network users. A reduced window to schedule outages places pressure on how and when we can deliver capital works, and operate and maintain the network.

An upgrade of the CQ-SQ network is flagged for the early 2030s in AEMO's 2020 ISP. However, subsequent renewables development in southern Queensland or northern New South Wales (NSW) could again fundamentally shift intra-connector flows. Given the uncertainty related to the investment need for CQ-SQ and the timing of any investment need being potentially late in the 2023-27 regulatory period or early in the following regulatory period, our Revenue Proposal includes some (limited) capital expenditure for targeted life extension works on this part of the network.

The CQ-SQ network is a key example of why we consider the concept of contingent reinvestments should be pursued further, outside the current Revenue Proposal process. The rapid changes occurring through the energy transition can make it highly uncertain whether existing network capacity along major transmission flow paths should remain the same, be increased, or even be reduced, which must be considered as part of any potential asset reinvestment along those flow paths. Rather than ask customers to pay for investments that remain highly uncertain, we would have a mechanism to seek approval from the AER should such expenditure be required to maintain the safe, secure, reliable and cost-effective supply of electricity within the regulatory period.

It is clear that as we transition to this new energy future, investment will need to take a 'whole of system' perspective. This will require greater coordination of investment strategies between generation, transmission and distribution businesses to deliver appropriate outcomes for our customers.

2.5.3 Demand disruption

Solar uptake at a household level continues to drive changes to our demand and energy patterns. Overall, while energy consumption is declining, several key trends have been observed across our network.

Higher and shorter demand peaks

Maximum demand is expected to grow at 0.7% per annum over the next 10 years³ (refer Chapter 5 Forecast Capital Expenditure). Increases in peak demand puts pressure on the maximum capacity of our network, which would traditionally necessitate network augmentation investment. However, the short duration and low frequency of these maximum demand events makes network augmentation uneconomic.

This reduction in demand-driven investment has occurred in the current regulatory period, and is expected to continue in the 2023-27 regulatory period. We have proposed only one capital project (estimated at \$2.4m) driven by increased maximum demand in our Revenue Proposal.

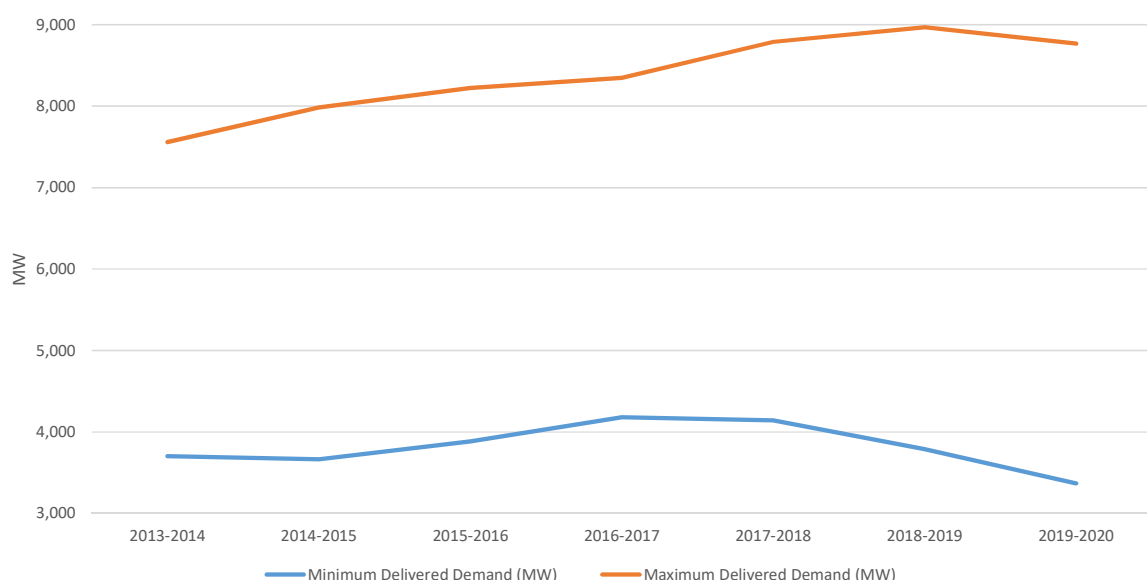
Decline in minimum demand

Demand during the day has reduced to levels (currently approximately 3,500MW) that impact on the technical capability for daytime baseload generation to operate. This is driven by the increased deployment of DER, which includes large-scale photovoltaic (PV) generation connected to distribution networks and customer rooftop PV. AEMO forecasts that minimum operational demand is expected to continue to fall by 1.9% per annum in Queensland between 2021 and 2040⁴.

