

System Management allowable revenue and forecast capital expenditure application

1 July 2016 – 30 June 2019

February 2016

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1 Introduction

1.1 Purpose of this document

- 1.1.1 This proposal for the allowable revenue and forecast capital expenditure of System Management is lodged by Western Power for approval by the Economic Regulation Authority (ERA) in accordance with the processes and criteria set out in the Wholesale Electricity Market Rules (Rules). This document is referred to as the 'allowable revenue application'.
- 1.1.2 This allowable revenue application specifies the allowable revenue and forecast capital expenditure for System Management to support the secure and reliable operation of the South West Interconnected System (**SWIS**) and the operation of the Wholesale Electricity Market (**WEM**).

1.2 Definitions and interpretation

- 1.2.1 Where a word or phrase is italicised it has the definition given to that word or phrase as described in this *allowable revenue application* or section 11 of the *Rules*, unless the context requires otherwise.

1.3 Review period

- 1.3.1 This *allowable revenue application* is for the *review period* 1 July 2016 to 30 June 2019 (**AR4**). The current *allowable revenue review period* (**AR3**) is 1 July 2013 to 30 June 2016.

1.4 Composition of this allowable revenue application

- 1.4.1 The allowable revenue application comprises this document together with a detailed information document titled 'System Management allowable revenue and forecast capital expenditure information, February 2016'.

2 Allowable revenue

2.1 Overview of allowable revenue

- 2.1.1 The calculation of *System Management's allowable revenue* has been undertaken in accordance with the building block method as contained in the revenue model. Please note, all monetary amounts presented in this document are expressed in nominal dollars and some totals may not add up due to rounding.

2.2 Opening capital base value

- 2.2.1 The table below shows the derivation of the capital base value as at 30 June 2016.

Table 1: Derivation of System Management capital base (nominal \$'000)

Financial Year ending:	2014/15 Actual	2015/16 (Forecast)
Opening capital base value 1 July		8,730
plus capital expenditure		276
less depreciation		(3,028)
Closing capital base value 30 June	8,730	5,978

- 2.2.2 The capital base value as at 30 June 2016 reflects a rolled forward approach based on the *written down value (WDV)* taken from Western Power's audited Regulatory Financial Statements 2014/15. This approach is consistent with the *ERA AR3* determination.

2.3 Depreciation

- 2.3.1 The depreciation provision contained in the *allowable revenue* for each year of the *AR4* is calculated using:
- the straight line depreciation method;
 - the existing economic life for assets that comprise the capital base value as at 30 June 2016; and
 - for the capital expenditure forecast for this *review period* the economic lives for each group of assets as set out in the following table.

Table 2: Asset groupings and economic lives for depreciation purposes

Asset group	Economic Life (years) for accounting depreciation purposes
SMARTS	5 years

Asset group	Economic Life (years) for accounting depreciation purposes
IT	5 years

- 2.3.2 The depreciation of the opening capital base at the commencement of the *AR4* period has been determined based on a straight line basis using the actual and forecast capital expenditure over the *AR3* period and the economic lives detailed in section 2.3.1 above.

2.4 Weighted average cost of capital

- 2.4.1 *System Management* has adopted the nominal pre-tax *Weighted Average Cost of Capital (WACC)* as outlined in the *AR3* determination. The nominal pre-tax *WACC* assumes a 100% debt component. The cost of debt at 5.35% is consistent with Western Power's Access Arrangement 3 determination.

2.5 Allowable revenue for system operation services

- 2.5.1 The *allowable revenue* for system operation services for each financial year *t*, adjusted for the revenue correction factor and the expenditure correction factors, is determined by the *annual aggregate revenue (AAR)* for *System Management* as described in sections 2.5.5 to 2.5.12.
- 2.5.2 The operation of the revenue correction factor, K_t , as described in sections 2.5.6 and 2.5.7 of this *allowable revenue application*, will ensure that the *AAR* in financial year *t* is adjusted for any shortfall or over-recovery of actual revenue compared to the *AAR* in preceding years.
- 2.5.3 For the purposes of this *allowable revenue application*, *System Management's* actual revenue in financial year *t* is revenue earned via system operation fees in relation to the provision of system operation services in financial year *t*.
- 2.5.4 The operation of the expenditure correction factors, C_t and O_t , as described in sections 2.5.8 and 2.5.11 of this *allowable revenue application* will ensure that the differences between forecast and actual expenditures are reflected in the *AAR* for *System Management* as required by section 2.23.7 of the *Rules*.
- 2.5.5 For the *AR4* period, the *AAR* in year *t* is determined as follows:

$$AAR_t = AR_t + K_t + C_t + O_t$$

where:

AR_t is the dollar amount for the financial year *t* expressed in nominal prices set out in Table 3 below.

