

# Determination on the Proposed 2007/08 Price List for the South West Interconnected Network

Submitted by Western Power

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Economic Regulation Authority

 WESTERN AUSTRALIA

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## DETERMINATION

1. On 7 May 2007, Western Power submitted a proposed 2007/2008 price list for the South West Interconnected Network (**SWIN**) to the Economic Regulation Authority (**Authority**) for the Authority's approval under Chapter 8 of the *Electricity Networks Access Code 2004* (**Access Code**).
2. The Authority has considered the proposed price list and considers that the proposed price list complies with the price control and pricing methods in the access arrangement for the SWIN.
3. In accordance with the requirements of section 8.2 of the Access Code, the Authority accordingly approves the proposed price list and determines that this price list has effect from 1 July 2007. The Authority has published the proposed price list and price list information on its web site ([www.era.wa.gov.au](http://www.era.wa.gov.au)).

## REASONS

### Requirements of the Access Code

4. Chapter 8 of the Access Code sets out requirements for a service provider to submit proposed prices lists, and for the Authority to approve and publish the proposed price lists and related price list information. The relevant sections of the Access Code are reproduced below.

Approval of price lists if required

- 8.1 If a service provider's access arrangement requires it to submit price lists to the Authority for approval, the service provider must, at least 45 business days before the start of each pricing year (except for the first pricing year), submit to the Authority:
  - (a) a proposed price list to apply for the next pricing year; and
  - (b) price list information.
- 8.2 If the Authority considers that a service provider's proposed price list complies with:
  - (a) the price control in the service provider's access arrangement; and
  - (b) the pricing methods in the service provider's access arrangement,then the Authority must:
  - (c) approve and publish the service provider's proposed price list which has effect from a date specified by the Authority; and
  - (d) publish the service provider's price list information.
- 8.3 The Authority must not approve a service provider's proposed price list if the proposed price list does not comply with sections 8.2(a) and 8.2(b), and must notify the service provider that it does not approve the proposed price list and provide reasons.
- 8.4 If a service provider is notified under section 8.3 that the Authority does not approve a proposed price list submitted by the service provider, the service provider may at any time submit a revised proposed price list to the Authority.
- 8.5 If the Authority:
  - (a) notifies a service provider under section 8.3 that it does not approve a proposed price list submitted by the service provider and

- (b) has not approved a revised proposed price list then the price list most recently in effect continues in effect until the Authority approves a revised proposed price list submitted by the service provider under section 8.4.
- 8.6 If the Authority has not notified a service provider that it does not approve a proposed price list within 15 business days after receiving either:
  - (a) the proposed price list; or
  - (b) any further information the Authority has requested in relation to the proposed price list,

(whichever is later), then the Authority is to be taken to have approved the price list.
- Publication of price lists if approval not required
- 8.7 If a service provider's access arrangement does not require it to submit price lists to the Authority for approval, the service provider must, at least 25 business days before the start of each pricing year (except for the first pricing year), submit to the Authority a copy of:
  - (a) a price list to apply in respect of the next pricing year which complies with:
    - (i) the price control in the service provider's access arrangement; and
    - (ii) the pricing methods in the service provider's access arrangement;and
  - (b) price list information.
- 8.8 Where a service provider submits a price list and price list information to the Authority under section 8.7, the Authority must publish the price list and price list information.

## Submission of the Proposed Price List

- 5. Clause 3.10 of the access arrangement for the SWIN requires Western Power to submit a proposed price list, together with price list information, to the Authority for approval at least 45 business days before the start of each pricing year (except for the first pricing year).
- 6. The exact requirements for Western Power to submit a proposed price list under clause 3.10 of the access arrangement and section 8.1 of the Access Code are unclear as a result of the access arrangement for the SWIN only having been approved by the Authority on 26 April 2007 and the access arrangement not coming into effect until 1 July 2007. The relevant provisions of Chapter 8 of the Access Code do not contemplate the situation of an access arrangement being approved within 45 days of the commencement of a new pricing period and, hence, the time by which Western Power was required to submit a price list for the 2007/08 year is not clear from the provisions of the Access Code.
- 7. Taking into account the absence of clear requirements under the Access Code and the need to have a price list approved for the 2007/08 year, the Authority indicated in its Further Final Decision and Final Approval of the access arrangement that Western Power had provided the Authority with an undertaking to submit a proposed price list and price list information for 2007/08 shortly after the Authority issued its Further Final Decision.
- 8. On 7 May 2007, Western Power submitted its proposed 2007/2008 price list and price list information for the SWIN to the Authority. Western Power also provided the Authority with confidential spreadsheets as supporting information to demonstrate that the charges specified in the proposed price list are forecast to return an amount of revenue approximately equal to the required revenue under the price control of the access arrangement.