While minimum demand has declined and will continue to decline, significant transmission connected generation is still required to meet peak demand. These opposing factors mean it is increasingly difficult to determine the optimal investment strategy (e.g. life extension, replacement or other reinvestment options) for some transmission network assets, or whether they could potentially be decommissioned.

Figure 2.4 demonstrates these inverse trends.

Figure 2.4: Trends in Maximum and Minimum Delivered Demand in Queensland (MW)



In the near-term, this rate of decline in minimum demand could be greater than the long-term average as Queensland continues to experience rapid uptake of rooftop solar PV systems, particularly from larger sized commercial installations. An increased spread between minimum and maximum demands is likely to present operational challenges for both AEMO and network businesses in managing the demand for various forms of system services.

³ 2020 Electricity Statement of Opportunities, Australian Energy Market Operator, August 2020.

⁴ *Ibid*, page 43.

As battery storage technology further develops, it also has the potential to flatten electricity usage and reduce the need to develop transmission services to cover short duration peaks. We may also see an increase in the application of batteries to reduce residential demand peaks as customers take advantage of storage to smooth their consumption and avoid peak retail tariffs. Government policy, retail offerings, development of community storage or large-scale storage and demand response are also factors that may influence minimum demand in the future.

For Powerlink, the issue of an increased spread between minimum and maximum demands is driving the need to install additional reactive power control devices to maintain power system voltages within secure limits. Our capital expenditure forecast includes \$22.4m in investment for these devices to support prescribed transmission services (refer Chapter 5 Forecast Capital Expenditure).

If the decline in minimum demand turns out to be materially greater than is currently forecast by AEMO it could necessitate further investment in the provision of system services for prescribed purposes. This could be either through direct investment in new assets, or through mechanisms such as cost pass through arrangements and contracts for network support services (refer Chapter 12 Pass Through Events). Relevant capital investments will also be subject to the AER's Regulatory Investment Test for Transmission (RIT-T).

