

**Proposed (draft) transmission  
pricing methodology guidelines**

**Version No: 01**

**25 July 2007**



© Commonwealth of Australia 2007

This work is copyright. Apart from any use permitted by the *Copyright Act 1968*, no part may be reproduced without permission of the Australian Competition and Consumer Commission. Requests and inquiries concerning reproduction and rights should be addressed to the Director Publishing, Australian Competition and Consumer Commission, GPO Box 3131, Canberra ACT 2601.

Produced by the ACCC Publishing Unit 2007.

Inquiries concerning the currency of these guidelines should be addressed to:

Australian Energy Regulator  
GPO Box 3131  
Canberra ACT 2601  
Email: AERInquiry@aer.gov.au

AMENDMENT RECORD

<b>Version no.</b>	<b>Date</b>	<b>Pages</b>
01	July 07	11

# Contents

<b>1. Nature and authority .....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Authority .....	1
1.3 Role of these guidelines .....	1
1.4 Relationship between these guidelines and the National Electricity Rules .....	1
1.5 Confidentiality .....	2
1.6 Definitions and interpretation .....	2
1.7 Processes for revision.....	2
1.8 Version history and effective date .....	2
<b>2. Pricing methodology guidelines .....</b>	<b>3</b>
2.1 Information requirements.....	3
2.2 Permitted (locational) pricing structures.....	5
2.3 Permitted (postage stamp) pricing structures.....	6
2.4 Attribution of transmission system assets to categories of prescribed transmission services.....	8
2.5 Disclosure of information .....	10
<b>3. Glossary.....</b>	<b>11</b>

# 1. Nature and authority

## 1.1 Introduction

These proposed *guidelines* specify or clarify a number of aspects in relation to the preparation of a *Transmission Network Service Provider's (TNSP) proposed pricing methodology* to be submitted to the *Australian Energy Regulator (AER)*.

## 1.2 Authority

Clause 6A.25.1(a) of the *National Electricity Rules* requires the *AER* to develop, in accordance with the *transmission consultation procedures*, guidelines relating to the preparation of a proposed *pricing methodology* by a *TNSP*.

## 1.3 Role of these guidelines

These *guidelines* specify or clarify:

- (a) the information that is to accompany a proposed *pricing methodology*;
- (b) permitted pricing structures for the recovery of the locational component of providing *prescribed TUOS services*;
- (c) permitted postage stamp pricing structures for *prescribed common transmission services* and the recovery of the adjusted non-locational component of providing *prescribed TUOS services*;
- (d) the types of *transmission system assets* that are *directly attributable* to each *category of prescribed transmission services*; and
- (e) those parts of a proposed *pricing methodology*, or the information accompanying it that will not be publicly disclosed without the consent of the *TNSP*.

## 1.4 Relationship between these guidelines and the National Electricity Rules

- (a) Each *TNSP* must develop a proposed *pricing methodology* for submission to the *AER* in accordance with the requirements of these *guidelines* and the *National Electricity Rules*.
- (b) The *pricing methodology* approved by the *AER* must be used by the relevant *TNSP*, in conjunction with the *National Electricity Rules*, for the purpose of determining transmission prices in each *regulatory year* of a *regulatory control period*.

- (c) Clause 6A.17.1 of the *National Electricity Rules* provides for information to be provided by the *TNSP* to the *AER* which the *AER* may use to monitor, report on and enforce compliance with a *transmission determination*, including a *TNSP's pricing methodology*. A failure by a *TNSP* to comply with its *pricing methodology* may constitute a breach of clause 6A.24.1(d) of the *National Electricity Rules*.

## **1.5 Confidentiality**

The *AER's* obligations regarding confidentiality and the disclosure of information provided to it by a *TNSP* are governed by the *Trade Practices Act 1974*, the *National Electricity Law* and the *National Electricity Rules*.

## **1.6 Definitions and interpretation**

- (a) In these *guidelines* the words and phrases presented in italics have the meaning given to them in:
  - (1) the glossary; or
  - (2) if not defined in the glossary, the *National Electricity Rules*.
- (b) Explanations in these *guidelines* about why certain information is required are provided for guidance only.

