

Determination on the Proposed 2014/15 Price List for Western Power's Covered Electricity Network

Submitted by Western Power

Economic Regulation Authority

WESTERN AUSTRALIA

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Economic Regulation Authority
Perth, Western Australia
Phone: (08) 6557 7900

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DETERMINATION

1. On 28 April 2014, Western Power submitted a proposed 2014/15 price list under its access arrangement for approval by the Economic Regulation Authority (Authority) under Chapter 8 of the *Electricity Networks Access Code 2004* (Access Code).
2. Currently, Western Power's access arrangement governs terms of access to its network for the third access arrangement period (AA3, 2012/13 to 2016/17). The amended access arrangement commenced on 1 February 2013, with further mid-period variations approved by the Authority on 4 June 2013 and 3 April 2014.^{1,2}
3. The Authority has assessed the proposed 2014/15 price list and considers that the proposed price list complies with the price control and pricing methods of the access arrangement.
4. In accordance with the requirements of section 8.2 of the Access Code, the Authority approves the 2014/15 proposed price list and determines that this price list has effect from 1 July 2014. The Authority has published Western Power's proposed price list and price list information on its website.³

¹ November 2012, Western Power, *Amended Proposed Revisions to the Access Arrangement for the Western Power Network* (hereafter cited as "**access arrangement**"). The access arrangement was approved by the Authority on 29 November 2012, with a commencement date of 1 February 2013.

² Economic Regulation Authority, *Decision: Variation to Western Power's Access Arrangement for 2012/13 to 2016/17*, 4 June 2013; and Economic Regulation Authority, *Notice: Variations to Western Power's Access Arrangement*, 3 April 2014.

³ See Economic Regulation Authority website: <http://www.erawa.com.au/access/electricity-access/price-list-determinations/>

REASONS

Access Code Requirements

5. Chapter 8 of the Access Code sets out requirements for a service provider to submit proposed price lists, and for the Authority to approve and publish the proposed price lists and related price list information.

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.

Proposed Price List Submission

6. Clause 6.4.3 of Western Power's amended access arrangement requires it to submit to the Authority a proposed price list, together with price list information, at least 45 business days before the start of each pricing year (except for the first pricing year).
7. Western Power submitted a proposed 2014/15 price list and price list information to the Authority on 28 April 2014. Western Power has also provided the Authority with confidential spreadsheets containing additional supporting information and calculations to indicate the forecast of revenue associated with the proposed price list.
8. Western Power's proposed 2014/15 price list would result in an average tariff increase of 4.8 per cent. This comprises an increase of 6.9 per cent for distribution network tariffs and a reduction of 0.8 per cent for transmission network tariffs.

Compliance of the Proposed Price List with the Price Control

Specification of the Price Control under the Access Arrangement

9. Under the Access Code, "price control" refers to the provisions of an access arrangement that determine the target revenue to be earned by the service provider, enable users to predict likely annual changes in target revenue during the access arrangement period, and aim to avoid price shocks (material tariff adjustments between succeeding years).
10. Section 5 of the access arrangement establishes 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 5.6.1 to 5.6.8 and 5.7.1 to 5.7.8 of the access arrangement.
11. Related to the price control is a "side constraint" that limits the extent to which component charges of reference tariffs may be increased from one pricing year of the access arrangement period to the next. Clauses 6.5.13 and 6.5.14 of the access arrangement specify the method to calculate side constraints on price changes for transmission and distribution.

Revenue Cap Service Revenue

12. Western Power has set out its determination of maximum transmission revenue cap service revenue (MTR_t) and maximum distribution revenue cap service revenue (MDR_t) in sections 1.3.1 and 1.3.2 of the price list information respectively.

Transmission Services

13. Western Power's derivation of the revenue cap service revenue for transmission services is indicated in Table 1 below.

Table 1 Western Power's determination of maximum transmission revenue cap service revenue for 2014/15

Calculation Parameter	Value (\$ million)	Source
Revenue cap (TR _{2014/15} , dollar values of 30 June 2012)	321.4	Amended Access Arrangement, clause 5.6.6
Correction factor (TK _{2014/15} , dollar values of 30 June 2012)	16.1	2014/15 Price List Information, section 1.3.1 (Table 2)
Maximum transmission revenue cap service revenue (MTR_{2014/15}, dollar values of 30 June 2012)	337.5	
<i>Inflation factor</i>	1.079	2013/14 Price List Information, section 1.3.3 (Table 6)
Maximum regulated transmission revenue (MTR_{2014/15}, nominal dollar values)	364.1	

14. Western Power has provided to the Authority on a confidential basis a model containing the calculations used to derive the correction factor (K).⁴
15. The correction factor for transmission for 2014/15 (TK_{2014/15}) was calculated from required and collected revenue values for the 2012/13 and 2013/14 pricing years. The correction factor was derived by applying Equation 1 in accordance with access arrangement clauses 5.6.7 and 5.6.8.

