# DRAFT DECISION
# Powerlink Queensland
# Transmission Determination

# 2022 to 2027

# Attachment 3
# Rate of return

September 2021

AUSTRALIAN ENERGY REGULATOR

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# Note

This attachment forms part of the AER's draft decision on Powerlink Queensland's transmission network revenue determination for the 2022–27 regulatory control period. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment 11 – Pricing methodology

Attachment 12 – Pass through events

Attachment 13 – Demand management innovation allowance mechanism

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# 3 Rate of return

The return each business is to receive on its regulatory asset base (RAB), known as 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 value of the RAB.

We estimate the rate of return by combining the returns of the 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 on its loans and give a return on equity to investors.

The estimate of the rate of return is important for promoting efficient prices in the long term interests of consumers. If the rate of return is set too low, the network business may not be able to attract sufficient funds to be able to make the required investments in the network and reliability may decline. Conversely, if the rate of return is set too high, the network business may seek to spend too much and consumers will pay inefficiently high tariffs.

We also make an estimate of expected inflation over the next five years. Alongside our nominal estimate of the rate of return, these determine the effective real return that will be provided to investors over time.

## 3.1 Draft decision

The 2018 Rate of Return Instrument (2018 Instrument) specifies how we will estimate the return on debt, the return on equity, and the overall rate of return.[1] As required under the National Electricity Law (NEL), we have applied the 2018 Instrument and estimate a placeholder allowed rate of return of 4.65 per cent (nominal vanilla) which will be updated for our final decision on the averaging periods.[2] Powerlink's initial proposal has adopted the 2018 Instrument.[3]

Our calculated rate of return, in Table 3.1, will apply to the first year of the 2022–27 regulatory control period. A different rate of return will apply for the remaining regulatory years of the period. This is because we will update the return on debt component of the rate of return each year in accordance with the 2018 Instrument to use a 10-year trailing average portfolio return on debt that is rolled-forward each year. We will update the estimate of the rate of return and expected inflation in our final decision.

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1 AER, *Rate of return instrument*, December 2018. See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/rate-of-return-guideline-2018/final-decision.

2 The legislative amendments to replace the (previous) non-binding Rate of Return Guidelines with a binding legislative instrument were passed by the South Australian Parliament in December 2018. See, Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Act 2018 (SA). NGL, Chapter 2, Part 1, Division 1A; NEL, Part 3, Division 1B.

3 Powerlink, *2023–27 Revenue Proposal*, January 2021, p. 116.

## Table 3.1 Draft decision on Powerlink's rate of return (nominal)

| | Previous Regulatory Period (2017–22) | Powerlink's Initial Proposal (2022–27) | AER draft decision (2022–27) | Allowed return over regulatory control period |
|---|---|---|---|---|
| Nominal risk free rate | 2.85% | 0.82% | 1.53%[a] | |
| Market risk premium | 6.5% | 6.1% | 6.1% | |
| Equity beta | 0.7 | 0.6 | 0.6 | |
| Return on equity (nominal post–tax) | 7.4% | 4.48% | 5.19% | Constant (%) |
| Return on debt (nominal pre–tax) | 5.1%[b] | 4.42% | 4.29%[a] | Updated annually |
| Gearing | 60% | 60% | 60% | Constant (60%) |
| Nominal vanilla WACC | 6.0%[b] | 4.44% | 4.65% | Updated annually for return on debt |
| Expected inflation | 2.45% | 2.25% | 2.25% | Constant (%) |

Source: AER analysis; Powerlink, *2023–27 Revenue Proposal*, January 2021, p. 119.

(a) Calculated using a placeholder averaging period of 20 business days ending 30 June 2021.

(b) Applied to the first year of the 2017–22 regulatory control period.