## **1.7 Processes for revision**

The *AER* may amend or replace the *guidelines* from time to time in accordance with clause 6A.25.1(b)(2) of the *National Electricity Rules*.

## **1.8 Version history and effective date**

A version number and an effective date of issue will identify every version of these *guidelines*.

## 2. Pricing methodology guidelines

### 2.1 Information requirements

A *TNSP*'s proposed *pricing methodology* must contain the following information:

- (a) Whether the *TNSP* is the sole provider of *prescribed transmission services* within its *region* or whether there are multiple *TNSPs* providing *prescribed transmission services*.
- (b) If there are multiple *TNSPs* providing *prescribed transmission services* within its *region* the *TNSP* should detail whether it:
  - (1) has been appointed as the *Co-ordinating Network Service Provider* for a *region* under clause 6A.29.1(a) of the *National Electricity Rules* and is therefore responsible for the allocation of the *AARR* within the *region*; or
  - (2) is an appointing provider for the purposes of clause 6A.29.1(a) of the *National Electricity Rules* and if so, it should nominate the *Co-ordinating Network Service Provider* and identify the parts of its proposed *pricing methodology* which will be dealt with by the *Co-ordinating Network Service Provider*.
- (c) Details of how the *AARR* has been derived including an explanation of how the operating and maintenance costs subtracted from the *maximum allowed revenue* in accordance with clause 6A.22.1 of the *National Electricity Rules* have been determined and how they will be recovered via transmission prices.
- (d) Details of how the *AARR* will be allocated to derive the *ASRR* for *each category of prescribed transmission service*, including:
  - (1) how the *attributable cost shares* for each *category of prescribed transmission service* will be calculated in accordance with clause 6A.22.3 of the *National Electricity Rules*, including hypothetical worked examples; and
  - (2) how the priority ordering approach outlined in clause 6A.23.2(d) of the *National Electricity Rules* will be applied, including a hypothetical worked example.
- (e) Details of how the *ASRR* for each *category of prescribed transmission service* will be allocated to each *transmission connection point*, including:
  - (1) how the *attributable connection point cost share* for both *prescribed entry services* and *prescribed exit services* will be calculated in accordance with clause 6A.22.4 of the *National Electricity Rules*, including hypothetical worked examples;

- (2) how the locational and pre-adjusted non-locational shares of *prescribed TUOS services* will be allocated in accordance with 6A.23.3(d) of the *National Electricity Rules*;
  - (3) how the locational and adjusted non-locational components of *prescribed TUOS services* will be determined and allocated to *connection points* in accordance with clause 6A.23.3(c) of the *National Electricity Rules*.
- (f) In relation to price structures:
- (1) confirm that separate prices will be developed for each *category of prescribed transmission service*;
  - (2) confirm that the prices for *prescribed entry services* and *prescribed exit services* will be a fixed annual amount, and describe how these amounts will be calculated;
  - (3) outline how the pricing structure for the recovery of the locational component of *prescribed TUOS services* complies with these *guidelines* and clauses 6A.23.4(e)-(i) of the *National Electricity Rules*;
  - (4) outline how the pricing structure for the recovery of the adjusted non-locational component of *prescribed TUOS services* complies with these *guidelines* and clause 6A.23.4(j) of the *National Electricity Rules*; and
  - (5) outline how the pricing structure for the recovery of *prescribed common transmission services* complies with these *guidelines* and clause 6A.23.4(d) of the *National Electricity Rules*.
- (g) A statement of how the *pricing methodology* gives effect to and is consistent with, the *pricing principles for prescribed transmission services* including an explanation of how any alternative pricing structure which the *TNSP* wishes to apply meets the requirements of clause 6A.23.4 of the *National Electricity Rules*.
- (h) Information relating to any prudent discounts for *prescribed transmission services* and how those discounts are proposed to be recovered from *Transmission Network Users* in accordance with clause 6A.26 of the *National Electricity Rules*.
- (i) Details of billing arrangements with *Transmission Network Users* and transfers between *TNSPs* conducted in accordance with clause 6A.27 of the *National Electricity Rules*.
- (j) Details of the nature of *prudential requirements* as outlined in clause 6A.28 of the *National Electricity Rules* and how any capital contributions will be taken into account in determining a transmission network users' prices for *prescribed transmission services*.
- (k) If a *TNSP* has, in accordance with section 2.5 of these *guidelines*, provided the *AER* with a confidential version of its proposed *pricing methodology*, the non-confidential version of the proposed *pricing methodology* must outline the area or areas where the *TNSP* is making a claim for confidentiality and why.