Table 3: System Management allowable revenue to be used for calculating AR_t (nominal \$'000)

Financial year ending:	30 June 2017	30 June 2018	30 June 2019
AR_t	15,854	15,246	14,602

K_t is the revenue correction factor calculated in accordance with sections 2.5.6 and 2.5.7 of this *allowable revenue application*.

C_t is the capital expenditure correction factor calculated in accordance with sections 2.5.8 and 2.5.9 of this *allowable revenue application*.

O_t is the operating cost correction factor calculated in accordance with sections 2.5.8 and 2.5.9 of this *allowable revenue application*.

2.5.6 For financial years ending on 30 June 2017 to 30 June 2019:

$$K_{2016/17} = 0$$

$$K_{2017/18} = (FR_{2015/16} - R_{2015/16}) + (AAR_{2016/17} - FR_{2016/17})$$

$$K_{2018/19} = (FR_{2016/17} - R_{2016/17}) + (AAR_{2017/18} - FR_{2017/18})$$

where:

$FR_{2015/16}$ is \$13,921,593 (nominal).¹

FR_t is the forecast revenue for *System Management* in the financial year t .

R_t is the actual revenue for *System Management* in the financial year t as defined in accordance with section 2.5.3 of this *allowable revenue application*.

AAR_t is the annual aggregate revenue for *System Management* in the financial year t .

2.5.7 The revenue correction factor, K_t , will also apply:

- in the first year of the next *review period* to adjust for any difference between annual aggregate revenue and forecast revenue, in relation to the financial year ending on 30 June 2019 and for any difference between forecast revenue and actual revenue, in relation to the financial year ending on 30 June 2018; and
- in the second year of the next *review period* to adjust for any difference between forecast revenue and actual revenue, in relation to the financial year ending on 30 June 2019.

2.5.8 For financial years ending on 30 June 2017 to 30 June 2019:

$$C_{2016/17} = 0$$

$$C_{2017/18} = (AC_{2015/16} - FC_{2015/16}) * WACC_{pre-tax} * (1 + WACC_{pre-tax}) + (AC_{2015/16} - FC_{2015/16}) * WACC_{pre-tax} + (FC_{2016/17} - CE_{2016/17}) * WACC_{pre-tax}$$

¹ The $FR_{2015/16}$ figure includes a combination of actuals and forecast for the final year of the AR3 period as at 08/01/2015 taken from DM 13201798 tab 'SM Cost Summary'.

$$C_{2018/19} = (AC_{2016/17} - FC_{2016/17}) * WACC_{pre-tax} * (1 + WACC_{pre-tax}) + (AC_{2015/16} - FC_{2015/16}) * WACC_{pre-tax} + (AC_{2016/17} - CE_{2016/17}) * WACC_{pre-tax} + (AC_{2017/18} - CE_{2017/18}) * WACC_{pre-tax}$$

where:

$FC_{2015/16}$ is \$276,084 (nominal terms).²

FC_t is the forecast capital expenditure for *System Management* in the financial year t.

CE_t is the dollar amount for the financial year t expressed in nominal prices set out in the table below.

Table 4: System Management capital expenditure to be used for calculating CE_t (nominal \$'000)

Financial year ending:	30 June 2017	30 June 2018	30 June 2019
CE_t	4,126	2,075	431

AC_t is the actual capital expenditure for *System Management* in the financial year t.

2.5.9 The capital expenditure correction factor, C_t , will also apply

- in the first year of the next *review period* to adjust for any difference in the return on building block component due to differences between $CE_{2018/19}$ and forecast capital expenditure, in relation to the financial year ending on 30 June 2019 and for any difference in the return on building block component due to differences between forecast capital expenditure and actual capital expenditure, in relation to the financial year ending on 30 June 2018; and
- in the second year of the next *review period* to adjust for any difference in the return on building block component due to differences between forecast capital expenditure and actual capital expenditure, in relation to the financial year ending on 30 June 2019.

