Issues Paper

Powerlink Queensland

Electricity Transmission Revenue Proposal

1 July 2022 to 30 June 2027

March 2021

AUSTRALIAN ENERGY REGULATOR

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1 Introduction

The Australian Energy Regulator (AER) works to make all Australian energy consumers better off, now and in the future. We regulate electricity networks in all jurisdictions except Western Australia. Our work is guided by the National Electricity Objective (NEO) which promotes efficient investment in, and operation and use of, electricity services in the long term interests of consumers.[1] We set the maximum revenues that network businesses are allowed to recover from consumers through network charges. These revenues are based on our assessment of efficient costs and a realistic expectation of forecast electricity demand. By only allowing efficient costs, we regulate network tariffs so that consumers pay no more than necessary for the safe and reliable delivery of electricity.

Queensland households and businesses consume electricity which is commonly supplied through a network of 'poles and wires' divided into:

- transmission – carrying electricity from large generators to major load centres
- distribution – carrying electricity from the points of connection with the transmission network to virtually every residence and building in Queensland.

We are in the early stages of the regulatory process for setting the maximum allowed revenue for Powerlink Queensland[2] ('Powerlink') for the five-year regulatory control period, starting 1 July 2022 to 30 June 2027 (the '2022–27 period').

Powerlink it is a licensed, regulated operator of the monopoly high voltage electricity transmission network in Queensland. The network comprises the poles, wires and transformers used for transporting high voltage electricity from remote generators to population centres. Powerlink designs, constructs, operates and maintains the transmission network for Queensland electricity consumers.

Although our decision determines the maximum revenue that Powerlink can recover from its transmission consumers, we do not set transmission charges for each consumer or the retail prices that end-consumers pay. Retail prices for Queensland electricity consumers are set by electricity retailers and include the costs associated with generation (29 per cent), transmission (9 per cent), distribution (40 per cent), environmental schemes (12 per cent) and costs incurred by retailers in selling electricity (10 per cent).[3]

Revenue determinations usually occur every five years for each regulated business. We use an incentive approach where, once regulated revenues are set for the five-year period, networks who keep actual costs below the regulatory forecast of costs retain part of the benefit. This benchmark incentive framework is a foundation of the AER's regulatory approach and promotes the delivery of the NEO. Service providers have an incentive to become more efficient over time, as they retain part of the financial benefit from improved efficiency. Consumers also benefit when efficient costs are revealed and a lower cost benchmark is set in subsequent regulatory periods.

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1 National Electricity Law (NEL or Law), s. 7.

2 Powerlink Queensland is the registered business name of the Queensland Electricity Transmission Corporation Limited.

3 Powerlink, *2023–27 Revenue proposal*, January 2021, pp. 4-5.

On 28 January 2021, Powerlink submitted its revenue proposal for the 2022–27 period.[4] This Issues Paper highlights some of the key elements, and how stakeholders can assist in our review, of Powerlink's proposal.[5]

While we have conducted an initial review of the proposal, we have not yet formed a final view. We have not yet considered all of the information provided by Powerlink in support of its claims, or applied all of our regulatory tools to test the robustness of the proposal.

Stakeholder consultation is a key part of our review. The purpose of publishing this Issues Paper is to assist stakeholders by identifying those aspects of Powerlink's proposal which, after our preliminary review, are likely to be relevant to our assessment. Stakeholders can assist our process by providing their views on these aspects, or any other aspect, of Powerlink's proposal.

1.1 How can you get involved?

Consumer engagement is not only something we must have regard to when making our revenue determinations. It is a valuable input, which we encourage. When we receive stakeholder submissions that articulate consumer preferences, address issues in a revenue proposal, and provide evidence and analysis, our decision-making process is strengthened. It also provides greater transparency, predictability and builds trust and confidence in the regulatory framework.

We published Powerlink's 2022–27 proposal on our website on 8 February 2021 and invited stakeholder submissions.[6]

Following the release of this Issues Paper, we will hold an online public forum on **8 April 2021**.[7] The public forum will provide further insight into the key issues in this review, and we encourage stakeholders to comment on topics of interest and where our assessment should focus. Details of how to participate are available on our website.[8]

Submissions on this Issues Paper and Powerlink's proposal are due by **24 May 2021**.

Throughout this review, we will also have the benefit of advice from our Consumer Challenge Panel (CCP23).[9] The expert members of CCP23 help us to make better regulatory decisions by providing input on issues of importance to consumers and bringing consumer perspectives to our processes.

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4 Powerlink, *2023–27 Revenue proposal*, January 2021.

5 As required under the National Electricity Rules (NER or Rules), cl. 6A.11.3(b1).

6 See AER website: https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/powerlink-determination-2022-27/proposal

7 COVID-19 continues to impact our stakeholder consultation approach and the ability of all market participants to engage. In line with our Statement of Expectations, the AER acknowledges the changing operating environment and the potential for this to impact on Powerlink's five-year forecast. We propose to adopt a greater degree of flexibility in our approach to requesting and receiving information (from all stakeholders), as well as the way we consider the extenuating circumstances in our analysis.

8 https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/powerlink-determination-2022-27

9 CCP23 comprises Mark Henley, David Prins and Bev Hughson. https://www.aer.gov.au/about-us/consumer-challenge-panel

Table 1 sets out the key milestones planned for this review.

Table 1 Key dates for Powerlink's 2022–27 revenue determination

Milestone	Date
AER publishes Issues Paper on Powerlink's proposal	24 March 2021
AER holds public forum on Issues Paper and Powerlink's proposal	8 April 2021
Submissions due on Powerlink's proposal	24 May 2021
AER publishes draft decision	30 September 2021
AER holds public forum on Draft Decision (predetermination conference)	14 October 2021
Powerlink submits revised proposal to AER	2 December 2021
Submissions due on draft decision and Powerlink's revised proposal	11 January 2022
AER publishes final decision	29 April 2022

Note: Timelines are indicative and subject to change.

1.2 Our initial observations

This Issues Paper sets out the key issues evident from our initial review of Powerlink's 2022–27 proposal. While we welcome submissions on any aspect of the proposal, we are particularly interested in stakeholder views on the following areas:

- Powerlink's consumer engagement approach (section 3)
    - Powerlink's overarching goal has been to submit a 2022–27 proposal that is capable of acceptance by its consumers, the AER and Powerlink
    - we are interested in stakeholder views on whether they consider Powerlink has achieved its goal, or whether further engagement in specific areas is required prior to the making of our draft decision in September 2021
- the revenue drivers in Powerlink's proposal that may be subject to scrutiny:
    - regulatory asset base and depreciation (section 5.2)
    - capital expenditure (capex) (section 5.3)
    - operating expenditure (opex) (section 5.4)
- Powerlink's proposed changes to its pricing structure (section 2.2)
    - Powerlink proposes to transition locational charges from a combination of peak and average demand, to be based on peak demand only, over the next 10 years
- the suite of incentive schemes proposed to apply to Powerlink (sections 6.1–6.4).

2 Powerlink's proposed revenue and pricing

Powerlink's 2022–27 proposal sets out the revenue it proposes to recover from its consumers over the five-year period, including its proposed pricing methodology.

2.1 Proposed revenue

Powerlink proposes total revenue of $3,565.1 million ($ nominal, smoothed) to be recovered from Queensland electricity consumers over the 2022–27 period. This is 8.5 per cent lower than what we approved for the current, 2017–22, period (see Table 2).[10]

Table 2 Summary of proposed revenue ($ nominal, smoothed)

($ million)	2022–23	2023–24	2024–25	2025–26	2026–27	Total revenue for 2022–27	% change from 2017–22
Powerlink	689.7	701.1	712.8	724.7	736.8	3,565.1	–8.5%

Source: Powerlink 2022–27, *Post-tax revenue model (PTRM)*, January 2021.

2.2 Proposed prices

A transmission business recovers revenue from its consumers via network charges. The pricing methodology prescribes the way in which the business recovers this revenue.[11]

Powerlink's 2022–27 proposal is estimated to contribute to a $7 (nominal) decrease in the transmission component of the average annual residential electricity bill in Queensland over the 2022–27 period.[12]

Powerlink proposes one major amendment to its pricing methodology for the 2022–27 period. Under the current methodology, Powerlink's locational prices are based on a combination of peak and average demand. Powerlink proposes to progressively transition locational charges to be based on peak demand only. This transition would occur over the next two regulatory periods (or 10 years).[13]

Powerlink submits the proposed amendment is better aligned with the locational price calculation principles in the Rules. That is, that they be based on demand at times of greatest utilisation of the transmission network for which network investment is most likely to be contemplated. Powerlink submits that peak, rather than average, demand is a key consideration in network investment.[14]

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10 In real terms ($2021–22), proposed total revenue is $549.4 million (14.2 per cent) lower than approved for 2017–22.

11 NER, cl. 6A.24.1(b).

12 Transmission network charges account for approximately 9 per cent of the total electricity bill for a typical residential consumer on a single rate tariff in Queensland.

13 Powerlink, *2023–27 Revenue proposal – Appendix 16.01, Proposed pricing methodology*, January 2021, pp.13-14, 22.

14 Powerlink, *2023–27 Revenue proposal*, January 2021, p. 163.

Powerlink proposes other minor amendments to its pricing methodology, including adjusting non-locational prices by the advised National Transmission Planner costs each year.[15]

Powerlink submits that it engaged extensively with consumers and stakeholders in developing its proposed pricing methodology for the 2022–27 period.[16]

Questions

1. Do you consider Powerlink's proposed changes to its pricing methodology for the 2022–27 period are appropriate and give effect to the pricing principles for prescribed transmission services?
2. What are your views on Powerlink's consumer engagement in developing its proposed pricing methodology for the 2022–27 period?

[15] Ibid., p. 158.

[16] Ibid., pp. 159-164.

3 Consumer engagement and assessment

Consumer engagement helps network businesses determine how best to provide services that align with consumers' long term interests. Consumer engagement in this context is about Powerlink working openly and collaboratively with its electricity consumers and providing opportunities for their views and preferences to be heard and to influence Powerlink's decisions.

In addition to our assessment of Powerlink's efficient costs, the Rules require us to consider the extent to which elements of Powerlink's 2022–27 proposal address relevant concerns identified during its engagement with consumers. Strong consumer engagement can help us test Powerlink's proposal, and can raise alternative views on matters such as service priorities, capex and opex proposals, and tariff structures.

We will use a range of considerations to demonstrate whether consumers have been genuinely engaged in the development of Powerlink's 2022–27 proposal. As set out in Table 3, our framework for consumer engagement includes the following elements:[17]

- nature of engagement
- breadth and depth of engagement
- clearly evidenced impact
- assessment of outcomes (or 'proof points').

[17] See also Table 7: AER, *Draft decision, Jemena distribution determination 2021–26, Overview*, September 2020, p. 43.

Table 3 AER framework for considering consumer engagement

Element	Examples of how this could be assessed
Nature of engagement	• Consumers partner in forming the proposal rather than asked for feedback on network business's proposal • Relevant skills and experience of the consumers, representatives, and advocates • Consumers provided with impartial support to engage with energy sector issues • Sincerity of engagement with consumers • Independence of consumers and their funding • Multiple channels used to engage with a range of consumers across a network business's consumer base
Breadth and depth	• Clear identification of topics for engagement and how these will feed into the regulatory proposal • Consumers consulted on broad range of topics • Consumers able to influence topics for engagement • Consumers encouraged to test the assumptions and strategies underpinning the proposal • Consumers were able to access and resource independent research and engagement
Clearly evidenced impact	• Proposal clearly tied to expressed views of consumers • High level of business engagement (e.g. consumers given access to the network business's CEO/Board) • Network business responds to consumer views rather than just recording them • Impact of engagement can be clearly identified • Submissions on proposal show consumers feel the impact is consistent with their expectations

Proof point	• Reasonable opex and capex allowances proposed:
	  ○ In line with, or lower than, historical expenditure
	  ○ In line with, or lower than, our top-down analysis of appropriate expenditure
	  ○ If not in line with top-down, can be explained through bottom-up category analysis

3.2 Powerlink's consumer engagement approach

Provided below is an overview of the consumer engagement approach undertaken by Powerlink in developing its 2022–27 proposal.

3.2.1 Powerlink's proposal

In developing its 2022–27 proposal, Powerlink submits:[18]

> "Our overarching goal has been to deliver a Revenue Proposal that is capable of acceptance by our customers, the AER and Powerlink. This goal targeted acceptance of our Revenue Proposal as an overall package by relevant stakeholders at the time we lodged our Revenue Proposal with the AER in January 2021. Importantly, it has been the guiding objective for our engagement and built on the strong foundations we undertake in the normal course of business."

Powerlink's 2022–27 proposal exhibits lower proposed revenues and stable real prices, underpinned by a lower return on capital, continued falls in capex and stabilising opex. Whilst our assessment as to the prudency and efficiency of proposed expenditures is incomplete and ongoing, we are encouraged by Powerlink's approach to this review to date. Combined with evidence of reasonably strong levels of consumer engagement thus far, the real reduction in total expenditure by Powerlink may provide the basis for a more constructive and efficient regulatory process.