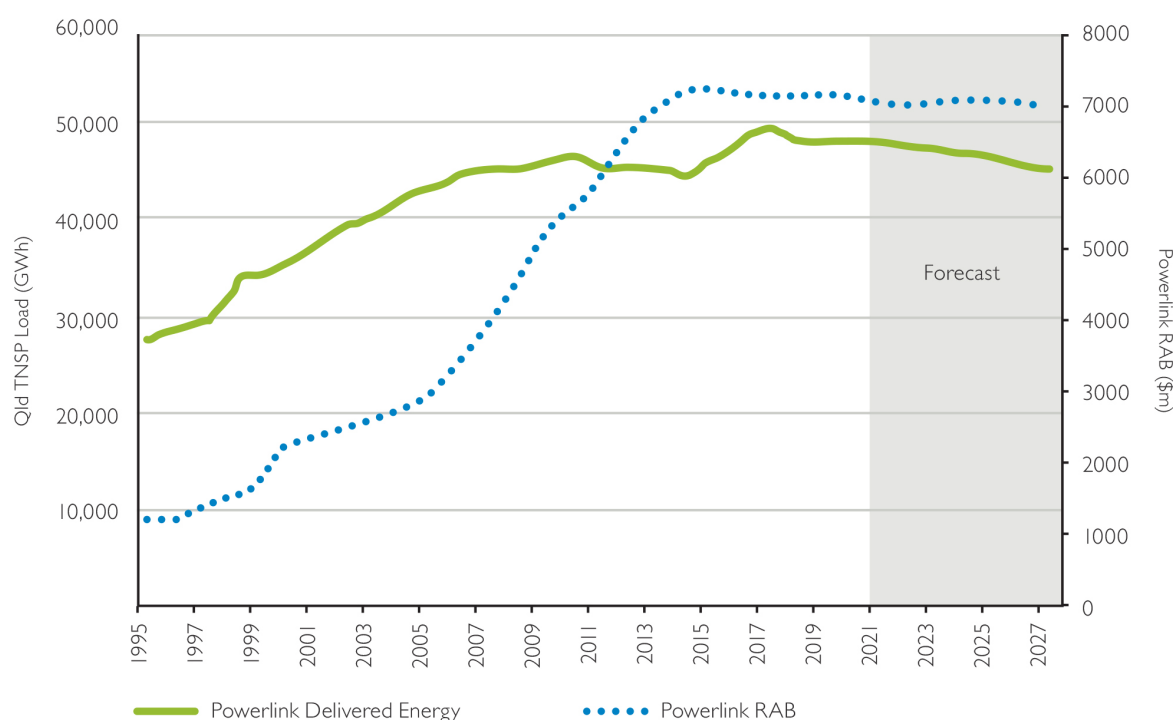
Decline in delivered energy

Total delivered energy is expected to decline at an average annual rate of 0.7% over the next 10 years⁵ (refer Chapter 5 Forecast Capital Expenditure). This is primarily due to current and proposed large-scale renewable generation that is (or will be) directly-connected to the distribution network.

In line with flat or declining forecasts of delivered energy, our RAB has decreased in both nominal terms and real terms in the current regulatory period⁶.

In the 2023-27 regulatory period, we forecast our RAB to continue to decrease in both nominal and real terms⁷ (refer Chapter 8 Regulatory Asset Base). Our proposed reduction in capital expenditure has contributed to this decrease, and we consider the trend in our RAB provides a reasonable indication of our prudent asset management and reinvestment approach.

Figure 2.5: Powerlink forecast delivered energy (GWh) versus RAB (\$m nominal)



⁵ 2020 Electricity Statement of Opportunities, Australian Energy Market Operator, August 2020.

⁶ Based on a comparison of 1 July 2017 opening RAB to 30 June 2022 closing RAB.

⁷ Based on a comparison of 1 July 2022 opening RAB to 30 June 2027 closing RAB.

2.5.4 Digitisation

The growth in the number and interconnectedness of digital sensors and mobile devices is often referred to as the Fourth Industrial Revolution⁸. The first and second industrial revolutions entailed the harnessing of mechanical and electrical energy to replace manual work. The third industrial revolution harnessed the power and cost benefits of digital technologies to collect data from the real, analogue world and transform it into digital form. Once in digital form the data can be assembled and communicated at near zero cost and provides the basis for improvements in production and operations processes.

The transformation of data into information and then insights can improve business decision-making and reduce risks to our customers. Our investments in Business Information Technology (IT) and Operational Technologies are made to ensure we can deploy and access enhanced digital data analytics to support the business and the provision of services to customers. This includes digital interfaces with our customers, our suppliers and AEMO.

Our key business initiatives that support this increase in digitisation are:

- Next Generation Network Operations (NGNO) – our program to modernise our network operations and be able to adapt to the changing energy landscape. A foundational element is a new advanced Energy Management System to support our real-time operations.
- Systems, Applications, Products (SAP) Transform – the replacement of our legacy Enterprise Resources Planning system will support increasing digitisation and automation of routine business processes.

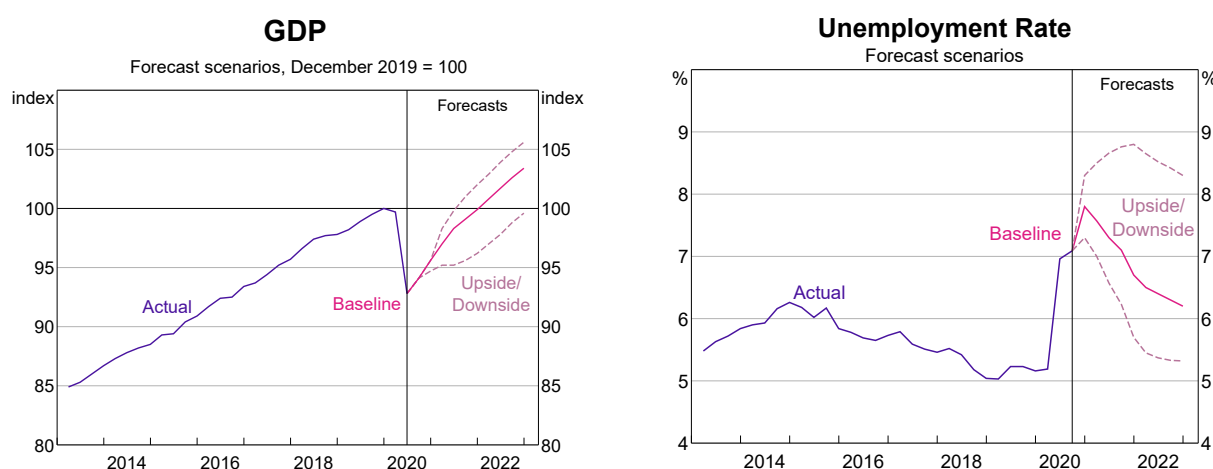
2.6 Economic and financial market drivers

The COVID-19 pandemic is currently the dominant influence on the economy and financial markets and remains the main source of uncertainty for the economic growth outlook.