- (l) Details of any derogation in accordance with chapter 9 of the *National Electricity Rules*.
- (m) Details of any transitional arrangements which apply in accordance with chapter 11 of the *National Electricity Rules*.
- (n) The period over which the proposed *pricing methodology* will apply.
- (o) A description of any differences between the *pricing methodology* applied during the current *regulatory control period* and that proposed for the next *regulatory control period*.
- (p) Details of how the *TNSP* intends to maintain records of the application of the *pricing methodology* in order for the *AER* to monitor, report on and enforce the *pricing methodology* in accordance with clause 6A.17.1 of the *National Electricity Rules*; and
- (q) Details of how the *TNSP* intends to monitor its compliance with its approved *pricing methodology*, the *pricing principles for prescribed transmission services* and more broadly Part J of the *National Electricity Rules*.

## **2.2 Permitted (locational) pricing structures**

- (a) Prices for the recovery of the locational component of *prescribed TUOS services* must be based on demand at times of greatest utilisation of the *transmission network* and for which network investment is most likely to be contemplated in accordance with clause 6A.23.4(e) of the *National Electricity Rules*.
- (b) Prices calculated in accordance with clause 6A.23.4(e) of the *National Electricity Rules* must be applied to a measure of demand of the network to derive a charge for the locational component of *prescribed TUOS services*.
- (c) The following measures of demand, when applied to a price calculated in accordance with clauses 6A.23.3(c)(1) and 6A.23.4(e), are permitted pricing structures:
  - (1) The higher of the *contracted agreed maximum demand* as negotiated in a *transmission customer's* connection agreement or the *transmission customer's* actual maximum demand in the previous *financial year* expressed as \$/MW/day; or
  - (2) Demand measured as the average of the *transmission customer's maximum demand* recorded at a *connection point* on the 10 weekdays when system demand is highest between the hours of 07:00 and 23:00 in the local time zone during the previous *financial year* expressed as \$/MW/day.
- (d) If historical data is unavailable for a *connection point* for use in section 2.2(c) of these proposed *guidelines*, forecast demand must be used instead.

- (e) The *contracted agreed maximum demand* must only be used for the calculation of the locational component of *prescribed TUOS services* pricing structure if the *transmission customer's* connection agreement or other enforceable instrument governing the terms of connection of the *transmission customer*:
  - (1) nominates a fixed maximum demand for the *connection point*; and
  - (2) specifies penalties for exceeding the *contracted agreed maximum demand*.
- (f) A *TNSP* (or *Co-ordinating Network Service Provider*) may propose alternative pricing structures for the recovery of the locational component of *prescribed TUOS services* which it considers give effect to, and are consistent with the *pricing principles for prescribed transmission services* in the *National Electricity Rules*.
- (g) If a *TNSP* (or *Co-ordinating Network Service Provider*) proposes an alternative pricing structure for the recovery of the locational component of *prescribed TUOS services* it must clearly demonstrate to the *AER* that the alternative pricing structure:
  - (1) gives effect to, and is consistent with the *pricing principles for prescribed transmission services* in the *National Electricity Rules*;
  - (2) improves on the permitted pricing structures outlined in section 2.2(c) of these *guidelines*; and
  - (3) contributes to the NEM objective.