We are interested in stakeholders' views on the extent to which Powerlink has achieved its overarching goal, including whether specific changes are required to its proposal. Such information, as well as our own analysis of Powerlink's efficient costs and forecast electricity demand, will inform our assessment of Powerlink's proposal and enable us to determine Powerlink's maximum revenue for the 2022–27 period.

Questions

3. Given Powerlink's overarching goal to deliver a revenue proposal that is capable of acceptance, is Powerlink's 2022–27 proposal acceptable to you in its current form? Please give reasons. If the proposal is not acceptable to you, what changes would be required to make it acceptable?

3.2.2 Key stakeholder issues

Three key consumer drivers have influenced Powerlink's 2022–27 proposal:[19]

- affordability – the cost of electricity remains a key concern for consumers. Powerlink's consumers expect it do what it can to ensure affordable services and value for money
- price signals – directly-connected consumers want price signals that better reflect the cost of the network at different times and locations
- customer choice – consumers want a greater say in how they access, use and pay for electricity as the energy system transitions. A 'one size fits all' model is not

[18] Powerlink, *2023–27 Revenue proposal*, January 2021, p. iii.

[19] Ibid., pp. 4-6.

appropriate. Technologies, such as distributed energy resources and battery storage, have the potential to transform the way consumers manage their energy needs.

Questions

4. Do you agree with Powerlink's three key consumer drivers for the 2022–27 period (i.e. affordability, price signals and customer choice)? Are there other key drivers that are important to you?

3.2.3 Consumer engagement approach

Powerlink submits that it views engagement on its revenue determination process as an extension of its business-as-usual engagement activities.[20]

Powerlink considers that it has undertaken extensive engagement with its consumers and stakeholders on all key elements of its 2022–27 proposal, including adapting its approach in light of stakeholder feedback where it would provide meaningful value (e.g. releasing a draft revenue proposal).[21] Powerlink also notes that it engages with its directly-connected consumers and a diverse range of stakeholders in the normal course of business.[22]

Powerlink's engagement plan was developed through a co-design process — involving consumers, stakeholders and members of Powerlink's Board, Executive and Senior Leadership Team — to gain insights into the engagement approach, scope, techniques, sequencing, evaluation and supporting communications for its 2022–27 proposal.[23] Engagement activities were based on feedback obtained at a co-design workshop held in May 2019, which included the following insights:[24]

- Powerlink's Customer Panel should play a primary engagement role
- publish early forecasts approximately six months in advance of the revenue proposal to provide greater visibility and opportunity for comment
- hold one-on-one briefings with directly-connected customers and target stakeholders
- raise stakeholder understanding of the transmission industry and regulatory approach
- deep dives should focus on large, complex or contentious topics with the greatest potential impact on revenue, and for which Powerlink has not yet made a decision
- test interest in hosting engagement forums in regional locations
- use webinars/website to make information easily accessible, despite location
- establish a microsite/dedicated section on the website to educate and facilitate interactive feedback and discussion
- investigate site tours to allow stakeholders to learn about Powerlink's operations.

Powerlink's key engagement activities in developing its 2022–27 proposal included:[25]

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20 Powerlink, *2023–27 Revenue proposal – Appendix 3.01, Engagement plan*, January 2021, p. 3.

21 Powerlink, *2023–27 Revenue proposal*, January 2021, p. iii.

22 Ibid., p. v.

23 Powerlink, *2023–27 Revenue proposal – Appendix 3.01, Engagement plan*, January 2021, p. 3.

24 Powerlink, *2023–27 Revenue proposal*, January 2021, pp. 27-28.

25 Ibid., pp. 27-28.

- Customer Panel[26] meetings – comprised of representatives from several industry and consumer organisations, Powerlink's Customer Panel has played a key role in engagement on a range of aspects in the development of Powerlink's proposal
- Revenue Proposal Reference Group[27] (RPRG) meetings – a sub-group of Powerlink's Customer Panel, the RPRG enables Powerlink to engage in more detail, and more regularly, than with its Customer Panel, meeting every four to six weeks between October 2019 to December 2020 for discussions on engagement scope items
- draft revenue proposal and webinar – in response to stakeholder feedback, Powerlink published and invited submissions on a draft 2022–27 proposal in September 2020, and followed this up with a stakeholder webinar on the draft proposal in October 2020
- Preliminary Positions and Forecasts Paper (PPFP) – Powerlink published a PPFP in August 2020 to provide stakeholders with a more detailed update on its 2022–27 proposal at that stage of development, including on the key drivers of capex and opex
- Transmission Network Forum – a key stakeholder engagement annual event, Powerlink promoted and updated stakeholders on the development of its 2022–27 proposal at the 2019 and 2020 forums
- Insurance deep dive – held in November 2020, Powerlink presented its approach to managing risk and insurance cost trade-offs, with a focus on the challenges of managing potential insurance premium increases in the 2022–27 period. Participants were able to hear from Powerlink's Chief Financial Officer, and provide their views on the appropriate levels of risk and cost trade-offs related to insurance.[28]
- One-on-one briefings – Powerlink's directly-connected consumers were offered one-on-one briefings, with 20 held on transmission pricing and the 2022–27 proposal
- Regional engagement – Powerlink's master stakeholder list of more than 450 contacts included regional representatives who were sent information and invited to participate in engagement, including contact being made with key regional representatives. Powerlink provided high-level briefings to 20 local governments across Queensland
- Digital engagement – Powerlink established a dedicated section on its website as a central point of information on its proposal, as well as to facilitate interactive feedback
- Formal research – Powerlink sought consumer and stakeholder feedback insights through its annual Stakeholder Perception Survey. Powerlink also informs its network planning function through the Queensland Household Energy Survey on consumption patterns, uptake of solar/new technology, and sentiment towards energy companies
- Informal discussions and feedback – throughout its 2022–27 proposal's development, Powerlink sought regular informal feedback and responded to questions/emails from consumers, stakeholders, and the AER's CCP23 and staff.

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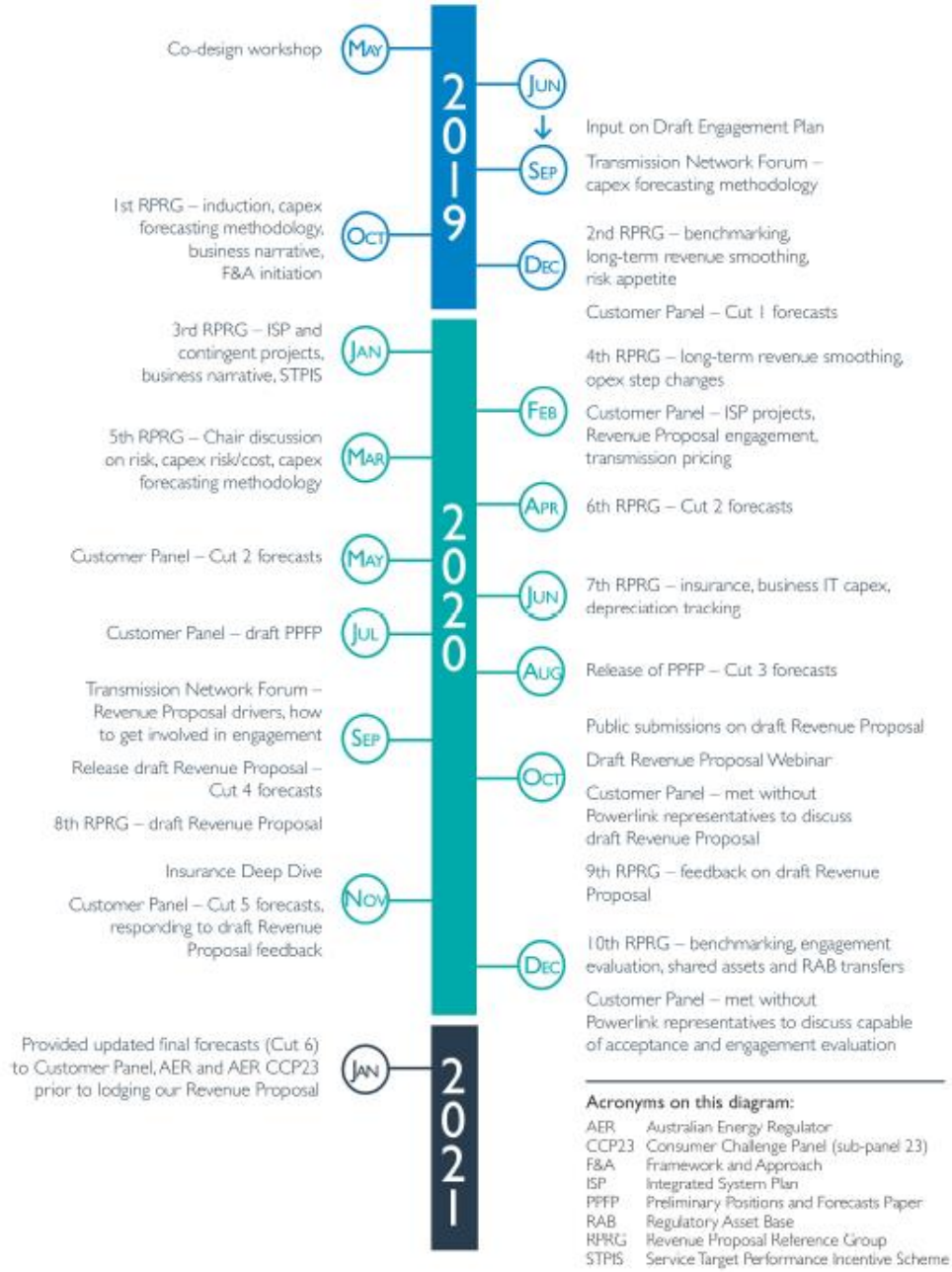
[26] Powerlink's Customer Panel members include: Aurizon, BHP, Council on the Ageing, CS Energy, Commonwealth Scientific and Industrial Research Organisation, Edify Energy, Energy Consumers Australia (up to August 2020), Energy Queensland, Energy Users Association of Australia, Queensland Farmers' Federation, Queensland Resources Council, Shell and St Vincent de Paul. Invitees include AER staff and CCP23.

[27] Powerlink's RPRG members include: CS Energy, Energy Users Association of Australia, Queensland Farmers' Federation, Shell, Energy Consumers Australia (up to June 2020) and Council on the Ageing (from July 2020). Invitees include AER staff and CCP23.

[28] A summary of the insurance deep dive is published on Powerlink's website: file:///C:/Users/sjova/Work%20Folders/Downloads/Insurance%20Deep%20Dive%20Overview.pdf

A timeline of Powerlink's key engagement activities on its 2022–27 proposal, including key topics discussed with stakeholders, is provided at Figure 1.[29]

Figure 1 Powerlink's 2022–27 proposal engagement timeline

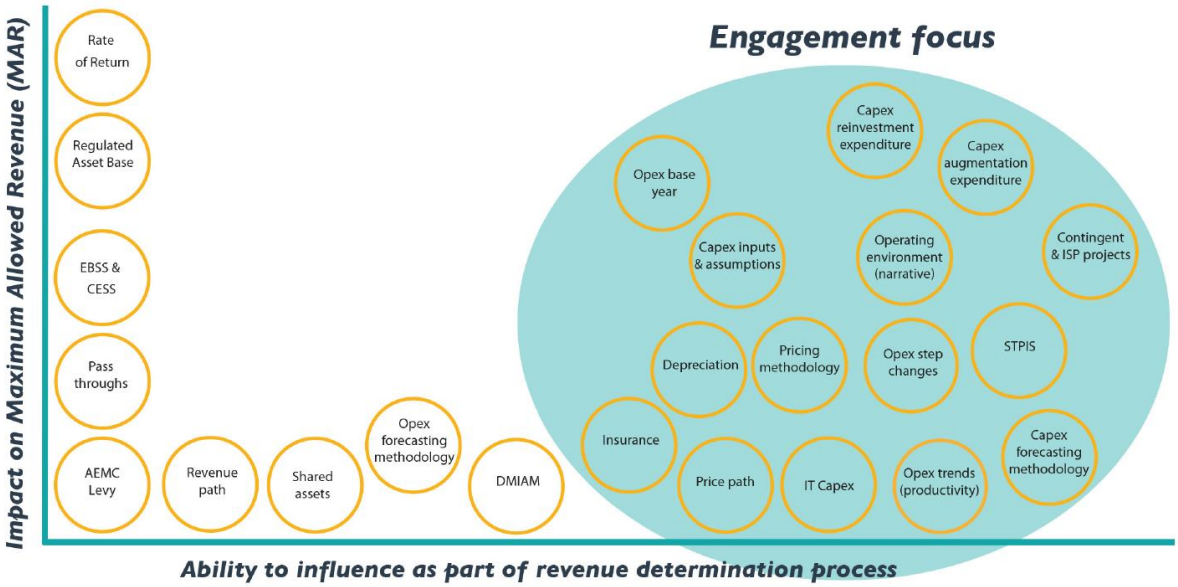


Source: Powerlink, *2023–27 Revenue proposal*, January 2021, p. 29.