Our draft decision is to:

- accept Powerlink's proposed risk free rate[4] and debt averaging periods because they comply with conditions set out in the 2018 Instrument.[5] We specify these periods in confidential Appendix A and they will be used to update the risk free rate and return on debt in the final decision
- accept Powerlink's proposed gamma of 0.585 because it complies with the 2018 Instrument.[6]

4 This is also known as the return on equity averaging period.

5 AER, *Rate of return instrument*, December 2018, cll. 7–8, 23–25, 36; AER, *Draft decision, Powerlink transmission determination 2022 to 2027, Attachment 3—Rate of return confidential appendix A: Equity and debt averaging periods*, September 2021; Powerlink, *Revenue proposal 2023–27, Appendix 9.01 – Confidential, Nominated Averaging periods*, January 2021, pp. 1–2.

6 Powerlink, *Revenue Proposal 2023-27*, January 2021, p. 118.

## 3.2 Expected inflation rate

We estimate an expected inflation of 2.25 per cent (see Table 3.2 for calculations) based on the approach adopted in our final position paper from our 2020 inflation review.[7]

Powerlink's initial proposal adopted our previous approach for estimating expected inflation.[8] This was because its initial proposal appears to have been prepared before the final position paper was released. However, Powerlink has stated that we should adopt the outcomes of our inflation review to this revenue determination which we have done.[9]

### Table 3.2 Draft decision on Powerlink's forecast inflation (%)

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Geometric average |
|---|---|---|---|---|---|---|
| Expected inflation | 2% | 2.1% | 2.3% | 2.4% | 2.5% | 2.25% |

Source: AER analysis; *RBA Statement on Monetary policy*, August 2021.

Our previous approach to estimate expected inflation used a 10-year average of the Reserve Bank of Australia's (RBA) headline rate forecasts for 1 and 2 years ahead, and the mid-point of the RBA's target band—2.5 per cent—for years 3 to 10. The period of 10 years matches the term of the rate of return.

Our inflation review considered that this should be augmented by:[10]

- Shortening the target inflation horizon from 10 years to a term that matches the regulatory period (typically 5 years).
- Applying a linear glide-path from the RBA's forecasts of inflation for year 2 to the mid-point of the inflation target band (2.5 per cent) in year 5.

We noted subsequently that the linear glide-path can apply from the RBA's latest inflation forecasts for year 1 if there is no RBA data for year 2.[11]

The key reasons for these changes are:[12]

- There was a mismatch between our estimate of expected inflation over a 10-year term, and our roll forward of the RAB, which is done over a 5-year term. We consider that shortening the inflation term to match the regulatory period, although creating a mismatch with the term of the rate of return, is the more critical

7 AER, *Final position – Regulatory treatment of inflation*, December 2020.
8 Powerlink, *2023–27 Revenue Proposal*, January 2021, p. 119.
9 Ibid.
10 AER, *Final position – Regulatory treatment of inflation,* December 2020, p. 6.
11 AER, *Explanatory statement proposed amendments – Electricity transmission and distribution network service providers – Post-tax revenue models (version 5),* December 2020, p. 11.
12 AER, *Final position – Regulatory treatment of inflation,* December 2020, p. 6.

mismatch to resolve. This is because of the sustained decline in the required rate of return and the increased difference between 5- and 10-year inflation expectations due to short-term fluctuations in inflation expectations.

- Applying a glide-path acknowledges that it is likely to take longer than previously for inflation to revert to the mid-point of the RBA's target band following periods of sustained low or high inflation.

We considered that these changes will provide service providers a reasonable opportunity to more accurately recover their efficient costs in an increasingly changing market to better serve consumers with the energy services they want in the long term. Broadly, this was because we take out what we expect to put back into the RAB through our regulatory models.

## 3.3 Capital raising costs

In addition to compensating for the required rate of return on debt and equity, we provide an allowance for the transaction costs associated with raising debt and equity. We include debt raising costs in the opex forecast because these are regular and ongoing costs which are likely to be incurred each time service providers refinance their debt.