2.5.10 For financial years ending on 30 June 2017 to 30 June 2019:

$$O_{2016/17} = 0$$

$$O_{2017/18} = (AO_{2015/16} - FO_{2015/16}) + (FO_{2016/17} - OE_{2016/17})$$

$$O_{2018/19} = (AO_{2016/17} - FO_{2016/17}) + (FO_{2017/18} - OE_{2017/18})$$

where:

$FO_{2015/16}$ is \$9,197,877 (nominal).³

FO_t is the forecast operating expenditure for *System Management* in the financial year t.

² The $FC_{2015/16}$ figure includes a combination of actuals and forecast for the final year of the AR3 period as at 08/01/2015 taken from DM 13201798 tab 'SM Cost Summary'.

³ The $FO_{2015/16}$ figure includes a combination of actuals and forecast for the final year of the AR3 period as at 08/01/2015 taken from DM 13201798 tab 'SM Cost Summary'.

OE_t is the dollar amount for the financial year t expressed in nominal prices set out in Table 5 below.

Table 5: System Management operating expenditure to be used for calculating OE_t (nominal \$'000)

Financial year ending:	30 June 2017	30 June 2018	30 June 2019
OE_t	12,451	12,228	12,632

AO_t is the actual operating expenditure for *System Management* in the financial year t .

$WACC_{pre-tax}$ is the *weighted average cost of capital* as detailed in section 2.4 of this *allowable revenue application*.

2.5.11 The cost correction factor, O_t , will also apply:

- a) in the first year of the next *review period* to adjust for any difference between $OE_{2018/19}$ and forecast operating expenditure, in relation to the financial year ending on 30 June 2019 and for any difference between forecast operating expenditure and actual operating expenditure, in relation to the financial year ending on 30 June 2018; and
- b) in the second year of the next *review period* to adjust for any difference between forecast operating expenditure and actual operating expenditure, in relation to the financial year ending on 30 June 2019.

2.5.12 The intended effect of the arrangements set out in sections 2.5.6 to 2.5.11 of this *allowable revenue application* is to hold *System Management* and users financially neutral for any differences between forecasts and actuals, as required by section 2.23.7 of the *Rules*, by taking account of:

- a) the effects of actual inflation; and
- b) the time value of money as reflected by *System Management's* WACC specified in section 2.4 of this *allowable revenue application*.

3 Forecast capital expenditure

3.1.1 The *forecast capital expenditure* for system operation services for this *review period* is \$6,631,366 as set out in the table below.

Table 6: System Management forecast capital expenditure (nominal \$'000)

Financial year ending:	30 June 2017	30 June 2018	30 June 2019
CE _t	4,126	2,075	431

4 Annual budget proposal

- 4.1.1 Pursuant to section 2.23.5 and 2.23.9 of the *Rules*, by 30 April each year *System Management* will provide a copy of the budget proposal for the next financial year, as described in section 4.1.2 below, to *Australian Energy Market Operator*.
- 4.1.2 The content of the budget proposal will include:
- a) the calculation of the *allowable revenue* for system operation services for the next financial year as specified in section 2.5 this *allowable revenue application*;
 - b) information supporting how *System Management* derived the elements of the calculation of the *allowable revenue* for system operation services; and
 - c) if required, a revised forecast of the capital expenditure for system operation services for the next financial year.

5 Allowable revenue reassessment

- 5.1.1 Pursuant to sections 2.23.8 and 2.23.8A of the *Rules*, *System Management* will apply to the *ERA* to reassess the *allowable revenue* in the circumstances where:

For financial year ending on 30 June 2017:

$$1.15 \times \sum_{t=2016/17}^{2018/19} AR_t < AAR_{2016/17} + AR_{2017/2018} + AR_{2018/2019}$$

For financial year ending on 30 June 2018:

$$1.15 \times \sum_{t=2016/17}^{2018/19} AR_t < FR_{2016/17} + AAR_{2017/2018} + AR_{2018/2019}$$

For financial year ending on 30 June 2019:

$$1.15 \times \sum_{t=2016/17}^{2018/19} AR_t < R_{2016/17} + FR_{2017/2018} + AAR_{2018/2019}$$

where:

AR_t is the dollar amount for the financial year t calculated from the dollar amounts set out in Table 3 (expressed in nominal prices).

AAR_t is the dollar amount for the financial year t calculated in accordance with section 2.5.5 of this *allowable revenue application*.

FR_t is the forecast revenue for *System Management* in the financial year t (expressed in nominal prices).

R_t is the actual revenue for *System Management* in the financial year t as defined in accordance with section 2.5.3 of this *allowable revenue application* (expressed in nominal prices).