[29] Powerlink, *2023–27 Revenue proposal*, January 2021, p. 29.

As set out in Figure 2, Powerlink submits that during the May 2019 co-design workshop, participants plotted elements they considered had the largest impact on revenue against the ability for each element to be influenced by engagement.[30] We invite stakeholder views on the engagement focus areas identified.

Figure 2 Powerlink's 2022–27 proposal engagement scope



Source: Powerlink, *2023–27 Revenue proposal*, January 2021, p. 23.

[30] Powerlink updated its scope of engagement in September 2020 to include insurance and demand management innovation allowance mechanism (DMIAM); Powerlink, *2023–27 Revenue proposal*, January 2021, p. 22.

Powerlink submits that, in developing its 2022–27 proposal, it had regard to the International Association for Public Participation (IAP2) Spectrum to help it select the appropriate level of participation in its engagement program. As set out in Table 4, to demonstrate how Powerlink adjusted its engagement focus in response to stakeholder feedback, it compared its original September 2019 engagement plan against the topics it had engaged on by January 2021.[31]

Table 4 Powerlink's 2022–27 engagement scope against the IAP2 Spectrum

	Timing	
Level of IAP2 Spectrum	Engagement scope as per Engagement Plan September 2019	Engagement scope as at January 2021
Empower To place the final decision-making in the hands of customers and stakeholders	Nil	Decision on whether our Revenue Proposal is capable of acceptance[(1)].
Collaboration To partner with customers to formulate alternatives and incorporate their advice into final decisions to the maximum extent possible	Engagement approach. Contingent and Integrated System Plan (ISP) projects. Operating environment (Business Narrative).	Engagement approach. Operating environment (Business Narrative). Contingent projects (including contingent reinvestment concept). Depreciation tracking approach. Capable of acceptance criteria. Preliminary Positions and Forecasts Paper (PPFP) content.
Involve To work directly with customers and stakeholders to ensure their concerns and aspirations are directly reflected in the alternatives developed	Capital expenditure – augmentation expenditure, reinvestment expenditure, forecasting methodology. Operating expenditure – efficient base year, step changes. Service Target Performance Incentive Scheme (STPIS).	Insurance. Capital expenditure – forecasting methodology. Operating expenditure – efficient base year, step changes, productivity STPIS – potential review of scheme and relevant years for setting targets. Transmission Pricing Consultation/Proposed Pricing Methodology. Cyber security. Long-term revenue smoothing. Publication of a draft Revenue Proposal. Affordability – in the context of capital and operating expenditure forecasts.
Consult To obtain feedback on alternatives and draft proposals	Capital expenditure – key inputs and assumptions, Information Technology. Operating expenditure – forecasting methodology, trends (productivity). Price and revenue path. Pricing Methodology. Australian Energy Market Commission (AEMC) Levy. Depreciation.	ISP projects. Capital expenditure – augmentation expenditure, reinvestment expenditure, key inputs and assumptions, Information Technology. Inflation – impacts on revenue from different treatments of inflation. AER Benchmarking.

Continued…

[31] Powerlink, *2023–27 Revenue proposal*, January 2021, p. 23.

Level of IAP2 Spectrum	Timing Engagement scope as per Engagement Plan September 2019	Engagement scope as at January 2021
Inform To provide balanced information to keep customers and stakeholders informed	Rate of return. Efficiency Benefit Sharing Scheme (EBSS) and Capital Expenditure Sharing Scheme (CESS). RAB. Shared assets. Pass throughs.	Operating expenditure – forecasting methodology. AEMC Levy. Powerlink risk appetite. Proposed rate of return. EBSS and CESS. RAB impacts. Shared assets. Pass throughs events. COVID-19 potential impacts.

(1) We recognise the IAP2 spectrum definition of empower is to implement what customers decide. This inclusion is not to be read that the Final Decision on our Revenue Proposal is in the hands of customers, rather to indicate our intent to empower and encourage customers to make their own decision on capable of acceptance, which should be taken into account by the AER and ourselves.

Source: Powerlink, *2023–27 Revenue proposal*, January 2021, p. 24.

Questions

5. Do you think Powerlink has engaged meaningfully with consumers on all key elements of its 2022–27 proposal? Are there any key elements that require further engagement?
6. To what extent do you consider you were able to influence the topics engaged on by Powerlink? Please give examples.
7. With regard to IAP2 Spectrum, do you think Powerlink selected an appropriate level of participation in the engagement program for its 2022–27 proposal (see Table 4)? Please provide examples of engagement activities that Powerlink conducted very well, and not as well?
8. To what extent do you consider Powerlink's 2022–27 proposal ties to your expressed views as a consumer?
9. Are there any aspects of Powerlink's consumer engagement that could have been done better? If yes, what opportunities are there for Powerlink to act on your feedback?

3.2.4 Powerlink's self-assessment of its consumer engagement approach

In its 2022–27 proposal, Powerlink self-assessed its consumer engagement approach under the AER's consumer engagement framework, as set out in Table 5.[32] We commend Powerlink for doing so, and encourage stakeholder views on Powerlink's self-assessment.

[32] Ibid., pp. 18-19.

Table 5 Powerlink's self-assessment of its consumer engagement approach under the AER's consumer engagement framework

Criteria	Examples of how this could be assessed	Powerlink self-assessment against criteria
Nature of engagement	• Customers partner in forming the proposal rather than asked for feedback on the proposal. • Relevant skills and experience of the customers, representatives and advocates. • Customers provided with impartial support to engage with energy sector issues. • Sincerity of engagement with customers. • Independence of customers and their funding. • Multiple channels used to engage with a range of customers across Powerlink's customer base.	• Co-design approach to set engagement approach, scope, techniques and evaluation (refer Section 3.3.3). • Highly experienced Customer Panel, with many involved since 2015. Several are also members of the AER's Consumer Challenge Panel (refer Section 3.5). • Feedback on engagement confirms it has been genuine, open and authentic (refer Section 3.9). • Wide range of engagement channels used including Customer Panel meetings, RPRG meetings, large forums, webinars, deep dives, one-on-one briefings, social media and website (refer sections 3.6 and 3.7). • Terms of Reference for the RPRG, included in Appendix 3.04, outlined funding to members to undertake independent research and outlined non-financial support mechanisms.
Breadth and depth	• Clear identification of topics for engagement and how these will feed into the Revenue Proposal. • Customers consulted on broad range of topics. • Customers able to influence topics for engagement. • Customers encouraged to test the assumptions and strategies underpinning the proposal. • Customers were able to access and resource independent research and engagement.	• Clear engagement scope co-designed with customers up-front, on the basis of the impact on MAR (refer Section 3.4). • A calendar of potential topics and dates for engagement was provided at the beginning of the RPRG process. • Engagement scope was regularly updated based on customer feedback. Demonstrated by several updates to the Engagement Plan (refer to Appendix 3.01 and table in Section 3.4). • Customers were encouraged to provide input and feedback during and outside meetings. • Customer Panel members stated[1]: o The panel are unanimous in our view that Powerlink's engagement with us has been genuine, consistent and deep. We also acknowledge the consistent high-level efforts of Powerlink staff to ensure that they engage meaningfully with us. • Two Customer Panel meetings were organised without Powerlink representatives present to allow frank discussion on the draft Revenue Proposal, engagement evaluation and capable of acceptance criteria. • With regard to customers being able to access and resource independent research and engagement, refer to the comment in the table above on the Terms of Reference for the RPRG.
Clearly evidenced impact	• Proposal clearly tied to expressed views of customers. • High level business engagement (e.g. customers given access to Powerlink's Chief Executive and/or Board). • Powerlink has responded to customer views rather than just recording them. • Impact of engagement can be clearly identified. • Submissions on proposal show customers feel the impact is consistent with their expectations.	• Influence of engagement clearly visible through changes in key aspects of the Revenue Proposal over the progressive development of five sets of expenditure and revenue forecasts (refer Section 3.8), and in our Revenue Proposal. • Active involvement in engagement activities by our Chair, Board, Chief Executive and Executive Team. Customer feedback was communicated regularly to the Board and Executive Team to inform decision-making. • Detailed minutes of Customer Panel and RPRG meetings demonstrate publicly how feedback has influenced decision-making (refer Section 3.8). • In their Statement on Engagement[2] our Customer Panel said there were a number of cases where they felt they influenced the Revenue Proposal and that their level of influence was high, relative to other engagement processes in the industry.

Continued…

Criteria	Examples of how this could be assessed	Powerlink self-assessment against criteria
Proof point	• Reasonable opex and capex allowances proposed, for example: o In line with, or lower than, historical expenditure. o In line with, or lower than, the AER's top-down analysis of appropriate expenditure. o If not in line with top-down, can be explained through bottom-up category analysis.	• We propose a 3% real reduction in capital expenditure compared to actual/forecast in the current regulatory period (refer Chapter 5 Forecast Capital Expenditure). • We propose a target of no real growth in underlying operating expenditure compared to actual/forecast in the current period for 2023-27 regulatory period (refer Chapter 6 Forecast Operating Expenditure). • Our Regulatory Asset Base (RAB) is reducing in both real and nominal terms (refer Chapter 8 Regulatory Asset Base). • Our proposed MAR is 15% lower than in the current regulatory period. • We forecast a reduction in the indicative transmission price in the first year of the next regulatory period of about 11% in nominal terms. Average price growth is expected to remain within inflation for the remainder of the regulatory period (refer Chapter 11 Maximum Allowed Revenue and Price Impact).

(1) Appendix 3.03 Customer Panel Statement on Engagement.

(2) Appendix 3.02 Submissions on our draft Revenue Proposal.

Source: Powerlink, *2023–27 Revenue proposal*, January 2021, pp. 18-19.

Questions

10. What are your views on Powerlink's self-assessment of its consumer engagement approach under the AER's consumer engagement framework (see Table 5)? Is it an accurate assessment of Powerlink's consumer engagement on its 2022–27 proposal, or would you assess Powerlink differently?
11. Do you consider the AER's consumer engagement framework is appropriate for assessing Powerlink's 2022–27 proposal? Are any criteria not appropriate, or absent but relevant to an accurate assessment of Powerlink's proposal?

3.2.5 Powerlink's Customer Panel statement on engagement

At Powerlink's request, its Customer Panel met separately in December 2020 to discuss its experiences of engagement with Powerlink and to make formal statement about that engagement. As part of Powerlink's 2022–27 proposal documentation, the Customer Panel included the following statement.[33]

On the issue of capability of acceptance:

> "Some Panel members feel they don't have the skills or grounding to be able to make a formal judgement about whether the Powerlink proposal is 'capable of acceptance' as per the AER terminology. There's a suggestion that we can't make a real judgement until we have seen the full proposal.
>
> We also considered whether the 'capable of acceptance' judgement could be made only once, either when we see the January 2021 proposal, or even after the AER Draft Decision.
>
> It would have been really useful for the AER to have explained specifically to us what they mean by 'capable of acceptance', because some of us perceive it may be 'tighter' and more declaratory than the 'looser' definition that seemed to be proposed by Powerlink. There is a

[33] Powerlink, *2023–27 Revenue proposal – Appendix 3.03, Customer Panel statement on engagement*, January 2021, pp. 2-4.

feeling among Panel members that the Customer Panel may provide a statement that Powerlink's proposal is 'capable of acceptance, subject to some conditions are met or clarified."

Other comments on Powerlink's engagement included:

"The Panel are unanimous in our view that Powerlink's engagement with us has been genuine, consistent and deep…

The Panel easily identified a number of cases where we feel we have influenced the Revenue Proposal…The Panel view this level of influence as high relative to other engagement processes in the industry…

The majority of Panel members are happy to declare the Revenue Proposal as reasonable: there's nothing left on the table we are still debating, and there's unlikely to be any surprises, so the package that we can see at the moment is reasonable. Some Panel members are less comfortable with making this declaration at this point, either because they have some specific concerns about issues Powerlink has not yet addressed with the Panel, or due to their relative lack of expertise and prior experience with such processes…

Panel members made a number of suggestions for additional criteria (mostly these emerged from discussions about things that Powerlink had also done well in their engagement with us):

- What could have been done better in engagement?
- Is engagement well structured, organised and documented?
- Is sufficient time given for 'real' engagement?
- Consideration of both quantity and quality (time for extra one-on-one meetings).
- Does engagement take customers on a journey? (e.g. provide a business narrative, which is important for context setting.)
- How were divergent Panel member views dealt with?
- Were there any surprises during engagement?"

In terms of potential areas for improvement in Powerlink's engagement:

"There was some sense that Powerlink is trying to push the Customer Panel to a specific response, perhaps leading/coercing us more than they should. If Powerlink is asking the Panel to judge 'capable of acceptance', then Powerlink should have first clarified what that means with the AER first, so that then the Panel members had a clearer target to judge against. But we also note that the 'capable of acceptance' drive is quite recent and the AER is still in the process of developing its own detailed understanding of what that means.