On the other hand, we include equity raising costs in the capex forecast because these costs are only incurred once and would be associated with funding the particular capital investments. Our draft decision forecasts for debt and equity raising costs are included in the opex and capex attachments, respectively. In this section, we set out our assessment approach and the reasons for those forecasts.

### 3.3.1 Equity raising costs

Equity raising costs are transaction costs incurred when a service provider raises new equity. We provide an allowance to recover an efficient amount of equity raising costs.

We apply an established benchmark approach for estimating equity raising costs. This approach estimates the costs of two means by which a service provider could raise equity—dividend reinvestment plans and seasoned equity offerings. It considers where a service provider's capex forecast is large enough to require an external equity injection to maintain the benchmark gearing of 60 per cent.[13]

Our benchmark approach was initially based on 2007 advice from Allen Consulting Group (ACG).[14] We amended this method in our 2009 decisions for the ACT, NSW and

[13] AER, *Final decision, Amendment Electricity distribution network service providers, Post-tax revenue model handbook*, January 2015, pp. 15, 16 and 33. The approach is discussed in AER, *Final decision, Powerlink Transmission determination 2012–13 to 2016–17*, April 2012, pp. 151–152.

[14] ACG, *Estimation of Powerlink's SEO transaction cost allowance-Memorandum*, 5 February 2007.

Tasmanian electricity service providers.[15] We further refined this approach in our 2012 Powerlink decision.[16]

Our benchmark approach requires an estimate of the dividend distribution rate (sometimes called the payout ratio) as an input into calculating equity raising costs. The dividend distribution rate is also estimated when we estimate the value of imputation credits. We consider that a consistent dividend distribution rate should be used when estimating both the value of imputation credits and equity raising costs.

Powerlink has proposed to adopt our approach for estimating equity raising costs, and used a distribution rate of 0.9 (set in the 2018 Instrument).[17] We have updated our estimate for this regulatory control period based on the benchmark approach using updated inputs. This results in zero equity raising costs.

### 3.3.2 Debt raising costs

Debt raising costs are the transaction costs incurred each time debt is raised or refinanced as well as the costs for maintaining the debt facility. These costs may include underwriting fees, legal fees, company credit rating fees and other transaction costs. We provide an allowance in opex to recover an efficient amount of debt raising costs.

#### Current assessment

Our current approach to forecasting debt raising costs is based on the approach in a report from the ACG, commissioned by the Australian Competition and Consumer Commission in 2004.[18] This approach compensates for the direct cost of raising debt.

It uses a 5-year window of bond data to reflect the market conditions at that time. Our estimates were updated in 2013 (based on a report by PricewaterhouseCoopers (PwC), which used data over 2008–2013) and most recently in 2019 by Chairmont.[19]

The ACG method involves calculating the benchmark bond size, and the number of bond issues required to rollover the benchmark debt share (60 per cent) of the RAB. This approach looks at how many bonds a regulated service provider may need to issue to refinance its debt over a 10-year period. Our standard approach is to amortise the upfront costs that are incurred in raising the bonds using the service provider's nominal vanilla weighted average cost of capital (WACC) over a 10-year amortisation period. This is then expressed in basis points per annum (bppa) as an input into the PTRM.

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15 For example, see: AER, *Final decision, ACT distribution determination 2009–10 to 2013–14*, April 2009, Appendix H.

16 AER, *Final decision, Powerlink Transmission determination 2012–13 to 2016–17,* April 2012, pp. 151–152.

17 Powerlink, *2023–27 Revenue proposal, Post-tax revenue model*, January 2021.

18 ACG, *Debt and equity raising transaction costs: Final report*, December 2004.

19 PricewaterhouseCoopers, *Energy Networks Association: Debt financing costs*, June 2013; Chairmont, *Debt Raising Costs*, 29 June 2019.

This rate is multiplied by the debt component of the service provider's projected RAB to determine the debt raising cost allowance in dollar terms. Our approach recognises that part of the debt raising transaction costs such as credit rating costs and bond master program fees can be spread across multiple bond issues, which lowers the benchmark allowance (as expressed in bppa) as the number of bond issues increases.