9. On 18 May 2007, 21 May 2007 and 25 May 2007, and subsequent to the Authority requesting further information on a number of matters, Western Power provided the Authority with revised versions of the price list information and revised versions of the confidential spreadsheets. It is the revised versions of these documents that the Authority has considered for the purposes of this determination and which the Authority has published.

## Compliance of the Proposed Price List with the Price Control

10. Clauses 5.25 to 5.48 of the Access Arrangement for the SWIN establish revenue-cap price controls for each of the transmission and distribution networks. The operation of these price controls within an access arrangement period is set out in clauses 5.35 to 5.37 and 5.46 to 5.48 of the access arrangement as follows.

- 5.35 For this access arrangement period, the maximum regulated transmission revenue  $MTR_t$  is determined as follows:

$$MTR_t = TR_t + TK_t$$

Where:

$TR_t$  is the dollar amount in money of the day terms (current prices) for the financial year  $t$  calculated from the dollar amounts (expressed in 30 June 2006 prices) set out in the table below.

**Transmission revenues to be used for calculating  $TR_t$   
(\$million real as at 30 June 06)**

2006/07	2007/08	2008/09
211.8	230.5	224.1

$TK_t$  is the correction factor calculated in accordance with sections 5.36 and 5.37 of this Access Arrangement, which takes account of any difference between the maximum regulated transmission network revenue in financial year  $t-1$  and the actual regulated transmission network revenue in financial year  $t-1$ .

For the purpose of determining compliance with this revenue cap and calculating  $TR_t$ ,  $TK_t$  and therefore  $MTR_t$ , in each financial year CPI adjustments will be effected by using published CPI data relating to the relevant March quarters.

- 5.36 For financial years commencing on 1 July 2007 and 1 July 2008:

$$TK_t = (MTR_{t-1} - ATR_{t-1}) * (1 + WACC_{pre-tax real})$$

Where:

$MTR_{t-1}$  is the maximum regulated revenue for Western Power's transmission network in the previous financial year.

$ATR_{t-1}$  is the actual regulated transmission revenue in the previous financial year as defined in accordance with section 5.29 of this Access Arrangement.

$WACC_{pre-tax real}$  is 0.0676

For the financial year commencing on 1 July 2006,  $TK_t = 0$ .

For the avoidance of doubt, it should be noted that the annual tariff-setting process for financial year  $t$  typically takes place before the end of financial year  $t-1$ . Therefore,  $TK_t$  will need to be estimated in the first instance, and then recalculated in the subsequent financial year when  $ATR_{t-1}$  is known.

- 5.37 The correction factor,  $TK_t$ , will also apply in the first year of the next access arrangement period to adjust for any difference between maximum regulated transmission network revenue and actual transmission network revenue, in relation to the financial year commencing on 1 July 2008.

...

- 5.46 For this access arrangement period, the maximum regulated distribution revenue  $MDR_t$  is determined as follows:

$$MDR_t = DR_t + TEC_t + DK_t$$

Where:

$DR_t$  is the dollar amount in money of the day terms (current prices) for the financial year  $t$  calculated from the dollar amounts (expressed in 30 June 2006 prices) set out in the table below.

**Distribution revenues to be used for calculating  $DR_t$**   
**(\$million real as at 30 June 06)**

2006/07	2007/08	2008/09
387.1	409.7	434.3

$TEC_t$  is the cost incurred by the distribution network for the financial year  $t$  as a result of the tariff equalisation contribution in accordance with section 6.37A of the Access Code.

$DK_t$  is the correction factor calculated in accordance with sections 5.47 and 5.48 of this Access Arrangement, which takes account of any difference between the maximum regulated distribution network revenue in financial year  $t-1$  and the actual regulated distribution network revenue in financial year  $t-1$ .

For the purpose of determining compliance with this revenue cap and calculating  $DR_t$ ,  $DK_t$  and therefore  $MDR_t$ , in each financial year CPI adjustments will be effected by using published CPI data relating to the relevant March quarters.

- 5.47 For financial years commencing on 1 July 2007 and 1 July 2008:

$$DK_t = (MDR_{t-1} - ADR_{t-1}) * (1 + WACC_{pre-tax\ real})$$

Where:

$MDR_{t-1}$  is the maximum regulated revenue for Western Power's distribution network in the previous financial year.

$ADR_{t-1}$  is the actual regulated distribution revenue in the previous financial year as defined in accordance with section 5.40 of this Access Arrangement.

$WACC_{pre-tax\ real}$  is 0.0676

For the financial year commencing on 1 July 2006,  $DK_t = 0$ .