There was a suggestion/call for more diversity on the Panel, and perhaps some succession planning for Panel members, as well as some more targeting of voices that are currently absent.

Noting the excellent depth of Powerlink's engagement with the Panel, we also feel that there could be better breadth of engagement with customers and stakeholders outside of the Panel. We acknowledge the difficulty in conducting such engagement, but would like to see more evidence of engagement with local councils, smaller businesses, etc., as well as evidence that engagement with them has also influenced Powerlink's decisions. The Panel feel that we would be well-served with more information from other stakeholders; it would enhance our capability…"

Questions

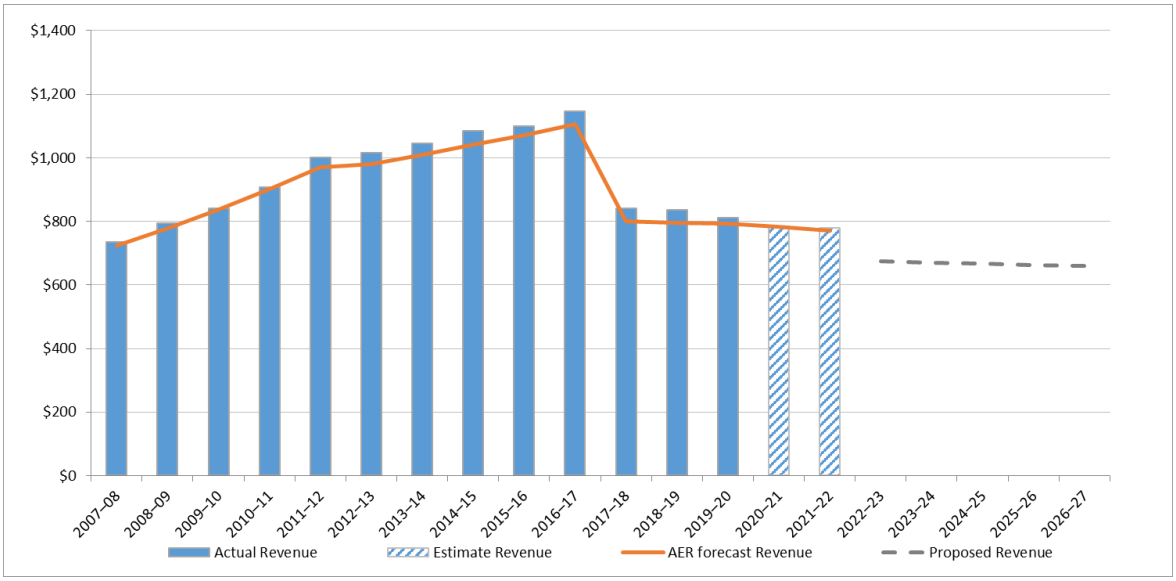
12. Do you have views on the statement on engagement submitted by Powerlink's Customer Panel? For example, you may have thoughts on the breadth of Powerlink's engagement, or whether you ever felt led/coerced in your engagement with Powerlink.

4 What's driving the change in revenue over time?

In section 2, we outlined Powerlink's proposed 2022–27 revenue in nominal terms, taking into account expected price inflation. The changing impact of inflation over time makes it difficult to compare revenue from one regulatory period to the next on a like-for-like basis. To do this, we use 'real' values based on a common year (in this case, 2021–22), which have been adjusted to remove the impact of inflation.

Figure 3 shows a drop in Powerlink's proposed real revenues for the 2022–27 period compared to the 2017–22 period, but a stable annual profile. Lower real revenues are largely driven by a decline in the rate of return over recent years.

Figure 3 Changes in regulated revenue over time ($million, 2021–22)

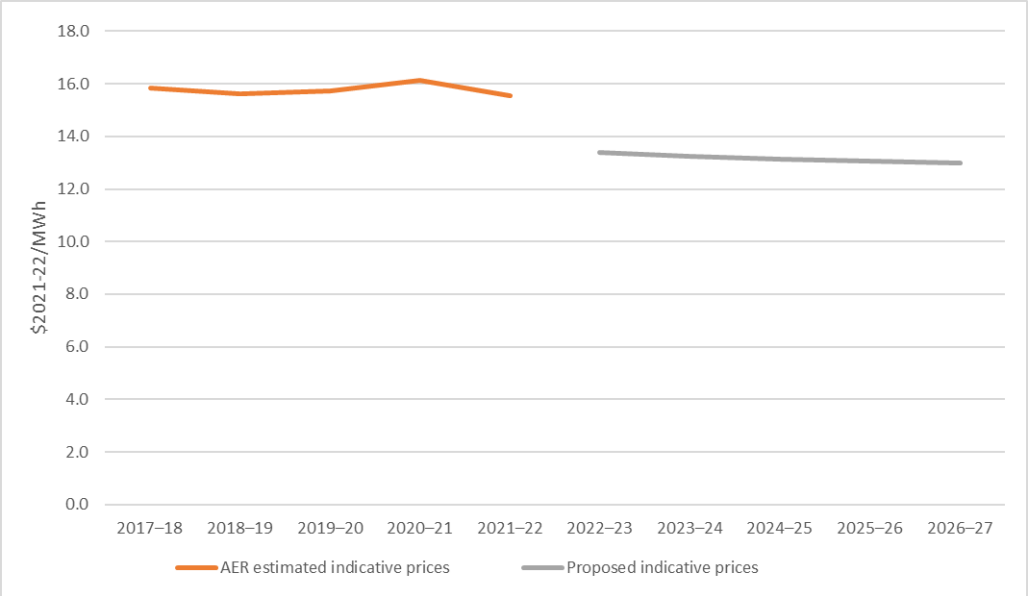


Source: AER, *Final decision PTRM* for Powerlink for 2017–22 and 2012–17; Powerlink, *2022–27 PTRM*, January 2021.

4.1 Impact on transmission prices

Figure 4 shows that, to date, real prices have remained relatively stable over the 2017–22 period. Powerlink's 2022–27 proposed revenue, if accepted, would translate to an estimated 14 per cent real decrease in transmission prices in 2021–22, resulting in a stable real price level of around $13 per megawatt hour (MWh) over the 2022–27 period for Queensland consumers.

Figure 4 Change in 2017–22 indicative prices to proposed 2022–27 indicative prices ($2021–22) per MWh



Source: AER, *Final decision PTRM for 2017–22*; Powerlink, *2022–27 PTRM*, January 2021; AEMO, *2020 Electricity Statement of Opportunities (ESOO)*.

Questions

13. Do you have views on the estimated transmission price impacts arising under Powerlink's 2022–27 proposal?

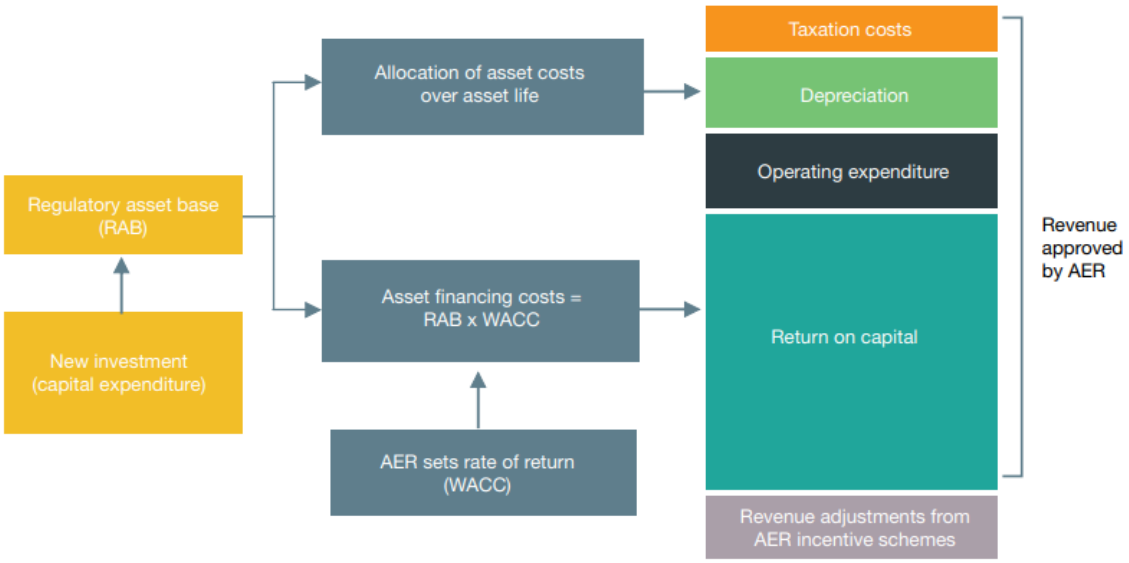
4.2 How we determine forecast revenue

Powerlink's proposed 2022–27 revenue reflects its forecast of the efficient cost of providing transmission network services over the 2022–27 period.

The revenue proposal, and our assessment of it under the Law and Rules, are based on a 'building block' approach which looks at five cost components (see Figure 5):

- return on the regulatory asset base (RAB) – or return on capital, to compensate investors for the opportunity cost of funds invested in this business
- depreciation of the RAB – or return of capital, to return the initial investment to investors over time
- forecast opex – the operating, maintenance and other non-capital expenses, incurred in the provision of network services
- revenue increments/decrements – resulting from the application of incentive schemes, such as the efficiency benefit sharing scheme (EBSS) for opex and capital expenditure sharing scheme (CESS) for capex
- estimated cost of corporate income tax.

Figure 5 The building block model to forecast network revenue



Source: AER, *State of the Energy Market 2020*, June 2020, p. 123.

We use an incentive approach where, once regulated revenues are set for a five-year period, network businesses that keep actual costs below regulatory forecast costs retain part of the benefit. This benchmark incentive framework is a foundation of the AER's regulatory approach and promotes the delivery of the NEO. Service providers have an incentive to become more efficient over time, as they retain part of the financial benefit from improved efficiency. Consumers also benefit when efficient costs are revealed and a lower cost benchmark is set in subsequent regulatory periods.

Our assessment breaks these costs down further. For example:

- capex – this refers to capital costs and expenditure incurred in the provision of network services and mostly relates to assets with long lives, the costs of which are recovered over several regulatory control periods. The forecast capex approved in our decisions directly affects the size of the capital base and, therefore, the revenue generated from the return on capital and depreciation building blocks. All else being equal, higher capex will lead to a higher RAB, return on capital and depreciation
- RAB value – the RAB accounts for the value of regulated assets over time. To set revenue for a new regulatory control period, we take the opening RAB value from the end of the last period, and roll it forward year-by-year by indexing it for inflation, adding new capex and subtracting depreciation and other possible factors (such as disposals or consumer contributions).[34] This gives us a closing RAB value at the end of each year of the regulatory control period. The RAB value is used to determine the return on capital (see section 5.1) and depreciation (see section 5.2) building blocks.

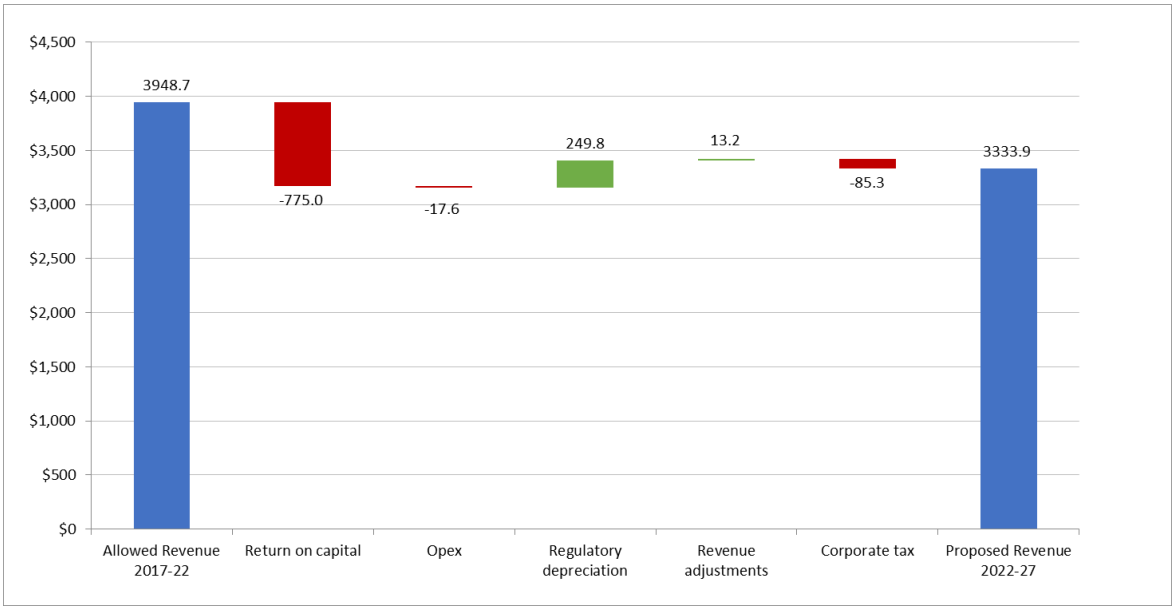
[34] The term 'rolled forward' means the process of carrying over the value of the RAB from one regulatory year to the next. This is reflected in the AER's roll forward model (RFM).