Equation 1: Transmission revenue correction factor formula (TK_t)

$$TK_t = (FTR_{t-2} - ATR_{t-2}) * (1+WACC_{\text{post-tax real}})^2 + (MTR_{t-1} - FTR_{t-1}) * (1+WACC_{\text{post-tax real}})$$

16. The application of Equation 1 is illustrated in Table 2, below. The post-tax real weighted average cost of capital (WACC) is 3.60 per cent as set out in clause 5.4.1 of Western Power's access arrangement.

⁴ 17 April 2014, Western Power, K Factor Model (confidential).

Table 2 Western Power's determination of the correction factor (TK_t) for 2014/15 for the determination of maximum transmission revenue cap service revenue (dollar values of 30 June 2012)

Calculation Parameter	Value(\$ million)	
	2012/13 (t-2)	2013/14 (t-1)
Forecast Transmission Revenue (FTR_{t-2})	387.3	
Actual Transmission Revenue (ATR_{t-2})	378.9	
Maximum Transmission Revenue (MTR_{t-1})		355.5
Forecast Transmission Revenue (FTR_{t-1})		348.6
(Over)/Under Revenue Collection _t	8.4	6.8
Multiplied by $(1 + WACC)^2$	9.0	
Multiplied by $(1 + WACC)$		7.1
Correction factor ($TK_{2014/15}$)		16.1

Distribution Services

17. Western Power's derivation of the reference service revenue for distribution services is indicated in Table 3 below.

Table 3 Western Power's determination of maximum distribution regulated revenue for 2014/15

Calculation Parameter	Value (\$ million)	Source
Revenue cap (DR _{2014/15} , dollar values of 30 June 2012)	816.7	Amended Access Arrangement, clause 5.7.6
Correction factor (DK _{2014/15} , dollar values of 30 June 2012)	47.9	2014/15 Price List Information, section 1.3.2 (Table 4)
Maximum distribution revenue cap service revenue excluding TEC_t (MDR _{2014/15} dollar values of 30 June 2012)	864.6	
<i>Inflation factor</i>	1.079	2014/15 Price List Information, section 1.3.3 (Table 6)
Maximum distribution revenue cap service revenue excluding TEC_t (MDR _{2014/15} nominal dollar values)	932.9	
Tariff equalisation contribution (TEC _{2014/15} , nominal dollar values)	136.0	2014/15 Price List Information, section 1.3.2 (Table 4)
Maximum distribution revenue cap service revenue including TEC_t (MDR _{2014/15} , nominal dollar values)	1068.9	

18. As with transmission services, the correction factor for distribution (DK_t) was calculated from required and collected revenue values for the 2012/13 and 2013/14 pricing years. The correction factor was derived by applying Equation 2 in accordance with access arrangement clauses 5.7.7 and 5.7.8.

Equation 2: Distribution revenue correction factor formula (DK_t)

$$DK_t = (FDR_{t-2} - ADR_{t-2}) * (1+WACC_{\text{post-tax real}})^2 + (MDR_{t-1} - FDR_{t-1}) * (1+WACC_{\text{post-tax real}})$$

19. The application of Equation 2 is illustrated in Table 4, below. The post-tax real weighted average cost of capital (WACC) is 3.60 per cent as set out in clause 5.4.1 of Western Power's access arrangement.

