

# **Explanatory notes regarding the price control arrangements**

## **ELECTRICITY NETWORKS CORPORATION ("WESTERN POWER")**

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{Outline: This document provides explanatory notes for *price control*, which is included in Western Power's *access arrangement* in accordance with section 5.1 of the Code.}

## TABLE OF CONTENTS

1. INTRODUCTION	2
2. DETAILS OF PROPOSED CONTROL	2
3. GAIN SHARING MECHANISM	4
4. REVENUE ADJUSTMENT FOR UNFORESEEN EVENTS	5
5. REVENUE ADJUSTMENT FOR TECHNICAL RULE CHANGES	6
6. REVENUE ADJUSTMENT FOR INVESTMENT ADJUSTMENT MECHANISM	6
7. REVENUE ADJUSTMENT FOR D FACTOR SCHEME	7

### 1. Introduction

The purpose of this appendix is to provide further information in relation to the proposed revenue cap arrangements set out in this *access arrangement*. It is intended that these notes may assist in the interpretation of the *price control* arrangements set out in section 5 of this *access arrangement* should the need arise.

### 2. Details of proposed control

Western Power has adopted a revenue cap for the transmission and distribution networks. The form of revenue cap, the correction factor and the investment adjustment mechanism are essentially the same for both the transmission and distribution networks (so the following comments are equally applicable to both).

The revenue cap formulae specify a total dollar amount (in \$ million) that can be recovered by Western Power from its customers for each year of the *access arrangement period* in respect of the sale of *reference services* (where actual revenue received by Western Power is apportioned appropriately between the transmission and distribution networks). The specified dollar amounts will be increased to take account of actual inflation (CPI) over the course of the *access arrangement period*. This type of adjustment is standard in many forms of “CPI minus X” incentive-based price controls. However, given that the revenue cap formulae specify maximum allowed revenues in dollar terms for each year (derived from forecasts of efficient total costs) there is no need for the formulae to contain X factors.

The revenue cap formulae also use a correction factor (termed the “K factor”), which allows the maximum revenue in one year to be adjusted (up or down) for any shortfall or over-recovery of revenue in preceding years. Such shortfalls or over-recoveries typically occur because actual revenue depends on a number of parameters, notably tariff sales, which are difficult to forecast with 100% accuracy.

It is particularly difficult to forecast accurately capital contributions and *non-reference* services because they depend on the actions of third parties who are making decisions to connect to Western Power's network (and pay a capital contribution) or to procure a particular *non-reference service*. In this *access arrangement*, the costs and revenues associated with the provision of *non-reference services* fall outside the revenue caps. Similarly, capital contributions are not treated as revenue for price control purposes. The charges for non-reference services will be negotiated in good faith, be consistent with the Code objective and be reasonable. Capital contributions are levied in accordance with Western Power's contributions policy. Therefore there is no regulatory need for capital contributions or *non-reference service* revenue to fall within the revenue caps.

In formulating its *access arrangement* proposal for this *access arrangement period*, Western Power has decided to adopt a conventional approach to regulatory treatment of capital contributions, as opposed to the "Queensland Method" that was adopted in the first *access arrangement period*. Under the conventional approach, the associated asset costs and revenues are excluded from the building block cost and revenue calculations, and the revenue cap. In contrast, the Queensland Method treats the capital contribution as revenue in the year in which it is received, whilst the costs are amortised over the life of the asset (and the costs and revenues are included in the building block calculation and the revenue cap). The effect of the Queensland Method is therefore to reduce revenue requirements from network tariffs today, but to require higher network tariffs in the future to compensate. Western Power's decision to adopt the conventional approach is consistent with principles of economic efficiency and established regulatory practice.

In the previous *access arrangement*, Western Power introduced a capital contributions adjustment mechanism to address the likely errors in forecasting capital contributions. Whilst this mechanism does not apply in the *access arrangement* for the second *access arrangement period* (because an alternative approach to regulatory treatment of capital contributions has been adopted as outlined above), the necessary adjustments are made to the revenue caps in this *access arrangement period* to give effect to the operation of the mechanism for the first *access arrangement period*. A similar issue arises in relation to any other adjustment mechanisms that operated in the first *access arrangement period*, whether or not such mechanisms continue to apply in the second *access arrangement period*. With this in mind, a term  $AA\#1_t$  has been included in each revenue cap. This term is defined as follows:

" $AA\#1_t$  is a positive or negative smoothed amount for the financial year  $t$  calculated to give effect to the following adjustments (if applicable) in accordance with the previous *access arrangement*:

- Adjusting target revenue for unforeseen events;
- Adjusting target revenue for technical rule changes;
- Investment adjustment mechanism; and
- Capital contributions adjustment mechanism.