5 Key elements of Powerlink's revenue proposal

Powerlink's proposal, if accepted, would allow it to recover $3,333.9 million ($2021–22, unsmoothed) from its consumers over the 2022–27 period. This is 15.6 per cent lower than our decision for the 2017–22 period.

Figure 6 highlights changes in Powerlink's proposal at the 'building block' level to illustrate what is driving its proposed decrease in total revenue from 2017–22 to 2022–27. As shown, the return on capital building block is a key factor in the revenue decrease.

Figure 6 Changes in building blocks: Powerlink's total revenue 2017–22 to forecast revenue 2022–27 ($ million, 2021–22, unsmoothed)



Source: AER, *Final decision PTRM for 2017–22*; Powerlink, *2022–27 PTRM*, January 2021.

5.1 Rate of return

The return each business is to receive on its capital base (the 'return on capital') is a key driver of proposed revenues. We calculate the regulated return on capital by applying a rate of return to the RAB value.

We estimate the rate of return by combining the returns of two sources of funds for investment: equity and debt. The allowed rate of return provides the business with a return on capital to service the interest rate on its loans, and give a return on equity to investors.

Powerlink proposes a return on capital of $1,377.7 million ($2021–22) for the 2022–27 period, which is $779.7 million (36.1 per cent) lower than for the 2017–22 period.[35] This is

[35] Powerlink, *2023–27 Revenue proposal*, January 2021, p. 116.

largely driven by a decline in the rate of return over recent years from around 6 per cent to 4.44 per cent in the first year of the 2022–27 period.

We must apply the 2018 Rate of Return Instrument (the Instrument) published by us and the values therein to calculate the rate of return for Powerlink.[36] There is no discretion available to the AER in determining the rate of return. We must apply the Instrument which mandates the parameter for the weighted average cost of capital. Powerlink has proposed its rate of return in accordance with the Instrument, as set out in Table 6.

Table 6 Key rate of return values

	Powerlink's proposal	2018 Instrument
Return on equity	4.48% (indicative)	Risk free rate + 3.66%
Risk free rate	0.82% (indicative)	Based on criteria in the instrument
Market risk premium	6.1%	6.1%
Equity beta	0.6	0.6
Equity risk premium (market risk premium*equity beta)	0.6*6.1%=3.66%	0.6*6.1%=3.66%
Return on debt (nominal pre-tax)	4.42% (indicative)	Based on criteria in the instrument
Gearing	60%	60%
Gamma (value of imputation credits)	0.585	0.585

Source: AER analysis; Powerlink, *2023–27 Revenue proposal*, January 2021.

5.2 Regulatory asset base and depreciation

The regulatory asset base (RAB) is the value of assets used by Powerlink to provide network services. The value of the RAB substantially impacts Powerlink's revenue requirement, and the price consumers ultimately pay. Other things being equal, a higher RAB would increase both the return on capital and depreciation components of the revenue determination.

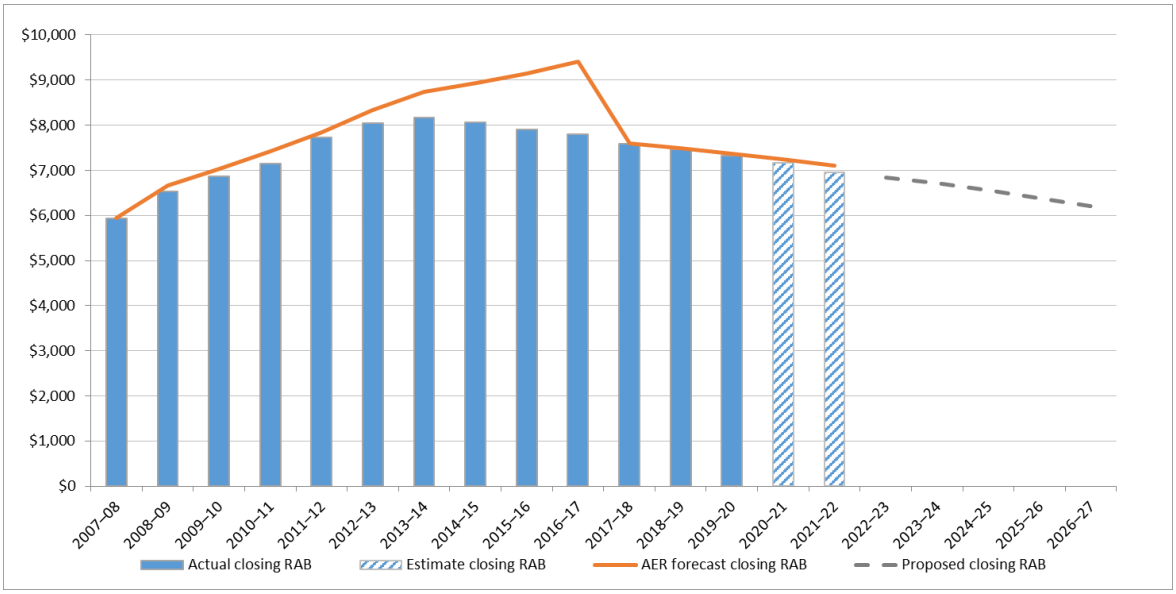
Powerlink proposes a RAB of $6,939.0 million ($ nominal) by the end of 2022–27 period, which is $19.4 million lower than for the 2017–22 period, or $749.6 million lower in real terms.[37] This follows a forecast RAB reduction of $111.0 million ($ nominal) over the 2017–22 period, or $621.9 million in real terms. The proposed RAB reductions over the 2022–27 period are driven by lower forecast capex and higher regulatory depreciation. Figure 7 shows the value of Powerlink's RAB over time.

[36] AER, *Rate of return instrument,* 17 December 2018; AER, *Rate of return instrument explanatory statement*, December 2018. Available at: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-modelsreviews/rate-of-return-guideline-2018/final-decision.

[37] Powerlink, *2023–27 Revenue proposal*, January 2021, p. 112.

Regulatory depreciation is provided so investors recover their investment over the economic life of the asset (return of capital). Powerlink proposes regulatory depreciation of $881.3 million ($2021–22) for the 2022–27 period, which is $261.2 million (42 per cent) higher than for the 2017–22 period.[38] Higher depreciation is due to the change in the depreciation forecasting approach from a weighted average remaining life (WARL) approach to a year-by-year tracking approach, lower forecast inflation and an increase in depreciation from the recovery of prior years' indexation. Powerlink is also proposing a transitional adjustment to smooth the revenue impact of the change to a year-by-year tracking approach.

Figure 7 Powerlink's RAB value over time ($ million, 2021–22)



Source: AER, *Final decision PTRM* and *RFM for 2017–22*; *Powerlink, PTRM and RFM for 2022–27*.

Question

14. Do you have views on Powerlink's proposed RAB, as set out in its 2022–27 proposal?
15. Do you have views on Powerlink's proposed depreciation approach, as set out in its 2022–27 proposal?

5.3 Capital expenditure

Capital expenditure (capex) refers to the capital cost and expenditure incurred in the provision of Powerlink's network services. Capex is added to the RAB, and so forms part of the capital costs of the building blocks used to determine total revenue.

We must accept the proposed forecast of total capex if we are satisfied it reasonably reflects the capex criteria set out in the Rules.[39] The capex criteria relate to the efficient

[38] Ibid., p. 120.
[39] NER, cl.6A.6.7(c).

costs incurred by a prudent operator in light of realistic demand forecasts and cost inputs. We must have regard to the capex factors in the Rules when making that decision.[40]

5.3.1 How we assess capex

We assess forecast capex proposals through a combination of top-down and bottom-up assessments. Our focus is typically on determining the prudent and efficient level of forecast capex in aggregate. In undertaking a bottom-up assessment, we undertake a project level assessment of the need for the expenditure, and the efficiency of the proposed projects and related expenditure to meet any justified expenditure need. This is likely to include consideration of the timing, scope, scale and level of expenditure associated with proposed projects.

If we are satisfied the service provider's proposal reasonably reflects the capex criteria, we accept it. If we are not satisfied, the Rules require us to put in its place a substitute estimate which we are satisfied reasonably reflects the capex criteria taking into account the capex factors.[41]

The assessment techniques that we may adopt to assess Powerlink's forecasts of total capex are outlined in our expenditure forecast assessment guideline.[42] We note that unlike our assessment for opex, past actual capex for transmission network service providers (TNSP) may not be an appropriate starting point given it is largely non-recurrent and hence more 'lumpy', and so past expenditures or work volumes may not be indicative of future volumes. Further, TNSPs will tend to propose smaller volumes of large, high-cost projects which we may need to consider on a case-by-case basis.

5.3.2 Powerlink's capex proposal

Powerlink proposes forecast capex of $863.9 million ($2021–22) for the 2022–27 period.[43] This represents a 3.1 per cent decrease compared to actual/expected expenditure for the 2017–22 period, and a substantial reduction on prior periods.[44] Powerlink submits the proposed capex decrease largely reflects:[45]

- non load-driven expenditure of $726.1 million, which is $37.5 million (4.9 per cent) lower than actual/expected expenditure for the 2017–22 period
- load-driven expenditure of $30.2 million, which is $3.4 million (13 per cent) higher than actual/expected expenditure for the 2017–22 period
- non-network expenditure of $107.7 million, which is $6.7 million (6.7 per cent) higher than actual/expected expenditure for the 2017–22 period.

Powerlink's proposed capex forecast is predominantly non load-driven expenditure ($726.1 million or 84 per cent). In this category, Powerlink is proposing $674.8 million in reinvestment in the transmission network to maintain security, reliability and quality of

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40 NER, cl.6A.6.7(e).
41 NER, cl.6A.13.2(b)(4).
42 AER, *Expenditure forecast electricity distribution guideline*, November 2013.
43 Powerlink, 2022–27 *Revenue proposal 2023–27*, January 2021, p. viii.
44 Ibid.
45 Ibid.

supply as assets continue to age.[46] Reinvestment expenditure is primarily undertaken due to end of asset life, asset obsolescence, and asset reliability or safety requirements.[47]

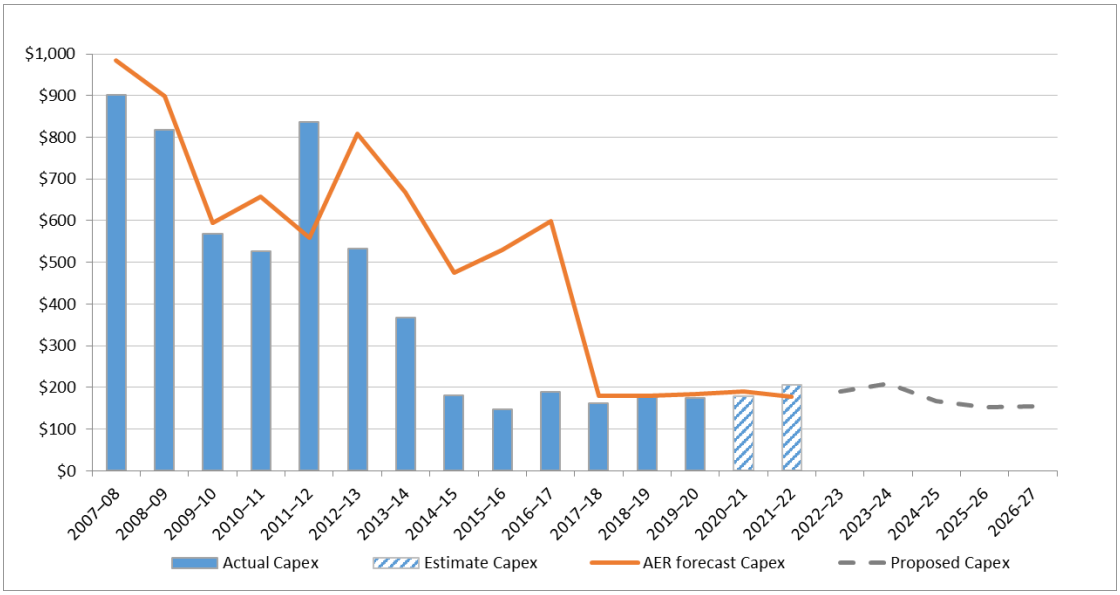
Powerlink's capex forecast approach involves a hybrid top-down and bottom-up method, and includes the provision of project-specific supporting justification for over 70 per cent of total forecast capex.[48] Powerlink's approach to forecasting replacement capex utilises a replacement expenditure (repex) model and an economic assessment framework to determine the preferred replacement options.

