DRAFT DECISION
Powerlink transmission determination
2017−18 to 2021−22

Attachment 12 − Pricing methodology

September 2016

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165
Email: AERInquiry@aer.gov.au

Note

This attachment forms part of the AER's draft decision on Powerlink's transmission determination for 2017–22. 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 – Value of imputation credits

Attachment 5 – Regulatory depreciation

Attachment 6 – Capital expenditure

Attachment 7 – Operating expenditure

Attachment 8 – Corporate income tax

Attachment 9 – Efficiency benefit sharing scheme

Attachment 10 – Capital expenditure sharing scheme

Attachment 11 – Service target performance incentive scheme

Attachment 12 – Pricing methodology

Attachment 13 – Pass through events

Attachment 14 – Negotiated services

Contents

Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	annual service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DMIA	demand management innovation allowance
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
MAR	maximum allowed revenue
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
NTSC	negotiated transmission service criteria
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice

Shortened form	Extended form
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
TUoS	transmission use of system
WACC	weighted average cost of capital

12 Pricing methodology

This attachment sets out our draft determination on Powerlink's proposed pricing methodology for the 2017–22 regulatory control period.

We are required to specify a pricing methodology as part of our transmission determination.[1] A pricing methodology answers the question 'who should pay how much'[2] in order for a transmission business to recover its costs. To do this, it must provide a 'methodology, formula, process or approach'[3] that, when applied:

- allocates the aggregate annual revenue requirement to the categories of prescribed transmission services that a transmission business provides and to the connection points of network users[4]
- determines the structure of prices that a transmission business may charge for each category of prescribed transmission services.[5]

A pricing methodology relates to prescribed transmission services only. For negotiated services, Powerlink must comply with other requirements, which are discussed in attachment 14 of this draft decision.

12.1 Draft decision

We do not approve Powerlink's proposed pricing methodology for the 2017–22 regulatory control period.

We consider that Powerlink's proposed pricing methodology generally complies with the requirements set out in the pricing methodology guidelines.[6] However, one aspect of its proposed methodology does not give effect to the pricing principles in the National Electricity Rules (NER).

12.2 Powerlink's proposal

Powerlink's proposed pricing methodology seeks to introduce a number of changes compared to the pricing methodology we approved for Powerlink's 2012–17 regulatory control period.[7]

The key changes Powerlink proposed are:

---

1 NER, cl. 6A.2.2(4).

2 AEMC, *Rule determination: National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 No. 22*, 21 December 2006, p. 1.

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

4 NER, cl. 6A.24.1(b)(1).

5 NER, cl. 6A.24.1(b)(2).

6 AER, *Electricity transmission network service providers – Pricing methodology guidelines*, July 2014.

7 Powerlink, *AER Approved Amended Pricing Methodology 1 July 2015 to 30 June 2017*, 18 May 2015.

- amendments to improve clarity in the event there would be more than one provider of prescribed transmission services in Queensland[8]
- amendments in the priority ordering examples to reflect asset allocations that would apply to most network configurations[9]
- changes to the setting of TUOS locational prices between annual price publications.[10]

12.3 Assessment approach

We must approve a proposed pricing methodology if we are satisfied that it:

- gives effect to, and complies with, the pricing principles for prescribed transmission services
- complies with the requirements of, and contains or is accompanied by information required by, the pricing methodology guidelines.[11]

Our assessment approach was guided by these requirements. In particular, we assessed whether Powerlink's proposed changes from its 2012–17 pricing methodology give effect to the pricing principles and comply with the pricing methodology guidelines.

12.4 Reasons for draft decision

We consider that most parts of the proposed pricing methodology give effect to and comply with the pricing principles in the NER and the pricing methodology guidelines determined by the AER. However, we have determined that one part does not meet the requirements of the pricing principles in the NER. We assessed each of the key changes Powerlink proposed in Table 12.1.

Table 12.1 Overview of our reviews for draft decision

Draft decision	Proposed change
Accept	Clarifying the allocation of the AARR in the event there is more than one TNSP in the Queensland region (section 6.2 and Appendix D)[12]
Accept	Amendments in the priority ordering examples to reflect asset allocations that would apply to most network configurations[13]

8 Powerlink, *Revenue Proposal 2017–22*, p. 123.

9 Powerlink, *Revenue Proposal 2017–22*, p. 124.

10 Powerlink, *Revenue Proposal 2017–22, Appendix 16.01 Proposed Pricing Methodology (tracked changes)*, section 6.12, p. 20.