### **2.3 Permitted (postage stamp) pricing structures**

- (a) Prices for *prescribed common transmission services* and the recovery of the adjusted non-locational component of *prescribed TUOS services* are to be set on a *postage stamp* basis in accordance with clause 6A.23.4(d) and clause 6A.23.4(j) of the *National Electricity Rules* respectively.
- (b) Each *financial year* a *TNSP* (or *Co-ordinating Network Service Provider*) must determine the following two prices for both *prescribed common transmission services* and the adjusted non-locational component of *prescribed TUOS services*:
  - (1) An *energy based price* that is a price per unit of historical or actual metered energy at a *connection point*; and
  - (2) A *contracted agreed maximum demand* price that is a price per unit of contracted capacity at a *connection point*.
- (c) Either the *energy based price* or the *contracted agreed maximum demand* price applies at a *connection point* except for those *connection points* where a transmission customer has negotiated reduced charges for *prescribed common transmission services* or the adjusted non-locational component of *prescribed*

*TUOS services* in accordance with clause 6A.26.1 of the *National Electricity Rules*.

- (d) The *energy based price* and the *contracted agreed maximum demand price* referred to in section 2.3(b) above must be determined so that:
  - (1) a *Transmission Customer* with a load factor in relation to its *connection point* equal to the median load factor for *connection points* with *Transmission Customers* connected to the transmission network in the *region* or *regions* is indifferent between the use of the *energy based price* and the *contracted agreed maximum demand price*; and
  - (2) the total amount to be recovered by the *prescribed common transmission services* and the adjusted non-locational component of *prescribed TUOS services* does not exceed the *ASRR* for each *category of prescribed transmission service*.
- (e) The charge for *prescribed common transmission services* and the adjusted non-locational component of *prescribed TUOS services* using the *energy based price* for a *billing period* in a *financial year* for each *connection point* must be calculated by:
  - (1) multiplying the *energy based price* by the metered energy offtake at that *connection point* in the same period in the *financial year* which came to an end 12 months prior to the commencement of the *financial year* in which the charge is to apply (i.e. historical energy offtake); or
  - (2) multiplying the *energy based price* by the metered energy offtake at that *connection point* in the same *billing period* if the historical energy offtake is not available.
- (f) The charge calculated for *prescribed common transmission services* and the adjusted non-locational component of *prescribed TUOS services* using the *contracted agreed maximum demand price* for a *billing period* in a *financial year* for each *connection point* must be calculated by multiplying the *contracted agreed maximum demand price* by the *maximum demand* for the *connection point* in that *financial year* and then dividing this amount by the number of *billing periods* in the *financial year*.
- (g) The *energy based price* or the *contracted agreed maximum demand price* that applies for *prescribed common transmission services* and the adjusted non-locational component of *prescribed TUOS services* must be the one which results in the lower of the *prescribed common transmission services* charge and the adjusted non-locational component of *prescribed TUOS services* charge.
- (h) A *contracted agreed maximum demand price* must only be used for the calculation of the *prescribed common transmission services* charge and the adjusted non-locational component of *prescribed TUOS services* charge if the *Transmission Customer's connection agreement* or other enforceable instrument governing the terms of connection of the *Transmission Customer*:

- (1) nominates a *maximum demand* for the *connection point*; and
- (2) specifies penalties for exceeding the nominated *maximum demand*.

## **2.4 Attribution of transmission system assets to categories of prescribed transmission services**

The following outlines the types of *transmission system* assets that are *directly attributable* to each *category of prescribed transmission service*.

- (a) Entry asset costs are recovered from *Generators* connected to the *Transmission Network*.
  - (1) *Transmission system assets* that are *directly attributable* to *prescribed entry services* include:
    - (i) *substation* establishment and building costs;
    - (ii) all switchgear and *plant* associated with *generators'* connection and *generator transformers*;
    - (iii) all secondary systems associated with primary systems providing *prescribed entry services*;
    - (iv) *transmission* lines owned by *TNSPs* connecting generators to the *TNSP's* assets; and
    - (v) *meters* associated with *prescribed entry services* and owned by the *TNSP*.
- (b) Exit asset costs are recovered from *Transmission Customers* connected to the *Transmission Network*.
  - (1) *Transmission system assets* that are *directly attributable* to *prescribed exit services* include:
    - (i) *substation* establishment and building costs;
    - (ii) switchgear used to supply the sub-transmission *voltage* and associated switchgear at both the *transmission* and sub-transmission *voltage* level;
    - (iii) all transformers which supply the sub-transmission voltage level and associated switchgear at both the *transmission* and sub-transmission *voltage* level;
    - (iv) all secondary systems associated with primary systems providing *prescribed exit services*;
    - (v) *meters* associated with *prescribed exit services* and owned by the *TNSP*; and