For the avoidance of doubt,  $AA\#1_t$  must take account of inflation, the time value of money and estimates (if any) of the above adjustments that have been included in the calculation of  $TR_t$  in this section 5.46 of this *access arrangement*. Western Power will provide model outputs to the Authority to demonstrate that the above smoothed adjustments have been made in accordance with the previous *access arrangement*."

For this *access arrangement period*, Western Power will continue to apply an investment adjustment mechanism (IAM) which addresses differences between forecast and actual capital expenditure for particular categories of capital expenditure. This adjustment is different in nature to the K factor, as the latter adjusts for differences between allowed and actual revenue

– whereas the IAM adjusts for differences in forecast and actual capital expenditures. The IAM applies to capital expenditure that Western Power believes is especially difficult to forecast accurately.

### 3. Gain Sharing Mechanism

Sections 5.13 to 5.14G of this *Access Arrangement* describe the operating of the gain sharing mechanism. In summary, the gain sharing mechanism has the following features:

- The gain sharing mechanism only applies to operating expenditure, not capital expenditure.
- The above benchmark surplus is measured in aggregate over a whole access arrangement period, and is defined as the difference between the sum of the Authority's forecast annual operating expenditures (which is the efficiency and innovation benchmark) and the sum of Western Power's actual operating expenditure over the access arrangement period. The above benchmark surplus cannot be negative.
- An adjustment is made to the Authority's forecast operating expenditure to include the effects of inflation and any operating expenditure adjustments allowed by the *Authority* (including *trigger events*, the D factor scheme, unforeseen events, or technical rule changes). This ensures that comparisons between aggregate actual and forecast operating expenditure are made on a like-for-like basis.
- The above benchmark surplus is subject to a further adjustment to ensure that Western Power does not receive any efficiency gain reward in respect of operating expenditure reductions that have occurred at the expense of service levels.
- The amount to be added to target revenue in the next and subsequent access arrangement periods will be the average annual above benchmark surplus. This amount will be added to target revenue for a total of five years immediately after the last year of the access arrangement period in which the relevant efficiency gains were achieved.
- The use of an average annual efficiency gain in the calculation addresses any regulatory concern that Western Power might engage in strategic cost shifting within the access arrangement period.
- The gain sharing mechanism provides an equitable sharing of the calculated efficiency gains between Western Power and its customers, in accordance with the requirements of the Code.

A worked example is presented in the table below for illustrative purposes.

### Illustration of proposed gain sharing mechanism

	2 <sup>nd</sup> AA period				3 <sup>rd</sup> AA period			4 <sup>th</sup> AA period		
	1	2	3	Total	4	5	6	7	8	9
Authority's unadjusted O&M Forecast	100	100	100	300						
Adjustments for inflation and any additional allowance for trigger events	10	12	14	36						
<b>Efficiency and innovation benchmark</b>	<b>110</b>	<b>112</b>	<b>114</b>	<b>336</b>						
Western Power's actual O&M expenditure	103	113	104	320						
<b>Above benchmark surplus</b> (Can be negative in any one year, but not in total)	<b>7</b>	<b>-1</b>	<b>10</b>	<b>16</b>						
Adjustment for any SSAM penalty	-2	0	0	-2						
<b>Efficiency gain attributed to management effort</b>	<b>5</b>	<b>-1</b>	<b>10</b>	<b>14</b>						
<b>Average annual efficiency gain</b>				<b>4.7</b>						
<b>Average annual actual opex over AA#2</b>				<b>106.7</b>						
5 year carry over of annual average efficiency gains from AA#2					4.7	4.7	4.7	4.7	4.7	
<b>Amount to be added to target revenue in next and subsequent AA</b>					<b>4.7</b>	<b>4.7</b>	<b>4.7</b>	<b>4.7</b>	<b>4.7</b>	

## 4. Revenue Adjustment for Unforeseen Events

In accordance with sections 5.4 and 5.5 of this *Access Arrangement*, the *target revenue* for the next *access arrangement period* may be adjusted for unforeseen events that occur in the *second access arrangement period*.