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

12 Powerlink, *Revenue Proposal 2017–22, Appendix 16.01 Proposed Pricing Methodology (tracked changes)*, section 6.2 and Appendix D, pp. 6, 33 and 37.

Not accept	Setting of TUOS locational prices between annual price publications – In the event Powerlink is required to set a TUOS locational price at a new connection point, an interim price not subject to the side constraints of clause 6A.23.4(b)(2) will be determined.[14]

Additionally, we assessed other aspects of Powerlink's proposed pricing methodology more generally against the requirements in the pricing principles (section12.4.4) and the pricing methodology guidelines (section 12.4.5).

12.4.1 In the event there is more than one provider of transmission services in the region

At present, Powerlink is the sole provider of prescribed transmission services in Queensland and is responsible for allocating the AARR within Queensland. The NER provides for possible situations where there are multiple transmission network service providers within a region. If this occurs, a question arises as to who is assigned the responsibility and role (called the co-ordinating network service provider) to allocate all relevant AARR within the region, calculate the modified load export charges (MLEC), and allocate MLEC, among other responsibilities. These are set out in clause 6A.29 of the NER.

Powerlink proposed additional clauses in its pricing methodology to refer to clause 6A.29 of the NER in the event prescribed transmission services are provided by more than one TNSP in Queensland. Powerlink states that this improves clarity in the event there is more than one TNSP in Queensland and Powerlink is appointed as the co-ordinating TNSP.[15] These additional clauses are within section 6.2 and Appendix D of Powerlink's proposed pricing methodology.[16]

We have reviewed Powerlink's proposed amendments and we consider these meet the requirements of the NER and provide more clarity and certainty to Powerlink's methodology.

12.4.2 Priority ordering examples

Powerlink's current pricing methodology for the 2012–17 regulatory period includes Appendix E – Priority Ordering Methodology which sets out how the priority ordering

13 Powerlink, *Revenue Proposal 2017–22, Appendix 16.01 Proposed Pricing Methodology (tracked changes)*, Appendix E, pp. 38–50.

14 Powerlink, *Revenue Proposal 2017–22, Appendix 16.01 Proposed Pricing Methodology (tracked changes)*, section 6.12, p. 20.

15 Powerlink, *Revenue Proposal 2017–22*, p. 123.

16 Powerlink, *Revenue Proposal 2017–22, Appendix 16.01 Proposed Pricing Methodology (tracked changes)*, section 6.2 and appendix D, pp. 6, 33 and 37.

approach outlined in clause 6A.23.2(d) of the NER will be applied, including hypothetical worked examples.

Priority ordering refers to the process by which the costs of a transmission system asset are allocated to more than one category of prescribed transmission services. Powerlink reviewed its hypothetical worked examples and proposed amendments to its Appendix E to reflect allocations that would apply to most network configurations.[17]

We have reviewed Powerlink's proposed amendments to Appendix E[18] and we consider these meet the requirements of the NER and provide more clarity and certainty to Powerlink's methodology.

12.4.3 Setting of interim TUOS locational prices

We do not accept Powerlink's proposal to set an interim TUOS locational price.

To give effect to an interim location price, Powerlink proposed an amended section 6.12 of its proposed pricing methodology:

> **6.12 Setting of TUOS locational prices between annual price publications**
>
> In the event that Powerlink is required to set a TUOS locational price at a new connection point, an interim price not subject to the side constraints of clause 6A.23.4(b)(2) will be determined. At an existing connection point where the load has changed significantly after prescribed TUOS service locational prices have been determined and published an interim price will be calculated subject to clause 6A.23.4(b)(3). This will be calculated using the prevailing pricing models with demands estimated in a manner consistent with clause 2.2(f) of the pricing methodology guidelines.
>
> A price subject to the side constraints of clause 6A.23.4(b)(2) will be determined and published at the next annual price determination.

We do not consider this aspect of Powerlink's proposed pricing methodology complies with the NER. The proposal to set an interim price not subject to the 2 percent side constraint in clause 6A.23.4(b)(2) of the NER is not permissible, even if this is on an interim basis (until the next annual price determination).

The NER includes a process for the side constraint in question to not apply where specific criteria are met. Clause 6A.23.4(b)(3)(ii) provides that the TNSP may charge a customer more than the 2 percent side constraint when:

- the load at the connection point has materially altered

17 Powerlink, *Revenue Proposal 2017–22*, p. 124.

18 Powerlink, *Revenue Proposal 2017–22, Appendix 16.01 Proposed Pricing Methodology (tracked changes)*, Appendix E – Priority Ordering Methodology, pp. 38–50.