- (vi) *reactive plant* installed for *power factor* correction which provides benefit to *Transmission Customers* connected at the *connection point*.
- (c) The assets included in the *prescribed TUOS service category* include all elements of the *transmission network* which provide *transmission* service on a locational basis.
- (1) *Transmission system assets* that are *directly attributable* to *prescribed TUOS services* include:
    - (i) *substation* establishment and building costs;
    - (ii) *transmission lines* and associated easements;
    - (iii) switchgear on *transmission lines* and auto-transformers which are part of the *transmission network* and are switched at the *substation* including associated bus work and control and protection schemes;
    - (iv) auto-transformers which transform *voltage* between *transmission* levels;
    - (v) static and dynamic *reactive plant* and associated switchgear and transformation regardless of the voltage level; and
    - (vi) all system controls required for monitoring and control of the integrated *transmission system* including remote monitoring and associated communications, *load shedding* and special control schemes and *voltage* regulating *plant* required for operation of the integrated *transmission system*.
- (d) The *prescribed common transmission service* category includes all the *transmission* service costs which cannot be allocated to *Transmission Network Users* on a locational basis, including those costs which provide equivalent benefits to all *Transmission Network Users* within the *transmission* system without any differentiation of their location.
- (1) *Transmission system assets* that are *directly attributable* to *prescribed common transmission services* include:
    - (i) *substation* establishment and building costs;
    - (ii) *power system* communications networks;
    - (iii) *control systems*;
    - (iv) network switching centres (excluding generation and system control functions);
    - (v) static and dynamic reactive control *plant* and associated switchgear;
    - (vi) spare plant and equipment including that installed at *substations*;

- (vii) fixed assets such as buildings and land that are not associated with *substation* or line easements, (head office buildings, land for future *substations* etc.); and
- (viii) motor vehicles and construction equipment.

## **2.5 Disclosure of information**

- (a) A *TNSP* should develop its proposed *pricing methodology* so that it can be publicly released by the *AER*.
- (b) If a *TNSP* identifies information which it believes to be confidential or commercially sensitive and providing that information to the *AER* is necessary in order to demonstrate that its proposed *pricing methodology* complies with the *National Electricity Rules*, it should include that information in a confidential version of its proposed *pricing methodology* and provide it to the *AER*.
- (c) The *AER* considers that confidential or commercially sensitive information is likely to include details of, or information that could readily be used to infer an individual *transmission customer's* price or charge, premises, negotiated discounts, *prudential requirements* or other commercial arrangements relating to its electricity supply.
- (d) If a *TNSP* considers that other information should not be publicly available, it must justify its claim for confidentiality to the *AER*.
- (e) If the *AER* disagrees with a *TNSP's* claim that information, other than that identified in section 2.5(c) of these proposed *guidelines*, is of a confidential nature, the *AER* will notify the *TNSP* of its view and will not take the information into consideration when assessing the *TNSP's* proposed *pricing methodology*.

### 3. Glossary

**AARR** means the aggregate annual revenue requirement as defined in the *National Electricity Rules*

**ASRR** means the annual service revenue requirement as defined in the *National Electricity Rules*

**AER** means the Australian Energy Regulator

**Appointing provider** has the meaning ascribed to it in clause 6A.29.1(a) of the *National Electricity Rules*

**Contracted agreed maximum demand** means the agreed maximum demand negotiated between a TNSP and a transmission customer

**Directly attributable** in relation to transmission assets refers to assets that are used or required to provide the relevant pricing category of prescribed transmission service.<sup>1</sup>

**Guidelines** means the *pricing methodology guidelines*

**National Electricity Rules** means the rules as defined in the *National Electricity Law*

**TNSP** means transmission network service provider as defined in the *National Electricity Rules*

**TUOS** means transmission use of system

---

<sup>1</sup> AEMC, Rule Determination, *National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 No. 22*, 21 December 2006, p.34.