The Reserve Bank of Australia (RBA) describes the COVID-19 pandemic as the largest shock to the global economy in many decades⁹. The RBA recently observed that the 7% contraction in Gross Domestic Product (GDP) in the June quarter was the largest and one of the most sudden in peacetime since the 1930s¹⁰. It has also resulted in significant disruption to the labour market. While labour market conditions have also improved, the RBA expects significant excess capacity to remain. This will continue to drive low wages growth and inflation.

The global economy, along with Australia, is currently in the early stages of recovery, although the RBA sees this as fragile and uneven¹¹. Given the extreme uncertainty that has arisen from the pandemic, the RBA considers the outlook in terms of three scenarios. Under its baseline scenario, the economy is forecast to contract by around 4% for the year to December 2020, followed by growth of 5% in 2021 and 4% in 2022. Unemployment is forecast to peak at 8% by the end of 2020¹². The RBA scenarios for GDP growth and unemployment are shown in Figure 2.6.

Figure 2.6: RBA scenarios: GDP and unemployment (Australia)



Source: Statement on Monetary Policy November 2020, Reserve Bank of Australia, pages 81-82

⁸ The Fourth Industrial Revolution – What it means and how to respond, Klaus Schwab, Foreign Affairs, December 2015.

⁹ Statement on Monetary Policy August 2020, Reserve Bank of Australia, page 1.

¹⁰ Statement on Monetary Policy November 2020, Reserve Bank of Australia, page 1.

¹¹ *Ibid*, page 79.

¹² *Ibid*, page 1.

In the Queensland Budget 2020/21, the Queensland Government forecast a marginal increase of 0.25% in GSP in 2020/21, a rebound to 3.5% growth in 2021/22 and then a return to longer-run growth potential of around 2.75% per annum¹³. This assumes that COVID-19 remains contained.

Overall, this highlights considerable uncertainty domestically and globally. This outlook has had a direct impact on the demand for electricity in the short-term, which may continue into the medium and long-term. It has also impacted key assumptions that underpin our Revenue Proposal such as inflation, labour cost escalators and elements of our rate of return.

We are also mindful of the impact of COVID-19 and the current economic climate on affordability, which is discussed in sections 2.3.1 and 2.4. More broadly, a sustained low economic growth environment could impact the financial sustainability of our suppliers and supply chains, thus impacting our ability to deliver projects on time and on budget.

A delivery and skills resource risk is also expected over the 2023-27 regulatory period. Australia has a limited pool of skilled labour for large electricity infrastructure investments, and there is a potentially significant period of transmission work to occur across the NEM. This is particularly the case if proposed projects in the 2020 ISP proceed as planned, in addition to the replacement of older transmission network infrastructure that needs to occur in the next decade. This will coincide with major infrastructure investment across the economy.

This work is in addition to existing capital and operating expenditure work. We have engaged with other Transmission Network Service Providers (TNSP) as to how this risk can be managed, which could include:

- development of project timelines and resource requirements by skill sets;
- management of the balance between internal and external resources, as well as augmentation versus replacement works; and
- identification of the need for increased levels of specific skills, which can be addressed by apprenticeships and training programs.

Competition for scarce resources may influence the cost of our projects, in particular capital projects, and we will need to manage this impact if it arises.

2.7 Government policy and regulation

This section outlines potential changes in our regulatory environment and the potential impact of government policies on our Revenue Proposal.

2.7.1 Energy market regulation

Key regulatory consultations underway that could significantly impact the provision of electricity transmission services include the Coordination of Generation and Transmission Investment reforms, the Energy Security Board's Post 2025 Market Design, Transmission Ring-Fencing Review and the Energy Security Board's consultation on planning rules for Renewable Energy Zones (REZs). The outcome of the AER's review of its regulatory treatment of inflation is also important as it will impact our revenue and prices within the regulatory period.