Table 4 Western Power's determination of the correction factor (DK_t) for 2014/15 for the determination of maximum regulated distribution revenue (dollar values of 30 June 2012)

Calculation Parameter	Value(\$ million)	
	2012/13 (t-2)	2013/14 (t-1)
Forecast Distribution Revenue (FTR_{t-2})	818.7	
Actual Distribution Revenue (ATR_{t-2})	817.2	
Maximum Distribution Revenue (MTR_{t-1})		953.1
Forecast Distribution Revenue (FTR_{t-1})		908.4
Under Revenue Collection _t	1.5	44.7
Multiplied by (1 + WACC) ²	1.6	
Multiplied by (1 + WACC)		46.3
Correction factor ($DK_{2014/15}$)		47.9

Inflation Factor

20. An inflation factor is used to calculate the required revenue from reference services in nominal dollar values. Consistent with section 1.3.3 of the price list information, Table 5 shows how the inflation factor for 2014/15 was derived.
21. Inflation for the period December 2012 to December 2013 has been adjusted to the actual rate of 2.75 per cent compared with the forecast included in the 2013/14 Price List of 2.0 per cent. The 2015/16 Price List will include a correction for any difference in the forecast and actual inflation for the December 2013 to December 2014 period.

Table 5 Western Power's determination of the inflation factor for 2014/15

Financial year	CPI Period	Type	Value
2012/13	December 2011 – December 2012	Actual	2.20%
2013/14	December 2012 – December 2013	Actual	2.75%
2014/15	December 2013 – December 2014	Forecast	2.75% ⁵
Derived Inflation Factor			1.079

Forecast Revenue

22. Table 7 of the price list information compares the revenue forecast to be collected with the revenue caps for both transmission and distribution. The total values of

⁵ Reserve Bank of Australia's February 2014 Statement on Monetary Policy, online <http://www.rba.gov.au/publications/smp/2014/feb/pdf/0214.pdf>, accessed 23/04/2014.

expected revenue compared with maximum target revenue are shown in Table 6 below.

Table 6 Western Power's forecast revenue to be collected from reference services for the period July 2014 – June 2015

Revenue Component	Value (\$ million nominal)
Transmission Revenue	
Forecast revenue from transmission tariffs (inclusive of non-reference charges for standby access and firm backup capacity service of \$4.0 million)	359.3
Maximum regulated transmission revenue (MTR _{2014/15})	364.1
Forecast under recovery of transmission revenue	4.8
Distribution Revenue	
Forecast revenue from distribution tariffs (inclusive of non-reference charges for firm backup capacity service of \$0.8 million)	1,046.8
Maximum regulated distribution revenue (MDR _{2014/15})	1,068.9
Forecast under recovery of distribution revenue	22.1
Total forecast under recovery	26.9

23. The expected revenues for both transmission and distribution comply with clause 6.5.3 of the access arrangement, in that forecast transmission and distribution revenue for 2014/15 do not exceed MTR_{2014/15} and MDR_{2014/15}, respectively.
24. Western Power has proposed to defer the recovery of this \$26.9 million in revenue and recover it in future years.

Compliance with side constraints

25. Clauses 6.5.13 and 6.5.14 of the access arrangement set out the side constraints that apply to increases in network charges for the transmission and distribution network. The side constraint formula allows for a reference tariff to be increased such that the proportional increase in nominal revenue from the reference tariff from the previous year is less than or equal to the proportional increase from:
- inflation escalation;
 - the year to year change in target revenue that was determined in the financial model for the access arrangement;
 - adjustments to target revenue that result from carry-over and cost pass-through mechanisms under the price control, as well as the tariff equalisation contribution for distribution charges; and
 - a further two per cent.

26. For this purpose, inflation is the percentage increase in the CPI (weighted average for eight capital cities) for the most recent December quarter compared to the December quarter in the previous year.
27. For the 2014/15 pricing year, these side constraints limit the revenue from any individual reference tariff as follows.
 - Transmission revenue derived from that reference tariff in 2014/15 must be equal to or less than 107.69 per cent of the 2013/14 transmission revenue obtained from that reference tariff; and
 - Distribution revenue derived from that reference tariff in 2014/15 must be equal to or less than 122.16 per cent of the 2013/14 distribution revenue obtained from that reference tariff.
28. In order to calculate the side constraints the following parameters were used:
 - a forecast of CPI inflation of 2.75 per cent;
 - year to year change in target revenue of -2.0 per cent for transmission charges and 19.3 per cent for distribution charges;
 - an increase of 5.0 per cent for transmission charges and -2.42 per cent for distribution charges which reflect adjustments to target revenue; and
 - a further two per cent.
29. Table 25, in Section 8.1 of the price list information indicates the percentage changes in reference tariffs from 2013/14 to the proposed 2014/15 price list. The percentage changes are within the bounds established by the side constraints and range between:
 - a reduction of 55 per cent for one transmission tariff through to a maximum increase of 2 per cent for other transmission tariffs; and
 - increases in distribution tariffs of between 3 and 13 per cent.
30. Western Power notes in sections 1.2.5 and 8.2 of the price list information that, during the second access arrangement period, rather than adjusting individual tariffs by different amounts, the decision was made (in order to reduce price shock to individual customer groups) to increase all network tariffs by the same amount each year. This resulted in charges for some reference tariffs deviating slightly from the "optimal" level. Western Power commenced re-balancing tariffs in the AA3 period, within the bounds imposed by the side constraints.
31. Section 8.2 of the price list information notes that the tariff with the most significant price movement is RT11 (distribution entry). In section 1.2.4, Western Power explains changes to the method for allocating costs to RT11 customers, which made the method consistent with the treatment of transmission connected generators. According to Table 1 of the price list information, the changes affect 20 customers and, as noted in Section 8.2, the reduction in revenue to this customer group is around \$2 million.
32. Section 8.2 of the price list information also notes that RT9 (street lighting) has increased proportionally less than other tariffs. Section 8.2 explains that this is because the primary determinant of costs for this tariff relates to maintenance charges, which are calculated separately from other network revenue.