- in connection with that alteration, the Transmission Customer requested a renegotiation of its connection agreement with the Transmission Network Service Provider; and
- the AER approved the change.

We have reviewed the amended section 6.12 of the proposed pricing methodology and in our view, this proposed amended section is not permissible under the NER.

Clause 6A.23.4(b) of the NER provides:

> (b) Prices for recovering the prescribed TUOS services - adjusted locational component:
>
> > (1) must be based on demand at times of greatest utilisation of the transmission network by Transmission Customers and for which network investment is most likely to be contemplated;
> >
> > (2) subject to subparagraph (3) below, must not change by more than 2% on a load weighted average basis for the relevant region compared with the previous regulatory year; and
> >
> > (3) are not subject to the limitation in subparagraph (2):
> >
> > > (i) to the extent that the change in prices relate to the adjusted modified load export charge as referred to in clause 6A.23.3(b)(2); or
> > >
> > > (ii) if, since the commencement of the previous regulatory year:
> > >
> > > > (A) the load at the connection point has materially altered;
> > > >
> > > > (B) in connection with that alteration, the Transmission Customer requested a renegotiation of its connection agreement with the Transmission Network Service Provider; and
> > > >
> > > > (C) the AER approved the change.

The side constraint set out in clause 6A.23.4(b)(2) automatically applies unless the conditions in clause 6A.23.4(b)(3) are met.

In this particular case, a change in the proposed price will not relate to the adjusted modified load export charge under clause 6A.23.4(b)(3)(i).

That being the case, the only basis for modifying the price by more than 2 percent from the previous year for an existing connection point is where the terms of clause 6A.23.4(b)(3)(ii) are satisfied. In other words, there must be a change to the connection agreement negotiated by the parties and the AER must approve that change.

In our view, the effect of Powerlink's proposed pricing methodology provision would be to effect a change, albeit on an interim basis, without meeting the requirements of clause 6A.23.4(b)(3)(ii). While it might be said that the AER would be, via the terms of the proposed pricing methodology, effectively approving changes in advance, the AER has no power to approve a change in a connection agreement in advance of such an agreement being reached.

We have therefore reviewed Powerlink's proposed amended section 6.12 and we consider this does not meet the requirements of clause 6A.23.4(b) of the NER.

12.4.4 Assessment against the pricing principles

With the exception of the element which we do not accept (as outlined above), we consider that the other aspects of Powerlink's proposed pricing methodology otherwise meet the requirements of the pricing principles in the NER. The pricing principles are intended to provide scope for transmission businesses to develop pricing arrangements that address the circumstances in which they operate their network.[19] This limits our review to a high-level assessment.

Calculation and allocation of the aggregate annual revenue requirement

We assessed Powerlink's method for calculating and allocating its aggregate annual revenue requirement, and consider that this aspect of Powerlink's proposed pricing methodology meets the NER requirements.

The aggregate annual revenue requirement (AARR) is the 'maximum allowed revenue' adjusted:

- in accordance with clause 6A.3.2 of the NER, for a number of factors such as cost pass throughs, service target performance incentive scheme outcomes, and contingent projects, and
- by subtracting the operating and maintenance costs expected to be incurred in the provision of prescribed common transmission services.

Table 12.2 summarises our review of how Powerlink's proposed pricing methodology calculates and allocates the business's aggregate annual revenue requirement.

Table 12.2 Powerlink's proposed calculation and allocation of the AARR, and the NER requirements

NER requirements	Assessment
Requirement for the AARR to be calculated as	Sections 6.3 and 6.9.4 and Appendix A of

[19] AEMC, *Rule Determination: National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 No 22*, 21 December 2006, pp. 27–8.

defined in the NER—clause 6A.22.1	Powerlink's proposed pricing methodology comply with this requirement.
Requirement for the AARR to be allocated to each category of prescribed transmission services in accordance with attributable cost share for each such category of service—clause 6A.23.2(a)	Sections 6.5 and 6.6 and Appendix B of Powerlink's proposed pricing methodology comply with this requirement.
Requirement for every portion of the AARR to be allocated and for the same portion of AARR not to be allocated more than once—clause 6A.23.2(c)	Section 6.8 of Powerlink's proposed pricing methodology complies with this requirement.
Subject to clause 11.6.11 of the NER, requirement for adjusting attributable cost share and priority ordering approach to asset costs that would otherwise be attributed to the provision of more than one category of prescribed transmission services—clause 6A.23.2(d)	Appendices B and E of Powerlink's proposed pricing methodology comply with this requirement.

