Issues Paper on Western Power's Proposed Revisions to the Access Arrangement for the Western Power Network

7 November 2011

Economic Regulation Authority
WESTERN AUSTRALIA

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Contents

List of Tables

List of Figures

Key Points

On 30 September 2011, Western Power submitted to the Economic Regulation Authority (**Authority**) proposed revisions to its access arrangement for the Western Power Network (**proposed revised access arrangement**). The proposed revised access arrangement relates to the third access arrangement period (**AA3**), the five year period from 1 July 2012 to 30 June 2017.

The role of the Authority is to determine whether Western Power's proposed revised access arrangement complies with the requirements of the *Electricity Networks Access Code 2004* (**Access Code**). In doing so, the Authority is guided by specific provisions of the Access Code relating to particular elements of the access arrangement, as well as the Code objective of promoting economically efficient investment in and operation and use of electricity networks and services of networks in Western Australia, in order to promote competition in markets upstream and downstream of the networks.

Western Power has forecast that it needs to earn $10.3 billion in revenue over the five years of AA3. It has proposed substantial increases in reference tariffs in the first year of AA3 of CPI plus 16.4 per cent followed by increases of CPI plus approximately 11 per cent for the following years.

The proposed increases in reference tariffs result from:

- full recovery of $967 million (real dollars at 30 June 2012) of revenue which Western Power agreed to defer in AA2 to minimise price shocks during AA2;
- a substantial increase in operating expenditure in real terms over AA3, with the forecast level of operating expenditure in 2016/17 around 32 per cent higher for the transmission network and 18 per cent higher for the distribution network than the estimated level in 2011/12;
- a capital expenditure program of $5.8 billion compared with $4.3 billion during the preceding five year period;
- the addition of $244.4 million of capital investment into the capital base that the Authority had previously disallowed as inefficient expenditure; and
- an increase in the rate of return from 7.98 per cent (real, pre-tax) for AA2 to 8.82 per cent (real, pre-tax).

Western Power has proposed a significantly different service performance incentive scheme for AA3 which it considers will adequately drive investment in service performance. It proposes to maintain average historical service levels (based on the five years prior to AA3) and improve service only where it considers it is required or efficient to do so.

Western Power has also proposed :

- the inclusion of three new bi-directional (entry and exit) reference services;
- a revised applications and queuing policy; and
- a new charging scheme for distribution low voltage connection.

1 Introduction

On 30 September 2011, Western Power submitted to the Economic Regulation Authority (**Authority**) proposed revisions to its access arrangement for the Western Power Network (**proposed revised access arrangement**).[1] The proposed revised access arrangement relates to the third access arrangement period (**AA3**). Western Power's current access arrangement (**AA2**) applies until a new proposed access arrangement is approved by the Authority. Western Power has been regulated by the Authority since its access arrangement for the first period (**AA1**) was approved on 26 April 2007.

The proposed revised access arrangement was submitted in accordance with the requirements of section 4.48 of the *Electricity Networks Access Code 2004* (**Access Code**) and the revisions submission date specified in the current access arrangement.

The proposed revised access arrangement and revised access arrangement information are available on the Authority's website.[2]

The Authority invited submissions from interested parties on the revised access arrangement by publishing a notice on 7 October 2011. The closing date for submissions was 21 November 2011.

Following receipt of an errata sheet from Western Power, the Authority decided to extend the deadline for submissions to 5 December 2011 to give interested parties more time to take account of the new information. A copy of the errata and the Authority's notice extending the closing date for submissions is available on the Authority's website.

The Authority has prepared this Issues Paper to assist interested parties in understanding the proposed revised access arrangement, the review process and some of the significant issues to be addressed by the Authority in determining whether to approve or not approve the proposed revised access arrangement.

This Issues Paper is not an exhaustive review of the content of the proposed revised access arrangement, or a complete list of the matters that the Authority will address in making its determination. While the Authority invites interested parties to make submissions on particular matters identified in this Issues Paper, interested parties are also invited to make submissions on any elements of the proposed revised access arrangement, and on the operation of the access arrangement[3] more generally during the current access arrangement period (2009/10 to 2011/12).

The Issues Paper addresses the following matters:

- the process for amendment of an access arrangement;
- the required content of an access arrangement;
- key issues for stakeholder consideration; and
- an overview of Western Power's proposed revised access arrangement.

[1] Western Power, 30 September 2011, Proposed revisions to the Access Arrangement for the Western Power Network; hereafter cited as (proposed revised access arrangement)

[2] Economic Regulation Authority's website: http://www.erawa.com.au/3/1181/48/_western_powers_proposed_revised_access_arrangemen.pm

[3] Western Power, 24 December 2009, Amended Proposed Revisions to the Access Arrangement for the South West Network owned by Western Power (approved by the Authority on 19 January 2010).