For the avoidance of doubt, it should be noted that the annual tariff-setting process for financial year  $t$  typically takes place before the end of financial year  $t-1$ . Therefore,  $DK_t$  will need to be estimated in the first instance, and then recalculated in the subsequent financial year when  $ADR_{t-1}$  is known.

- 5.48 The correction factor,  $DK_t$ , will also apply in the first year of the next access arrangement period to adjust for any difference between maximum regulated distribution network revenue and actual distribution network revenue, in relation to the financial year commencing on 1 July 2008.
11. Related to the price control is a "side constraint" that limits the extent to which component charges of reference tariffs may be increased or decreased from one year of the access arrangement period to the next. Clause 3.11 of the access arrangement establishes a side constraint of that allows individual reference-tariff charges to change by an amount of plus or minus "CPI + 5 per cent" per annum.<sup>1</sup>
12. Western Power has set out its determination of "maximum transmission regulated revenue" and "maximum distribution regulated revenue" in sections 3.1 and 3.2 of the price list information.

<sup>1</sup> The actual side constraint is plus or minus the percentage change in the CPI plus five per cent.



13. For both transmission and distribution, Western Power has set the relevant correction factors (TK<sub>2007,08</sub> and DK<sub>2007,08</sub>) at zero, reflecting Western Power's approach to financial modelling in which forecasts of actual revenue for 2006/07 were taken into account in determination of revenue requirements for 2007/08 and 2008/09 under its access arrangement.
14. The maximum regulated revenues for 2007/08 have therefore been derived by inflation escalation of the revenue requirements specified for 2007/08 under sections 5.35 and 5.46 of the access arrangement, as shown above.
15. Target reference-service revenues have also been derived in a manner consistent with financial modelling undertaken for the access arrangement.
16. Western Power's derivation of the target reference-service revenue for transmission is indicated in Table 1.<sup>2</sup>

**Table 1 Western Power determination of required revenue from transmission reference services for 2007/08**

Calculation Parameter	Value (\$million)	Source
Revenue cap (TR <sub>2007,08</sub> , dollar values of 30 June 2006)	230.6	Access Arrangement, section 5.35
Correction factor (TK <sub>2007,08</sub> , dollar values of 30 June 2006)	0	
<b>Maximum regulated transmission revenue (MTR<sub>2007,08</sub>, dollar values of 30 June 2006)</b>	<b>230.6</b>	
Forecast capital contributions (dollar values of 30 June 2006)	(27.4)	Access arrangement, section 5.29
Forecast non-reference service revenue (dollar values of 30 June 2006)	(18.4)	Access arrangement revenue model, <sup>3</sup> Transmission_Inputs line 172
<b>Reference service revenue (dollar values of 30 June 2006)</b>	<b>184.8</b>	
Inflation factor	1.055	Access arrangement revenue model, <sup>4</sup> Transmission_Inputs line 8
<b>Reference service revenue (nominal dollar values)</b>	<b>194.9</b>	

17. A part of Western Power's forecast revenue from non-reference transmission services (\$12.1 million in nominal dollar values) comprises revenue from services that are provided under "transitional" and "stand-by" tariffs. In deriving reference tariffs for transmission services, Western Power has assumed that all relevant users are paying the reference tariffs rather than the transitional and stand-by tariffs. Accordingly, Western Power has actually determined transmission reference tariffs with a view to recovering a target reference-tariff revenue of \$207.0 million (in nominal dollar values).

<sup>2</sup> Price list information, sections 3.1 to 3.3.

<sup>3</sup> Access arrangement information, Appendix 11.

<sup>4</sup> Access arrangement information, Appendix 11.

18. Derivation of the target reference-service revenue for distribution is indicated in Table 2 for transmission services and distribution services.<sup>5</sup>

**Table 2 Western Power determination of required revenue for distribution reference-services for 2007/08**

Calculation Parameter	Value (\$million)	Source
Revenue cap (TR <sub>2007,08</sub> , dollar values of 30 June 2006)	437.7	Access Arrangement, section 5.35
Tariff equalisation contribution (dollar values of 30 June 2006)	67.9	Access arrangement revenue model, <sup>6</sup> Distribution_Inputs line 170
Correction factor (TK <sub>2007,08</sub> , dollar values of 30 June 2006)	0	
<b>Maximum regulated distribution revenue (MDR<sub>2007,08</sub>, dollar values of 30 June 2006)</b>	<b>505.6</b>	
Forecast capital contributions (dollar values of 30 June 2006)	(106.8)	Access arrangement, section 5.40
Forecast non-reference service revenue (dollar values of 30 June 2006)	(14.7)	Access arrangement revenue model, <sup>7</sup> Distribution_Inputs line 174
<b>Reference service revenue (dollar values of 30 June 2006)</b>	<b>384.1</b>	
Inflation factor	1.055	Access arrangement revenue model, <sup>8</sup> Distribution_Inputs line 8
<b>Reference service revenue (nominal dollar values)</b>	<b>405.1</b>	