Allocation of the ASRR to transmission network connection points

We assessed Powerlink's proposed pricing methodology for allocating the ASRR, and consider this aspect of Powerlink's proposal meets the NER requirements. Table 12.3 summarises our assessment.

Table 12.3 Powerlink's proposed allocation of the ASRR, and the NER requirements

NER requirements	AER assessment
Requirement for whole ASRR for prescribed entry services to be allocated to transmission network connection points in accordance with the attributable connection point cost share for prescribed entry services that are provided by the TNSP at that connection point—clause 6A.23.3(i)	Section 6.8.1 of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for the whole ASRR prescribed exit services to be allocated to transmission network connection points in accordance with the attributable connection point cost share for prescribed exit services that are provided by the TNSP at that connection point—clause 6A.23.3(j)	Section 6.8.2 of Powerlink's proposed pricing methodology complies with this requirement.

NER requirements	AER assessment
Requirement for the allocation of the ASRR for: prescribed TUOS services locational components pre-adjusted non-locational components —clause 6A.23.3(a) to (g)	Section 6.8.3 of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for adjusting attributable cost share and priority ordering approach to asset costs that would otherwise be attributed to the provision of more than one category of prescribed transmission services—clause 6A.23.2(d)	Appendix E of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for the recovery of the ASRR for prescribed common transmission services and the operating and maintenance costs incurred in the provision of those services to be recovered through prices charged to transmission customers and network service and network service provider transmission connection points set in accordance with price structure principles set out in clause 6A.23.4—clause 6A.23.3(h)	Section 6.9 of Powerlink's proposed pricing methodology complies with this requirement.

Development of price structure

We assessed Powerlink's proposed pricing methodology and process for developing different prices for recovering the ASRR, and consider that one aspect of Powerlink's proposal does not meet the NER requirements (as discussed in section 12.4.3). Table 12.4 sets out our assessment.

Table 12.4 Powerlink's proposed pricing structure and the NER requirements

NER requirements	AER assessment
Requirement for separate prices for each category of prescribed transmission services—clause 6A.23.4(a)	Section 6.9 of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for fixed annual amount prices for prescribed entry services and prescribed exit services—clause 6A.23.4(g)	Section 6.9.1 of Powerlink's proposed pricing methodology complies with this requirement.

Requirement for postage stamped prices for prescribed common transmission services—clause 6A.23.4(f)	Section 6.9.4 of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for prices for locational component of prescribed TUOS services to be based on demand at times of greatest use of the transmission network and for which network investment is most likely to be contemplated—clause 6A.23.4(b)(1)	Section 6.9.2 of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for prices for the locational component of ASRR for prescribed TUOS services not to change by more than 2 per cent per year compared with the load weighted average prices for this component for the relevant region—clause 6A.23.4(b)(2)	Section 6.9.2 of Powerlink's proposed pricing methodology complies with this requirement.
Requirement for prices for the adjusted non-locational component of prescribed TUOS services to be on a postage stamp basis—clause 6A.23.4(e)	Section 6.9.3 of Powerlink's proposed pricing methodology complies with this requirement.
Setting of TUOS locational prices between annual price publications–clause 6A.23.4(b)	We do not accept that section 6.12 of Powerlink's proposed pricing methodology complies with aspects of this requirement for the reasons given in section 12.4.3 of this attachment.

12.4.5 Assessment against the pricing methodology guidelines

We are satisfied that Powerlink's proposed pricing methodology complies with the information requirements of the pricing methodology guidelines. Key features of the proposal include:

- acknowledging that Powerlink is the sole provider of prescribed transmission services in its region (Queensland), but in the event the services are provided by more than one provider, the proposed methodology provides more clarity
- calculating the locational component of prescribed TUOS services costs using a cost reflective network pricing methodology
- basing the locational prescribed TUOS services price on an agreed nominated demand and the average half-hourly demand
- basing the postage stamp pricing structure for the non-locational component of prescribed TUOS services and prescribed common transmission

- using the priority ordering approach under clause 6A.23.3(d) of the NER to implement priority ordering
- describing how asset costs that may be attributable to both prescribed entry services and prescribed exit services will be allocated at a connection point
- describing billing arrangements as in clause 6A.27 of the NER
- describing prudential requirements as in clause 6A.28 of the NER
- including hypothetical worked examples
- describing how Powerlink intends to monitor and develop records of its compliance with its approved pricing methodology.