This section describes the process under which Western Power will determine this revenue adjustment amount. There is no provision in forecast expenditures to account for possible *force majeure* events although there is provision to cover reasonable insurance costs.

This provision for revenue adjustment covers those costs (termed "unrecovered costs" in section 6.6 of the Code) which are net of any insurance payment or other cost recovery, and which were incurred prudently.

It is proposed that the expenditure included in the adjustment to *target revenue* for unrecovered costs be treated as an addition to the forecast revenue entitlement submitted in the next *access arrangement period*. This amount is to be spread evenly over each year of the next *access arrangement period*.

To give effect to this purpose, the adjustment to the *target revenue* for the next *access arrangement period* must leave Western Power economically neutral by taking account of:

- (a) The effects of inflation, both in this *access arrangement period* and the next; and
- (b) The time value of money as reflected by the real pre-tax WACC as applied in this *access arrangement period* and the next.

## 5. Revenue Adjustment for Technical Rule Changes

In accordance with sections 5.7 to 5.10 of this *Access Arrangement*, the *target revenue* for the next *access arrangement period* may be adjusted for changes to the *technical rules* that occur during the *second access arrangement period*.

This section describes the process under which Western Power will determine this revenue adjustment amount.

It is proposed that the expenditure included in the adjustment to *target revenue* for changes to *technical rules* be treated as an addition or subtraction to the forecast revenue entitlement submitted in the next *access arrangement period*. This amount is to be spread evenly over each year of the next *access arrangement period*.

To give effect to this purpose, the adjustment to the *target revenue* for the next *access arrangement period* must leave Western Power economically neutral by taking account of:

- (a) The effects of inflation, both in this *access arrangement period* and the next; and
- (b) The time value of money as reflected by the real pre-tax WACC as applied in this *access arrangement period* and the next.

## 6. Revenue Adjustment for Investment Adjustment Mechanism

Pursuant to sections 5.49 to 5.53 of this *Access Arrangement*, the *target revenue* for the next *access arrangement period* may be adjusted in accordance with the IAM.

As noted in section 2 of this appendix, the IAM adjusts for differences between forecast and actual capital expenditures, but only in relation to expenditure categories that are particularly difficult to forecast. These expenditure categories are defined in section 5.53 of this *Access Arrangement*.

The revenue adjustment may be positive or negative, depending on whether Western Power's actual capital expenditure in the defined expenditure categories exceeds or is less than the forecasts used in the determination of the revenue caps.

It is proposed that the adjustment to *target revenue* arising from the application of the IAM be treated as an addition or subtraction to the forecast revenue entitlement submitted in the next *access arrangement period*.

To give effect to this purpose, the adjustment to the *target revenue* for the next *access arrangement period* must leave Western Power economically neutral in relation to forecasting errors in the relevant categories of capital expenditure (the *investment difference*) in this *access arrangement period* by taking account of:

- (a) The effects of inflation, both in this *access arrangement period* and the next;
- (b) The time value of money as reflected by the real pre-tax WACC as applied in this *access arrangement period* and the next; and
- (c) The cost of depreciation and the value of capital additions to the *capital base* at the next *access arrangement period*.

## 7. Revenue Adjustment for D factor scheme

Pursuant to sections 5.54 to 5.57 of this *Access Arrangement*, the *target revenue* for the next *access arrangement period* may be adjusted in accordance with the D factor scheme. This D factor scheme will apply to both transmission and distribution expenditure. The intention of the D factor scheme is to provide an opportunity for Western Power to recover the full costs associated with efficient capital expenditure deferral and demand side initiatives. The scheme is designed to operate with limited regulatory review, which recognises the importance of keeping regulatory costs to a low proportion of the expected expenditure.

To give effect to the D factor scheme, the adjustment to the *target revenue* for the next *access arrangement period* must leave Western Power economically neutral by taking account of:

- (a) The effects of inflation, both in this *access arrangement period* and the next; and
- (b) The time value of money as reflected by the real pre-tax WACC as applied in this *access arrangement period* and the next.