Powerlink submits its capex forecast reflects the key drivers for investment, including:[49]

- reinvestment in existing network assets, particularly to address increasing levels of corrosion across Powerlink's fleet of over 23,500 steel transmission towers, and the cyclical replacement of digital technologies that protect and control high voltage assets due to obsolescence/lack of support and spares
- investment in network assets to meet the prescribed standards of power system technical performance as minimum demand decreases and there is greater variability in power flows across the network
- forecast load-driven capex reflecting minimal growth in peak demand. The majority of Powerlink's forecast load-driven expenditure is for easement acquisition, primarily for the Queensland/NSW Interconnector (QNI) Medium upgrade project.

Figure 8 shows Powerlink's proposed capex forecast compared to historic levels.

Figure 8 Powerlink's capex over time ($ million, 2021–22)



Source: AER, *Final decision PTRM for 2017–22*; Powerlink, *2022–27 PTRM*, January 2021.

[46] Ibid., p. 60.
[47] Ibid., p. viii.
[48] Ibid., p. ix.
[49] Ibid., p. 61.

5.3.3 Key drivers of the capex proposal

Powerlink's non load-driven expenditure is the most significant contributor to forecast capex for the 2022–27 period. Forecast non load-driven expenditure of $726.1 million is $37.5 million (4.9 per cent) lower than actual/expected expenditure for the 2017–22 period, and a substantial reduction on prior periods.[50] The majority ($674.8 million) of this proposed expenditure is in the reinvestment category, with the remainder relating to investments to meet power system performance standards, physical security, compliance and other minor network capex.

Replacement of ageing steel lattice transmission towers is a key driver of Powerlink's reinvestment program. Significant investment occurred to interconnect the Queensland network from the early 1970s to 1980s, with nearly 20 per cent of Powerlink's current fleet of transmission towers constructed between 1977 and 1981.[51]

Another significant driver of reinvestment expenditure is the replacement of Powerlink's fleet of digital secondary systems and telecommunications assets.[52] The typical product lifespan for Powerlink's secondary systems assets is around 20 years.[53] Powerlink's network expanded significantly during the 2000s, in response to growth in consumer demand, and is expected to require an increased volume of secondary systems assets to be reinvested in the 2022–27 and 2027–32 periods.[54]

Powerlink's load-driven expenditure of $30.2 million for the 2022–27 period is $3.4 million (13 per cent) higher than actual/forecast expenditure for the 2017–22 period.[55] Network augmentation expenditure remains low, reflecting minimal growth in peak demand.

Powerlink's non-network capex of $107.7 million for the 2022–27 period is $6.7 million (6.7 per cent) higher than actual/forecast expenditure for the 2017–22 period.[56] This includes $59.3 million for information and communications technology (ICT) expenditure, which is $12.8 million (17.8 per cent) lower than for the 2017–22 period.[57] The ICT capex forecast consists of $30.1 million on non-recurrent expenditure and $29.2 million on recurrent expenditure.[58]

Figure 9 shows the breakdown of Powerlink's proposed capex by driver category.

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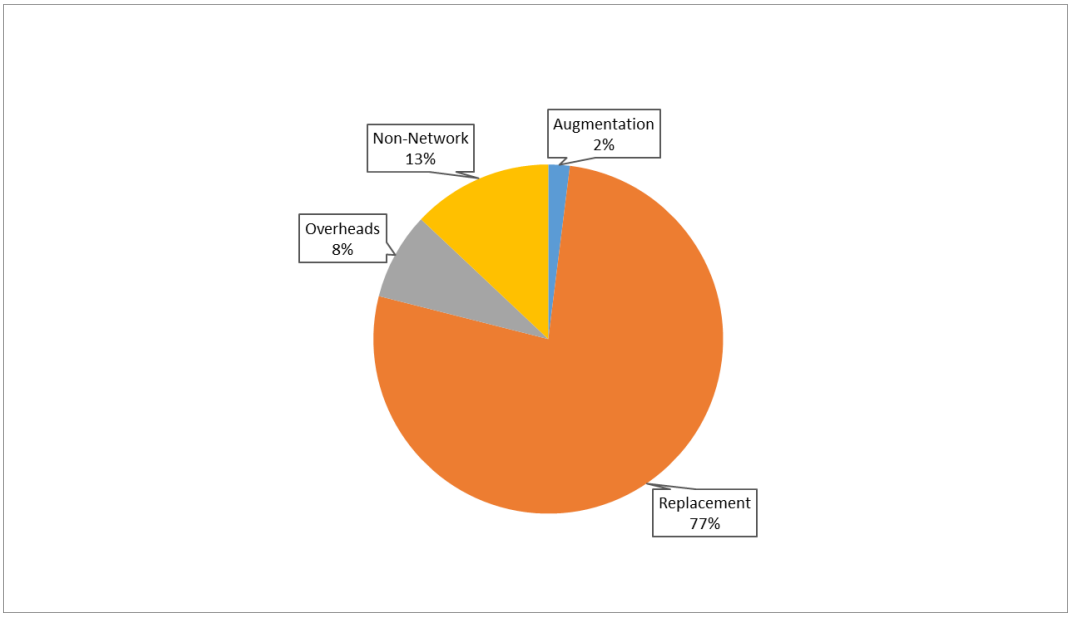
50 Ibid., p. 69.
51 Ibid.
52 Ibid., p. 70.
53 Ibid., p. 71.
54 Ibid.
55 Ibid., p. 68.
56 Ibid., p. 71.
57 Ibid., p. 60.
58 Ibid., p. 72.

Figure 9 Composition of proposed capex by driver



Source: Powerlink, 2022–27 *Revenue proposal*, January 2021.

Our role is to ensure that Powerlink's forecast capex for the 2022–27 period is consistent with the capex criteria; efficiency, prudency and a realistic expectation of the demand forecast and cost inputs required to achieve the capex objectives under the Rules.

As part of our assessment of Powerlink's capex forecast, we are interested in stakeholder views as to how well Powerlink's proposal addresses the key themes of affordability, sustainability, and reliability in accordance with the capex objectives,[59] and the extent to which Powerlink's capex forecast addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal. Stakeholders should also feel free to comment on any other aspect of Powerlink's capex proposal.

Questions

16. Do you consider Powerlink's capex proposal addresses the key themes of affordability, sustainability, and reliability?
17. Do you consider Powerlink's capex proposal addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal?
18. Do you consider Powerlink's hybrid approach to forecasting replacement capex, including Powerlink's use of the replacement expenditure (repex) model, is appropriate and likely to produce a forecast of efficient replacement capex?
19. Do you consider Powerlink's economic assessment framework and project documentation provide appropriate justification for its proposed capex projects and programs?
20. Do you consider Powerlink's total forecast capex reasonably reflects the efficient costs of a prudent operator?

[59] NER, cl.6A.6.7(a).

5.3.4 Contingent projects

Powerlink proposed one contingent project for its transmission system. A contingent project is a significant network augmentation project that may be required during the regulatory period but for which the need, timing and costs are currently uncertain. The expenditure for such projects does not form part of the total forecast capex that we will approve in this revenue determination. But, if certain conditions (project-specific 'trigger events') are met, Powerlink may apply to the AER to amend the determination to include the incremental revenue required to undertake the project.

In proposing its contingent project, Powerlink submitted that its 2020 Transmission Annual Planning Report identified several proposals for large mining, metal processing and other industrial loads whose development status is not yet at the stage that they have been included in AEMO's 2020 Electricity Statement of Opportunities (ESOO) central scenario forecast. Powerlink considers these loads have the potential to significantly impact the performance of the transmission system supplying these areas, including power flows reaching the secure limits of the transmission network.

Powerlink identified the Central West and North Queensland zones as areas where significant increases in the demand and energy are plausible during the 2022–27 period. Powerlink consider the most significant sources for this increased load include, but may not be limited to:

- development of the Copperstring transmission project to connect Mt Isa and the North West Minerals province to the National Electricity Market (NEM)
- development of large-scale coal mines in the Galilee Basin and associated rail and port infrastructure.

Powerlink submitted that as demand increases in northern Queensland, transmission congestion may occur, requiring northern Queensland generators to be constrained on. Further, as generation costs are higher in northern Queensland due to reliance on liquid fuels, it may be economic to advance the timing of augmentation to deliver positive net market benefits. Powerlink considers that the additional load in northern Queensland that would justify the network augmentation in preference to continued network support cost is between 250MW and 380MW.

Powerlink's proposed contingent project comprises the stringing of the second circuit of an existing double circuit line between Stanwell and Broadsound that currently has only one side strung. The proposed contingent project is estimated to cost $52.3 million.

Powerlink proposes the following trigger events for its contingent project:

- commitment of additional load in excess of 250MW to be connected to the Central West and/or North Queensland zones that requires the dispatch of higher cost generation in northern Queensland to maintain power transfers within limits
- successful completion of the regulatory investment test for transmission projects (RIT-T), including a comprehensive assessment of credible options, that demonstrates a network investment by Powerlink maximises the net market benefits while meeting Powerlink's reliability of supply obligations to North Queensland
- Powerlink Board commitment to proceed with the project subject to the AER amending Powerlink's 2022–27 revenue determination pursuant to the Rules.

We will assess whether Powerlink's proposed trigger events are appropriate. We may amend the wording of trigger events, if necessary, to ensure consistency across our determinations. Appendix 5.07 Contingent Projects of Powerlink's revenue proposal provides further details on its proposed contingent project and triggers.

Question
21. Do you consider Powerlink's proposed contingent project should be included as a contingent project for the 2022–27 period? Is the proposed project trigger appropriate?

5.4 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital expenditure incurred in the provision of network services. It includes labour costs and other non-capital costs that a prudent service provider is likely to require for the efficient operation of its network. Forecast opex is one of the 'building blocks' used to determine Powerlink's total revenue requirement.

We must accept a service providers' forecast of total opex if we are satisfied it reasonably reflects the opex criteria.[60] The opex criteria relate to the efficient costs incurred by a prudent operator in light of realistic expectations of the demand forecast and cost inputs. We must have regard to the opex factors when assessing the service provider's forecast opex.[61]

If we are not satisfied the opex proposal reasonably reflects the opex criteria, we must not accept it.[62] We must estimate the total required opex that, in our view, reasonably reflects the opex criteria taking into account the opex factors.

5.4.1 How we assess opex

We have outlined our approach to assessing the service providers' forecasts of total opex in our expenditure forecast assessment guideline.[63]

Our approach is to compare the service provider's total forecast opex with an alternative estimate that we develop and that reasonably reflects the opex criteria.[64] By doing this, we form a view on whether we are satisfied that the service provider's proposed total forecast opex reasonably reflects the opex criteria. If we conclude the proposal does not reasonably reflect the opex criteria, we use our estimate as a substitute forecast.

Our estimate is unlikely to exactly match the service provider's forecast because it may not adopt the same forecasting method. However, if the service provider's inputs and assumptions are reasonable, its method should produce a forecast consistent with our estimate.

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60 NER, cl. 6A.6.6(c).
61 NER, cl. 6A.6.6(e).
62 NER, cl. 6A.6.6(d).
63 AER, *Expenditure forecast assessment guideline*, November 2013.
64 Ibid., p. 7.

If a service provider's total forecast opex is materially different to our estimate and we find no satisfactory explanation for this difference, we may form the view that the service provider's forecast does not reasonably reflect the opex criteria. Conversely, if our estimate demonstrates that the service provider's forecast reasonably reflects the opex criteria, we will accept the forecast.[65]

In its 2022–27 proposal, Powerlink states that it adopted the base-step-trend approach to develop a total opex forecast that is prudent and efficient, consistent with AER practice and the expenditure objectives set out in the Rules.[66]

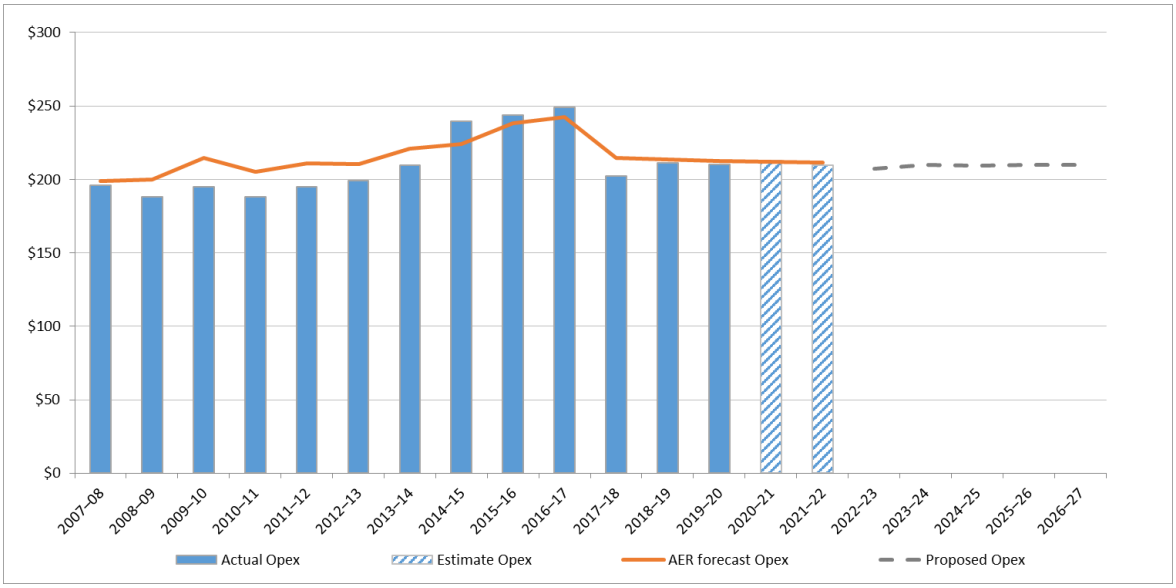
5.4.2 Powerlink's opex proposal

Powerlink proposes total opex of $1,046.4 million ($2021–22) for the 2022–27 period.[67] This is:

- $0.5 million less than Powerlink's estimated opex spend over the 2017–22 period
- $17.7 million (1.7 per cent) less than the opex forecast we approved for the 2017–22 period.