The outcomes of these regulatory reforms could have material impacts on our operations, such as changes to funding models for future network investment and the way revenue is collected. Until the outcomes from these reviews are finalised, it is unclear how they may impact our regulatory and other obligations going forward. For example, the AER's review of its Transmission Ring-Fencing Guideline could fundamentally impact the way in which we deliver our transmission services.

Until such time as we know the scope and scale of any changes to the existing arrangements, it will be difficult to estimate the cost impacts on the business. As a result, we have not allowed for this in our operating expenditure forecast (refer Chapter 6 Forecast Operating Expenditure). If material costs are likely to be incurred, we may seek a cost pass through within the regulatory period (refer Chapter 12 Pass Through Events).

2.7.2 Federal and Queensland Government policies

Government energy policies establish broad frameworks that can have important implications for market participants and customers (e.g. the Queensland Government's 50% Renewable Energy Target or the Federal Government's Low Emissions Technology Statement 2020). Key policies and decisions that may impact our Revenue Proposal are outlined in the following section.

¹³ Queensland Budget 2020-21, Queensland Government, December 2020, page 40.

Federal Government

There are two Federal Government policies that have been considered as part of our Revenue Proposal:

- the progressive increase to the Superannuation Guarantee rate which is currently targeted to reach 12% from 1 July 2025, which could impact our labour costs and WPI forecasts (refer Chapter 7 Escalation Rates and Project Cost Estimation); and
- the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*, which was introduced to Parliament in December 2020 but has not yet passed, would establish a new security and resilience regulatory regime on operators of critical infrastructure. We anticipate additional security (including cyber security) obligations for critical infrastructure providers as a result of this new legislation (refer Chapter 6 Forecast Operating Expenditure).

Queensland Government

The Queensland Government has committed to a 50% Renewable Energy Target (RET) by 2030 and has made recent energy policy announcements that focus on regional development, investment to support energy security and COVID-19 economic recovery. This includes potential investment in transmission infrastructure, such as:

- support for Genex's 250MW Kidston pumped storage hydro project¹⁴;
- support for Copperstring 2.0, which would connect the North West Minerals Province to the national grid¹⁵; and
- other projects that will contribute to the achievement of the Queensland Government's 50% RET. This includes its \$145m announcement to unlock three renewable energy corridors in North, Central and South West Queensland¹⁶ and a further \$500m to support Renewable Energy Zone (REZ) Development¹⁷.

These initiatives largely rely on market-based responses and do not directly impact our Revenue Proposal. If these investments proceed, they may trigger a need for investment in the prescribed network in the future. However, we have not included any associated expenditure in our forecasts.

We are working with the Queensland Government to understand and progress these initiatives as appropriate and required.

2.8 Environment drivers

Extreme weather events such as cyclones, bushfires and floods create challenges for the operation of the transmission network. The nature, frequency and impact of these events remain extremely difficult to predict and the risks vary across our network. Our approach is to design and construct our assets to be resilient against forecast risks, consistent with prevailing standards and to an extent that is prudent and efficient.

Our network has not been materially impacted to date by recent bushfires or other severe weather events like networks in New South Wales, Victoria and South Australia. We have not forecast capital expenditure to address general weather-related risks over the 2023-27 regulatory period.

In relation to operating expenditure, extreme weather events in Australia and across the world have placed upward pressure on our insurance premiums. We engage directly with insurance underwriters to ensure they understand the circumstances related to our business to advise appropriate insurance policies, excess levels and premiums. We have also consulted on this with our customers and the AER in the development of our Revenue Proposal. Further information on our proposed approach to insurance is provided in Chapter 6 Forecast Operating Expenditure.

2.9 Summary

We are operating in an environment of uncertainty, driven by significant changes in the energy market, the COVID-19 pandemic and potentially long-lasting effects on the national economy. Our customers remain concerned about affordability, and so do we.

We have had regard to our external environment in the development of our capital and operating expenditure forecasts, and the financial elements of our Revenue Proposal. We have actively engaged with our customers to understand their needs, priorities and concerns, and these are reflected in our business and operating environment.

¹⁴ Statements/88279, Queensland Government, <https://statements.qld.gov.au/statements/88279>.

¹⁵ Statements/89847, Queensland Government, <https://statements.qld.gov.au/statements/89847>.

¹⁶ Queensland Renewable Energy Zones, Department of Natural Resources, Mines and Energy, <https://www.dnrme.qld.gov.au/energy/initiatives/queensland-renewable-energy-zones>.

¹⁷ Statements/90683, Queensland Government, <https://statements.qld.gov.au/statements/90683>.