19. As is the case with forecast revenue from transmission services, a part of Western Power's forecast revenue from non-reference distribution services (\$3.8 million in nominal dollar values) comprises revenue from services that are provided under transitional and stand-by tariffs. In deriving reference tariffs for distribution services, Western Power has assumed that all relevant users are paying the reference tariffs rather than the transitional and stand-by tariffs. Accordingly, Western Power has actually determined reference tariffs for the distribution system with a view to recovering a target reference-tariff revenue of \$408.9 million (in nominal dollar values).
20. Western Power indicates in section 3.3 of the price list information that the inflation factor used to calculate the required revenue from reference services in nominal dollar values is derived from forecasts of inflation for the annual periods March 2006 to March 2007 and March 2007 to March 2008. Western Power further indicates that differences between these forecast values of inflation and realised values of inflation for the same periods will be corrected for in determination of revenue requirements in future price years.

<sup>5</sup> Price List Information, sections 3.1 to 3.3.

<sup>6</sup> Access arrangement information, Appendix 11.

<sup>7</sup> Access arrangement information, Appendix 11.

<sup>8</sup> Access arrangement information, Appendix 11.

21. The confidential spreadsheets provided by Western Power with the proposed price list and price list information contain calculations of expected revenue from the component charges of reference tariffs set out in the proposed price list given forecasts of the parameters of demand for each charge. The total values of expected revenue are indicated in Table 3.

**Table 3 Western Power forecast revenue from reference services for 2007/08**

Revenue component	Value (\$million)
<b>Transmission revenue</b>	
Revenue from transmission reference tariffs	52.4
Transmission revenue from bundled distribution charges	158.5
(less expected under-recovery of transmission revenue in distribution charges)	(3.9)
<b>Total revenue from transmission reference tariffs (including notional reference tariff revenue from users charged the non-reference transition and standby tariffs)</b>	<b>207.0</b>
<b>Distribution revenue from reference tariffs (net of transmission charges and including notional reference tariff revenue from users charged the non-reference transition and standby tariffs)</b>	<b>409.9</b>

22. The forecast revenues for transmission and distribution reference services is projected to vary from the revenue requirements:
- while the forecast revenue from transmission reference services is indicated by Western Power to recover the required revenue target of \$207.0 million, it is likely that there will be a small under-recovery against this target due to some users paying the transition and stand-by non-reference tariffs instead of the relevant reference tariffs; and
  - forecast revenue for distribution reference services is \$409.9 million, compared to the required reference service revenue \$408.9 million, indicating an over-recovery by about \$1 million, although this over-recovery would be expected to be lower than this due to some users paying the transition and stand-by non-reference tariffs instead of the relevant reference tariffs.
23. The Authority considers that the differences between required and forecast revenues from reference services are within a reasonable margin when determining a complex set of reference-tariff charges. The Authority also notes that, under the price control of the access arrangement, any differences between required and actual revenues will be corrected for in transmission and distribution prices in future price years.
24. The side constraint applying to increases in charges from 2006/07 to 2007/08 would be +/- 7.8 per cent, with the limit of 7.8 per cent corresponding to the forecast of inflation applied by Western Power for the 2006/07 year of 2.8 per cent plus the additional 5 per cent limit imposed under the side constraint.
25. An attachment to Western Power's price list information indicates the percentage changes in reference-tariff charges from the charges established in the Price List for 2006/07 to the Proposed Price List for 2007/08. These percentage changes are within the bounds established by the side constraint and comprise:

- increases in charges of distribution reference tariffs of generally between 3.0 and 5.8 per cent;
  - changes in charges of transmission reference tariffs ranging from decreases of up to 7.8 per cent to increases of up to 7.8 per cent.
26. Taking into account the derivation of required revenue from reference services, the forecast revenue from reference tariffs and the changes in reference-tariff charges relative to the side constraint, the Authority is satisfied that the proposed price list complies with the price control set out in the access arrangement for the SWIN.

## Compliance of the Price List with the Pricing Methods

27. Clause 9.4 of the access arrangement for the SWIN indicates that Western Power determines the charges of reference tariffs by use of fully distributed cost models to allocate costs to customer groups and to component charges of reference tariffs. The details of cost allocation are set out in the price list information included as Appendix 6 of the access arrangement and are reproduced in the price list information provided to the Authority with the proposed price list for 2007/08.
28. Western Power has not made any changes to basic cost allocation methodologies or the structures of reference tariffs in deriving the proposed price list for 2007/08. Accordingly, the Authority considers that the proposed price list complies with the pricing methods established under the access arrangement.