### Proposal

Powerlink has proposed debt raising costs of 8.50 basis points per annum based on our current approach for estimating debt raising costs.[20]

### Conclusion on debt raising costs

Our draft decision is to accept Powerlink's initial proposal of an annual rate of 8.50 bppa. We note that Powerlink's proposed value is from an accompanying report by Incenta which supported and applied our current approach for estimate debt raising cost.[21]

Our updated approach was first applied in the final decision for SA Power Networks.[22] We use updated Bloomberg data to inform the 'arrangement fee' component of debt raising costs and Chairmont's updated estimates for the remaining components.

We initially adopted Chairmont's updated estimates for all components of the debt raising allowance in 2019. However, we received submissions concerned with using Chairmont's estimate for the arrangement fee component.[23] After assessing these submissions, we recognised that Bloomberg is likely to be the most suitable source of information for the 'arrangement fee' at this time because it is the only published source of data known to us and was previously used to estimate the 'arrangement fee'. The Incenta report also supported the use of Bloomberg data for estimating the arrangement fee.[24]

### Review of debt raising costs approach

Since late 2019 we have been reviewing our approach to setting benchmark debt raising costs, informed by actual debt raising costs data obtained from relevant regulated businesses.

The initial response to our information request showed that each business has its own system for reporting cost categories with the number and naming of categories differing between businesses. This makes it difficult to aggregate costs across businesses in order to arrive at an accurate estimate.

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20 Powerlink, *2023–27 Revenue Proposal*, January 2021, p. 103.

21 Incenta, *Benchmark debt and equity raising costs*, November 2020.

22 AER, *Final Decision, SA Power Networks Distribution Determinations 2020 to 2025, Attachment 3 – Rate of Return*, June 2020.

23 For example see: SA Power Networks, *Revised Regulatory Proposal 2020–25: Attachment 3 – Rate of Return*, December 2019, pp. 20–22; CEG, *The cost of arranging debt issues*, November 2019.

24 Incenta, *Benchmark debt and equity raising costs*, November 2020.

We have considered whether to continue with further investigation of the industry data. This would entail significant further work and would require regulated businesses to work with each other, as well as us to reconcile costs to mutually agreed categories. Audit assurance would also need to be considered to ensure that costs have been correctly reconciled and allocated.

Further, we have had regard to the overall magnitude of the debt raising costs (that is, a small proportion of overall opex) and the level of imprecision in our current approach. Based on these considerations, we do not think the benefits of further investigation outweigh the costs at this stage.

Therefore, we have used our current approach for assessing benchmark debt raising costs—that is, using Bloomberg estimates for the 'arrangement fee' and Chairmont's 2019 estimates for the remaining debt raising costs.

In our 2020 Energy Network Debt Data paper, we proposed to collect the data used for the Energy Infrastructure Credit Spread Index (EICSI) using regulatory information notices (RIN).[25] As part of developing this RIN, we proposed that it would also collect direct debt raising costs that is not compensated for in either our existing allowance or the operating expenditure allowance. Regulated businesses would also need to pay these costs directly to the lender of the debt instrument.

[25] AER, Energy network debt data final working paper, November 2020, p. 5.

# A. Shortened forms

| Shortened form | Extended form |
|---|---|
| ACCC | Australian Competition and Consumer Commission |
| ACG | Allen Consulting Group |
| AER | Australian Energy Regulator |
| bppa | Basis points per annum |
| DRP | Debt risk premium |
| ERP | Equity risk premium |
| MRP | Market risk premium |
| NEL | National Electricity Law |
| NER | National Electricity Rules |
| NSP | Network service provider |
| Opex | Operating expenditure |
| PTRM | post-tax revenue model |
| PwC | PricewaterhouseCoopers |
| RAB | Regulatory asset base |
| RBA | Reserve Bank of Australia |
| RIN | Regulatory information notice |
| WACC | Weighted average cost of capital |