Figure 10 shows the trend in Powerlink's total opex over time.

Figure 10 Powerlink's opex over time ($ million, 2021–22)[68]



Source: Powerlink, *Economic benchmarking – Regulatory Information Notice response 2006–20*; AER, *Final decision PTRM 2007–12*; AER, *Final decision 2012–17 PTRM*; AER, *Final decision 2017–22 PTRM* and *Opex model*; Powerlink, *2023–27 Revenue proposal,* January 2021; AER analysis.

Note: Includes debt raising costs, AEMC levy and Grid support.

65 NER, cl.6A.6.6(c).
66 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 83.
67 Including debt raising costs.
68 Ibid.

5.4.3 Key drivers of the opex proposal

Powerlink has used a base-step-trend approach to forecast opex. This is broadly consistent with our approach to assessing opex, as outlined in our expenditure forecast assessment guideline.

Powerlink proposes 2018–19 as its base year, stating it chose this year as it best reflects a typical year of operations and does not include any COVID-19 cost impacts experienced by the business in 2019–20 and 2020–21.[69] The base opex amount used by Powerlink to trend forward was $206.0 million ($2021–22).

We will use a range of techniques, including benchmarking to test the efficiency of Powerlink's proposed base year opex. As our benchmarking tools for transmission networks are more limited than those available for distribution networks, our standard approach for testing the efficiency of a transmission business' opex is to use our benchmarking results as an indicative check. Where we believe there is sufficient evidence of material inefficiency, we undertake a deeper assessment using techniques such as a bottom-up review of the business' costs. Where we find insufficient evidence of material inefficiency, we rely on the business' historical opex or 'revealed' costs as the starting point to build our alternative forecast of total opex.

At our last (2017–22) determination, we found that Powerlink appeared to be not as efficient as other TNSPs, but ultimately found there was insufficient evidence to find it materially inefficient.[70] Since then, Powerlink has reduced its opex and improved its opex productivity.

Powerlink forecast the Australian Energy Market Commission (AEMC) Levy and debt raising costs as category specific forecasts, and removed these costs ($31.7 million) from the base year total opex forecast.[71]

As set out below, Powerlink's approach to forecasting trend for the 2022–27 period is largely consistent with our standard approach, apart from productivity growth where it has forecast a higher rate than what we typically use:

- output growth – Powerlink forecast an increase of $11.6 million to account for output growth.[72] Powerlink used the output weightings from the 2020 Economic Benchmarking Report, consistent with our standard approach
- price growth – Powerlink forecast an increase of $13.1 million to account for changes in real input prices.[73] The forecast is based on the average of wage price index (WPI) forecasts from its consultant BIS Oxford[74] and the consultant typically used by the

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69 Powerlink, *2023–27 Revenue proposal,* January 2021, pp. 84-85.

70 AER, *Draft Decision Powerlink Transmission Determination 2017−18 to 2021−22, Attachment 7 – Operating expenditure,* September 2016, pp. 7.14-7.16. Available at: https://www.aer.gov.au/system/files/AER%20-%20Draft%20decision%20-%20Powerlink%20transmission%20determination%20-%20Attachment%207%20-%20Operating%20expenditure%20-%20September%202016.pdf

71 Powerlink, *2023–27 Revenue proposal,* January 2021, pp. 85 and 102.

72 Ibid., pp. 93-94.

73 Ibid., pp. 94-95.

74 Labour Cost Escalation Forecasts to FY2027, BIS Oxford Economics, November 2020.

AER, Deloitte Access Economics (DAE).[75] Both forecasts factor in impacts of COVID-19 and the legislated increase in the superannuation levy from 1 July 2021. Powerlink forecast no real growth in non-labour inputs and used the weights generally applied by the AER. This is consistent with our standard approach for forecasting real input price growth

- productivity growth – Powerlink forecast productivity growth of 0.5 per cent per annum, resulting in a $14.7 million decrease.[76] This is higher than our standard approach of using the average productivity growth for transmission from the latest Annual Benchmarking Report (currently 0.31 per cent per annum in the 2020 report) to forecast productivity growth. Powerlink identified areas of its operations where it is aiming to achieve efficiency savings to meet this higher than industry average productivity growth rate.

Powerlink did not propose any step changes.

Powerlink's total opex forecast for the 2022–27 period includes the following category specific forecasts totalling $46.7 million ($2021–22):[77, 78]

- AEMC Levy of $29.7 million
- debt raising costs of $17.0 million.

Figure 11 shows how each of these components contributes to Powerlink's total opex forecast.

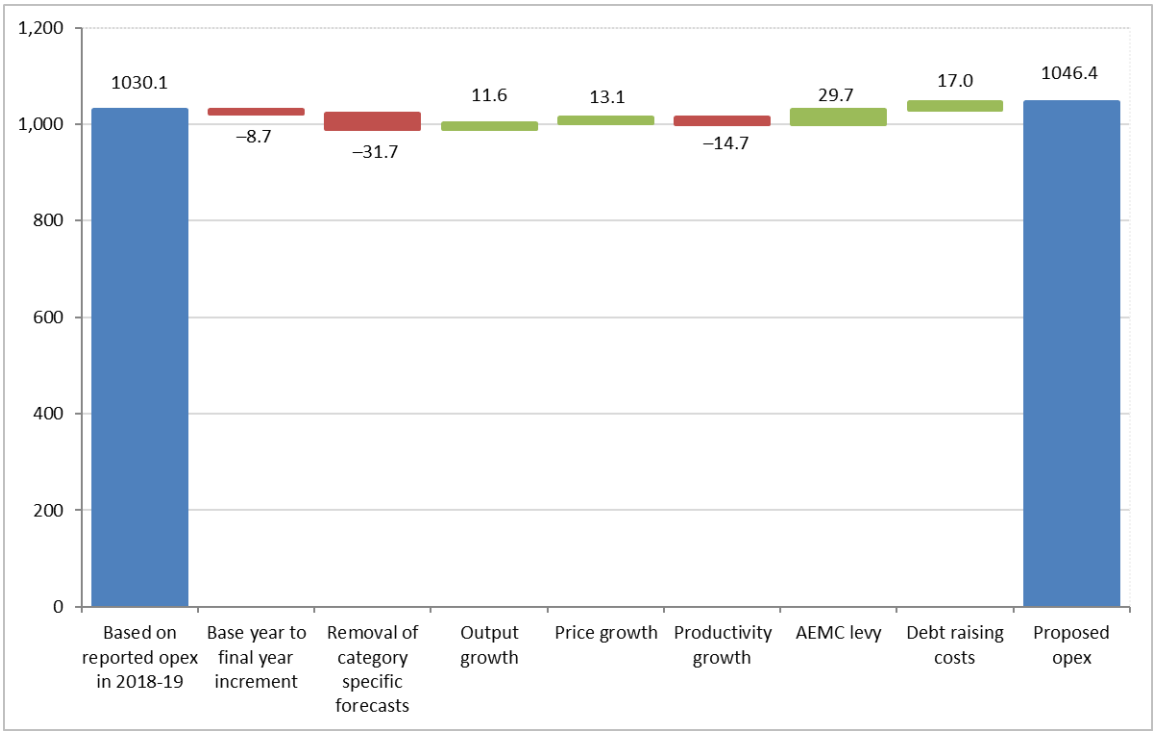
[75] Powerlink used the DAE WPI forecasts used by the AER in the Draft Decisions for AusNet Services, Jemena, United Energy, CitiPower and Powercor, Australian Energy Regulator, September 2020.

[76] Powerlink, *2023–27 Revenue proposal,* January 2021, p. 96.

[77] Ibid., p. 102.

[78] Powerlink forecast network support costs of $0, noting that there was too much uncertainty to include a number in the revenue proposal. Powerlink stated that it may include a network support cost forecast in its revised revenue proposal if contracts are in place or may seek to recover any costs through pass through arrangements.

Figure 11 Breakdown of Powerlink's opex forecast ($ million, $2021–22)



Source: Powerlink, *Operating Expenditure Model,* January 2021; AER analysis.

Question

22. Do you consider Powerlink's opex proposal addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal?
23. Do you consider Powerlink's forecast opex for the 2022–27 period reasonably reflects the efficient costs of a prudent operator?
24. Do you have any comments on the magnitude of Powerlink's proposed estimate for annual opex productivity growth the 2022–27 period?

5.5 Corporate income tax

The building block approach to calculating the annual revenue includes an amount for the estimated cost of corporate income tax payable by the business. We forecast tax in accordance with the requirements of the Rules.[79]

Powerlink has forecast corporate income tax of $25.9 million ($ nominal) for the 2022–27 period.

In December 2018, we completed a review of our regulatory tax approach.[80] The final report presented analysis of the current tax management practices of the regulated

[79] NER, cl. 6A.6.4.

[80] AER, *Final report: Review of regulatory tax approach*, December 2018, p. 76.

networks and identified some required changes to the estimation of tax expenses. The changes to our regulatory tax approach required amending our models to:

- recognise immediate tax expensing of some capex forecast for a regulatory control period
- adopt the diminishing value (DV) method for tax depreciation to all future capex, except for a limited number of assets which must be depreciated using the straight-line (SL) depreciation method under the tax law.[81]

In its 2022–27 proposal, Powerlink used our latest Post-tax revenue model (PTRM) template (version 4) which incorporates the above changes. We note that Powerlink has:

- adopted immediate expensing of forecast capex based on a level that is consistent with its treatment in the 2017–22 period
- allocated some capex to be depreciated using the SL method for tax depreciation.

We will assess the appropriateness of the proposed amounts of immediate expensing and capex allocated for SL depreciation based on the approach we have taken in recent revenue determinations.

Questions

25. Do you have views on the approach to corporate income tax in Powerlink's 2022–27 proposal?

[81] Capping of gas asset tax lives was also a finding from the final report, but does not require a model change.

6 Incentive schemes

Incentive schemes are a component of incentive-based regulation and complement our approach to assessing efficient costs. Our schemes encourage network businesses to make efficient decisions on when and what type of expenditure to incur, to innovate, and to meet service reliability targets.

Incentive schemes that may apply to transmission network businesses include:

- efficiency benefit sharing scheme (EBSS)
- capital expenditure sharing scheme (CESS)
- service target performance incentive scheme (STPIS)
- demand management innovation allowance mechanism (DMIAM)[82]

Once we determine how network revenues will be calculated, network businesses have an incentive to provide services at the lowest possible cost, because the returns are determined by their actual costs of providing services. If network businesses reduce their costs to below our forecast of efficient costs, the savings are shared with their consumers in future regulatory periods through the EBSS and CESS. The STPIS ensures network businesses are not simply cutting costs at the expense of service quality. The DMIAM provides network businesses an incentive to undertake innovative projects related to demand management.

As set out below, Powerlink proposes the application of our EBSS, CESS, STPIS and upcoming DMIAM (see section 6.4) incentive schemes for the 2022–27 period.

6.1 Efficiency benefit sharing scheme

Our efficiency benefit sharing scheme (EBSS) is intended to provide a continuous incentive for transmission network businesses to pursue efficiency improvements in opex, and to fairly share these between transmission businesses and consumers. Consumers benefit from improved efficiencies through lower network tariffs in future regulatory periods.

The EBSS applies to Powerlink for the 2017–22 period.[83] Powerlink included EBSS carryover amounts totalling $8.4 million ($2021–22) in its proposed revenues from the application of the EBSS in the current period.[84]

In our Framework and Approach paper for Powerlink,[85] we set out our intention to apply the EBSS to Powerlink in the 2022–27 period if we are satisfied the scheme will fairly share efficiency gains and losses between Powerlink and consumers.[86] Consistent with

[82] A final DMIAM is expected to be released by the AER by June 2021 (see section 6.4).

[83] AER, *Powerlink 2017–22, Attachment 9, Efficiency benefit sharing scheme*, April 2017, p. 7.

[84] Powerlink, *2023–27 Revenue proposal,* January 2021, p. 139.

[85] AER, *Framework and Approach – Powerlink*, July 2020.