33. The Authority considers that the proposed tariff changes comply with the side constraints.

Effect of changes on bi-directional customers

34. The Authority notes that the proposed 2014/15 price indicates there are currently no customers on any of the four bi-directional tariffs RT13 – RT16. These tariffs were developed primarily to apply to customers with photovoltaic systems.
35. Western Power has explained that Synergy has not yet nominated any of its bi-directional customers to be placed onto the reference services associated with these tariffs. The Authority understands that Synergy is awaiting the resolution of IT system upgrades to allow the bulk nomination of PV customers, avoiding the need to nominate individually.

Conclusions

36. Taking into account the derivation of required revenues from reference services, the forecast revenue to be collected and the changes in individual reference tariff revenues relative to the side constraint, the Authority is satisfied that the proposed 2014/15 price list complies with the price control set out in the access arrangement.

Compliance with the Pricing Methods

37. “Pricing methods” under the Access Code refer to the structure of reference tariffs included in the access arrangement, which determines how the maximum revenue is allocated across and within reference services.
38. Clauses 6.1.1 to 6.3.3 and clauses 6.5.1 to 6.7.3 of the access arrangement detail the pricing methods applied by Western Power.
39. The overview of pricing methods, at clause 6.3.1, states that reference tariffs are derived from an amount of required revenue for a pricing year by a method of cost allocation.
 - 6.3.1 Reference tariffs are derived from an analysis of the cost of reference service provision which entails:
 - a) identifying the costs of providing revenue cap services;
 - b) determining the expected non-reference service revenue within the costs of providing revenue cap services;
 - c) deducting the expected non-reference service revenue from the costs of providing revenue cap services to determine the costs of providing reference services;
 - d) allocating the costs of providing reference services to particular reference service customer groups;
 - e) translating the costs of serving particular reference service customer groups to the costs of providing reference tariffs; and
 - f) determining a structure of reference tariffs in a manner that reflects the underlying cost structure, in accordance with section 7.6 of the Code.

40. The pricing methods set out in the access arrangement also require:
 - reference tariffs should be set between the incremental and stand-alone cost of service provision (clause 6.5.6);
 - charges paid by different users of a reference service should differ only to the extent necessary to reflect differences in the average cost of service provisions to the users (clause 6.5.7);
 - the incremental cost of service should be recovered by tariff components that vary with usage and the costs in excess of the incremental cost of service should be recovered through tariff components that do not vary with usage (clause 6.5.15); and
 - the structure of tariffs should reasonably accommodate the requirements of users collectively (clause 6.5.9).
41. Western Power's proposed Price List Information for 2014/15 sets out how it has complied with the requirements of its approved access arrangement.
42. In assessing compliance with the pricing methods, the Authority notes that the objectives of the pricing methods under sections 7.3 and 7.4 of the Access Code are broad. These objectives require that the reference tariffs recover the forward-looking efficient costs of providing reference services and that the reference tariff applying to a user recovers an amount of revenue that is greater than the incremental cost of service provision and less than the stand-alone cost of service provision.
43. The Authority has reviewed the price list information together with additional information provided on a confidential basis to verify that the requirements of the access arrangement have been complied with. Taking into account all available information, the Authority considers that the proposed 2014/15 price list complies with the pricing methods established under the access arrangement.