[86] Ibid., p. 13.

this, Powerlink proposes in its revenue proposal that the EBSS apply to it in the 2022–27 period.[87]

Question

26. Do you consider Powerlink's proposed EBSS carryover amounts provide for a fair sharing of the efficiency gains and losses it has achieved in the 2017–22 period?
27. Do you consider applying the EBSS to Powerlink in the 2022–27 period would provide it a continuous incentive to reduce its opex?

6.2 Capital expenditure sharing scheme

Our capital expenditure sharing scheme (CESS) aims to incentivise transmission network businesses to undertake efficient capex throughout the regulatory period by rewarding efficiency gains and penalising efficiency losses (each measured by reference to the difference between forecast and actual capex).

The CESS applies to Powerlink for the 2017–22 period. Powerlink included CESS carryover amounts totalling –$3.7 million ($2021–22) in its proposed revenues from the application of the CESS in the current period.[88]

In our Framework and Approach paper for Powerlink, [89] we set out our intention to apply the CESS (as set out in our capex incentives guideline)[90] to Powerlink in the 2022–27 period.[91] Consistent with this, Powerlink proposes in its revenue proposal that the CESS apply to it in the 2022–27 period.[92]

Question

28. Do you consider Powerlink's forecast CESS incentivises it to undertake efficient capex throughout the regulatory control period, by rewarding efficiency gains and penalising efficiency losses?

6.3 Service target performance incentive scheme

Our service target performance incentive scheme (STPIS), version 5, provides a financial incentive to transmission network businesses to maintain and improve service performance.

There are three STPIS components that are applicable to Powerlink:

- service component (SC) – this incentivises TNSPs to reduce the frequency of unplanned outages and the time taken to return the network to service

87 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 140.

88 Ibid., p. 139.

89 AER, *Framework and Approach – Powerlink*, July 2020.

90 AER, *Capital expenditure incentive guideline for electricity network service providers*, pp. 5-9.

91 AER, *Framework and Approach – Powerlink*, July 2020.

92 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 141.

- market impact component (MIC) – this incentivises TNSPs to minimise the financial impact of outages on the dispatch of generation
- network capability component (NCC) – this incentivises TNSPs to identify transmission network limits and increase their capability by undertaking projects with a capital cost of less than $6 million and which are likely to result in a material benefit.

Powerlink's revenue proposal accepted our intention to apply version 5 of the STPIS, as set out in our Framework and Approach paper for Powerlink,[93] in the 2022–27 period.[94]

6.3.1 Service component

In its 2022–27 proposal, Powerlink submitted SC targets, caps, collars and weights.[95] Applying the five-year average over the 2015–19 period yields a zero target for the large loss of supply event frequency (number of events greater than 0.4 system minutes per annum). Powerlink proposes an alternative calculation method, whereby a five-year average is applied and the result is rounded to the nearest non-zero integer.[96] This yields a target of 1. Powerlink submits that a zero target does not support the intent and design principles of the Scheme as:[97]

- it is not in the interests of consumers to bear the greater cost of trying to achieve a zero target rather than a target of 1
- it undermines the incentive to improve, given a penalty-only incentive
- it creates an asymmetric scheme, undermining the intent of the Scheme to incentivise TNSPs to maintain or improve performance.

Powerlink submits that its proposed alternative calculation method meets the requirements of clause 3.2(i) of the Scheme. In particular, it assesses that its proposed methodology is consistent with the objectives in clause 1.4 of the Scheme.[98]

We do not consider the STPIS is an asymmetric scheme. One of the key features of the STPIS is that a TNSP can only keep its reward under the STPIS if the service level improvement is retained in subsequent regulatory periods. If the improvement is not maintained, the TNSP will need to return the earlier reward to network users. Hence, a TNSP can only earn a reward for service improvement results once. Given consumers have paid for the performance improvement by Powerlink to achieve the current level, the proposal to increase the performance target to above the historical average would result in consumers paying for the improvement twice.

We will apply version 5 of the STPIS, which provides for us to approve an alternative methodology subject to us being satisfied that the conditions set out in clause 3.2(i) are met. We are interested in stakeholder views on Powerlink's proposed methodology.

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93 AER, *Framework and Approach – Powerlink*, July 2020.
94 Powerlink, *2023–27 Revenue proposal,* pp. 150-156.
95 Ibid., Table 15.3, p. 158.
96 Ibid., p. 153.
97 Ibid., p. 143.
98 Ibid., Table 15.6, p. 150.

6.3.2 Market impact component

With respect to the MIC, Powerlink states that it continues to be of the view that a review of the MIC assessment is required. It submits that changes in power flows, the introduction of system strength constraints in 2019, and the rapid change in the mix and location of generation has significantly increased the Powerlink's MIC count.[99]

We set out our position in response to this issue in our Framework and Approach paper for Powerlink.[100] We do not consider there is an immediate need to review the MIC. We consider the incentive is operating appropriately, encouraging network management or investment to address network constraints. Until these constraints are addressed, penalties will accrue to the TNSP. Once these constraints are addressed, bonuses will be earned by the TNSP.

Powerlink also proposes that 2014–21 data[101] is used to calculate its MIC target, instead of 2013–20 data.[102, 103] We have advised Powerlink that we do not consider its proposed data range is consistent with the Scheme requirements. Clauses 4.2(a) and 4.2(b) of the Scheme require the TNSP to submit MIC performance measure data for the preceding seven calendar years, and to submit a proposed value for a MIC performance target, at the time the TNSP submits its revenue proposal. As Powerlink submitted its revenue proposal in January 2021, the Scheme requires that the data to be used for the calculation of the final MIC target is 2014–20.

Our review of Powerlink's 2020 data, as part of the STPIS Annual Return, was completed in mid-March 2021. Unlike for the SC, the Scheme does not allow us to approve or require a MIC performance target to be based on a different time period.

6.3.3 Network capability component

Powerlink has not proposed any Network Capability Incentive Parameter Action Plan (NCIPAP) projects to address network limits under the NCC.[104]

Questions

29. What are your views on Powerlink's proposed alternative methodology for calculating the target for the large loss of supply event frequency parameter? Do you consider Powerlink's methodology meets clause 3.2(i) of the Scheme?

6.4 Demand management innovation allowance mechanism

The demand management innovation allowance mechanism (DMIAM) provides transmission network service providers with an allowance to undertake innovative projects

99 Ibid., pp. 142-143.
100 AER, *Framework and Approach – Powerlink*, July 2020, pp. 12-13.
101 That is, 2014–20 data for the draft decision, and 2015–21 data for the final decision.
102 That is, 2013–19 data for the draft decision, and 2014–20 for the final decision.
103 Powerlink, *2023–27 Revenue proposal,* p. 155.
104 Ibid., pp. 156-157.

related to demand management projects. Projects must meet the objective of having the potential to reduce long term network costs.

In our Framework and Approach paper for Powerlink,[105] we stated that we expect to develop and apply a DMIAM to Powerlink in the 2022–27 period in our final determination.[106]

We released a draft DMIAM and Explanatory Statement in December 2020 for consultation. The final DMIAM is expected to be released by June 2021.[107]

Powerlink has sought to apply the DMIAM during the 2022–27 period, and proposes a number of potential demand management projects.[108] Powerlink indicated it will provide additional information to the AER as part of its 2022–27 revised proposal later this year.

Question
30. Do you consider the DMIAM should be applied to Powerlink in the 2022–27 period? Please provide comments on Powerlink's proposed potential demand management projects.

[105] AER, *Framework and Approach – Powerlink*, July 2020.
[106] Ibid., p. 7.
[107] AER, *Draft demand management innovation allowance mechanism*, December 2020; AER, *Explanatory statement – Draft demand management innovation allowance mechanism*, December 2020.
[108] Powerlink, *2023–27 Revenue proposal,* pp. 166-167.

Summary of questions

Pricing methodology

1. Do you consider Powerlink's proposed changes to its pricing methodology for the 2022–27 period are appropriate and give effect to the pricing principles for prescribed transmission services?
2. What are your views on Powerlink's consumer engagement in developing its proposed pricing methodology for the 2022–27 period?

Consumer engagement approach

3. Given Powerlink's overarching goal to deliver a revenue proposal that is capable of acceptance, is Powerlink's 2022–27 proposal acceptable to you in its current form? Please give reasons. If the proposal is not acceptable to you, what changes would be required to make it acceptable?
4. Do you agree with Powerlink's three key consumer drivers for the 2022–27 period (i.e. affordability, price signals and customer choice)? Are there other key drivers that are important to you?
5. Do you think Powerlink has engaged meaningfully with consumers on all key elements of its 2022–27 proposal? Are there any key elements that require further engagement?
6. To what extent do you consider you were able to influence the topics engaged on by Powerlink? Please give examples.
7. With regard to IAP2 Spectrum, do you think Powerlink selected an appropriate level of participation in the engagement program for its 2022–27 proposal (see Table 4)? Please provide examples of engagement activities that Powerlink conducted very well, and not as well?
8. To what extent do you consider Powerlink's 2022–27 proposal ties to your expressed views as a consumer?
9. Are there any aspects of Powerlink's consumer engagement that could have been done better? If yes, what opportunities are there for Powerlink to act on your feedback?
10. What are your views on Powerlink's self-assessment of its consumer engagement approach under the AER's consumer engagement framework (see Table 5)? Is it an accurate assessment of Powerlink's consumer engagement on its 2022–27 proposal, or would you assess Powerlink differently?
11. Do you consider the AER's consumer engagement framework is appropriate for assessing Powerlink's 2022–27 proposal? Are any criteria not appropriate, or absent but relevant to an accurate assessment of Powerlink's proposal?
12. Do you have views on the statement on engagement submitted by Powerlink's Customer Panel? For example, you may have thoughts on the breadth of Powerlink's engagement, or whether you ever felt led/coerced in your engagement with Powerlink.

Transmission price impacts

13. Do you have views on the estimated transmission price impacts arising under Powerlink's 2022–27 proposal?

Regulatory asset base and depreciation

14. Do you have views on Powerlink's proposed RAB, as set out in its 2022–27 proposal?
15. Do you have views on Powerlink's proposed depreciation approach, as set out in its 2022–27 proposal?

Capital expenditure

16. Do you consider Powerlink's capex proposal addresses the key themes of affordability, sustainability, and reliability?
17. Do you consider Powerlink's capex proposal addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal?
18. Do you consider Powerlink's hybrid approach to forecasting replacement capex, including Powerlink's use of the replacement expenditure (repex) model, is appropriate and likely to produce a forecast of efficient replacement capex?
19. Do you consider Powerlink's economic assessment framework and project documentation provide appropriate justification for its proposed capex projects and programs?
20. Do you consider Powerlink's total forecast capex reasonably reflects the efficient costs of a prudent operator?
21. Do you consider Powerlink's proposed contingent project should be included as a contingent project for the 2022–27 period? Is the proposed project trigger appropriate?

Operating expenditure

22. Do you consider Powerlink's opex proposal addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal?
23. Do you consider Powerlink's forecast opex for the 2022–27 period reasonably reflects the efficient costs of a prudent operator?
24. Do you have any comments on the magnitude of Powerlink's proposed estimate for annual opex productivity growth the 2022–27 period?

Corporate income tax

25. Do you have views on the approach to corporate income tax in Powerlink's 2022–27 proposal?

Incentive schemes

26. Do you consider Powerlink's proposed EBSS carryover amounts provide for a fair sharing of the efficiency gains and losses it has achieved in the 2017–22 period?
27. Do you consider applying the EBSS to Powerlink in the 2022–27 period would provide it a continuous incentive to reduce its opex?
28. Do you consider Powerlink's forecast CESS incentivises it to undertake efficient capex throughout the regulatory control period, by rewarding efficiency gains and penalising efficiency losses?
29. What are your views on Powerlink's proposed alternative methodology for calculating the target for the large loss of supply event frequency parameter? Do you consider Powerlink's methodology meets clause 3.2(i) of the Scheme?
30. Do you consider the DMIAM should be applied to Powerlink in the 2022–27 period? Please provide comments on Powerlink's proposed potential demand management projects.

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Capex	Capital expenditure
CESS	Capital expenditure sharing scheme
CPI	Consumer price index
DMIAM	Demand management innovation allowance mechanism
EBSS	Efficiency benefit sharing scheme
ESOO	AEMO's Electricity Statement of Opportunities
IAP2	International Association for Public Participation Spectrum
ICT	Information and communications technology
Instrument	2018 Rate of Return Instrument
MAR	Maximum allowed revenue
MW / MWh	Megawatt / megawatt hour
NCIPAP	Network Capability Incentive Parameter Action Plan
NEL or Law	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER or Rules	National Electricity Rules
Opex	Operating expenditure
Powerlink	Powerlink Queensland is the registered business name of the Queensland Electricity Transmission Corporation Limited
PTRM	Post-tax revenue model
RAB	Regulatory asset base
Repex	Replacement expenditure
RIT-T	Regulatory investment test – transmission
RFM	Roll forward model
SL	Straight-line depreciation method
STPIS	Service target performance incentive scheme
TNSP	Transmission network service provider