In considering Western Power's proposed revised access arrangement, the Authority must have regard to the objectives and requirements of the Access Code,[4] and in making its draft and final determinations, the Authority must consult with the public. If it is determined that the proposed revised access arrangement meets these objectives and requirements, the Authority must approve the revised access arrangement, even in the event that there are other revisions that could be made. Public submissions from interested parties therefore are an important part of the decision making process, particularly those submissions that raise matters of concern with respect to the objectives and requirements of the Access Code.

2 Amendments to an Access Arrangement

Chapter 4 of the Access Code establishes the process for the approval and subsequent amendment of an access arrangement.

Under section 4.48 of the Access Code, a service provider of a covered network must submit proposed revisions to the access arrangement and revised access arrangement information to the Authority by the revisions submission date specified in the access arrangement. Western Power provided its proposed revised access arrangement before the 1 October 2011 revisions submission date.

The Authority is required to consider the proposed revised access arrangement and make a decision to either approve or not approve the proposed revisions. The process required for making this decision involves:

- a first round of public submissions on the proposed revised access arrangement (sections 4.9 to 4.11);
- a draft decision by the Authority (sections 4.12 to 4.14);
- a second round of public submissions on the Authority's draft decision (section 4.15);
- an opportunity for the service provider to submit revised proposed revisions to the access arrangement subsequent to the Authority's draft decision (section 4.16);
- a final decision by the Authority to either approve or not approve the proposed revised access arrangement (sections 4.17, 4.18);
- if the Authority's final decision is to not approve the proposed revised access arrangement, an opportunity for the service provider to submit amended proposed revisions (sections 4.19 to 4.20); and
- a further final decision by the Authority to either approve amended proposed revisions submitted by service provider or, in the absence of the service provider submitting amended proposed revisions or, the amended proposed revisions not complying with the Authority's final decision, to approve revisions drafted by the Authority (sections 4.21 to 4.25).

The Access Code prescribes timeframes for this process as well as limited opportunities for extension of timeframes.

Taking into account the requirements of the Access Code, and subject to extensions of time, the minimum timescales for the Authority's decision on the revised access arrangement is set out in Table 1.

[4] Section 4.28 of the Access Code details the criteria for approval, being the 'Code objective' and the requirements set out in Chapter 5 (and Chapter 9, if applicable).

Table 1 Assessment process and minimum timeframes prescribed by the Access Code (subject to extensions of time or suspensions of deadlines as permitted under the Access Code)

Assessment stage	Minimum timeframe
First round public submissions on the revised access arrangement	Closing date for submissions of Monday, 5 December 2011[5]
Draft Decision	**Wednesday, 8 February 2012**
Second round public submissions on the draft decision	Closing date for submissions of Wednesday, 7 March 2012
Final Decision	**Friday, 20 April 2012**
Assessment stages if the final decision is to not approve the revised access arrangement	
Submission of amended proposed revisions by the service provider	+20 business days
Further Final Decision	**+15 business days**
Commencement of Western Power's revised access arrangement	+20 business days

3 Required Content of an Access Arrangement

The required content of an access arrangement is specified in Chapter 5 of the Access Code. Section 5.1 of the Access Code requires that an access arrangement:

- specify one or more reference services under section 5.2 of the Access Code;
- include a standard access contract under sections 5.3 to 5.5 of the Access Code for each reference service;
- include service standard benchmarks under section 5.6 of the Access Code for each reference service;
- include a price control under Chapter 6 of the Access Code;
- include pricing methods under Chapter 7 of the Access Code;
- include a current price list under Chapter 8 of the Access Code and a description of the pricing years for the access arrangement;
- include an applications and queuing policy under sections 5.7 to 5.11 of the Access Code;
- include a contributions policy under sections 5.12 to 5.17D of the Access Code;
- include a transfer and relocation policy under sections 5.18 to 5.24 of the Access Code;
- if required under section 5.25 of the Access Code, include efficiency and innovation benchmarks under section 5.26 of the Access Code;
- include provisions dealing with supplementary matters under sections 5.27 and 5.28 of the Access Code; and

[5] Under sections 4.64 and 4.64(d) of the Access Code, the Authority has extended the consultation period by 10 business days as set out in a notice published on 4 November 2011.

- include provisions dealing with:
  - the submission of future proposed revisions to the access arrangement under sections 5.29 to 5.33 of the Access Code, including specification of a revisions submission date and target revisions commencement date; and
  - trigger events under section 5.34 to 5.36 of the Access Code that require the service provider to submit proposed amendments to the access arrangement.

Western Power's existing access arrangement and proposed revised access arrangement addresses each of these requirements. The remainder of this Issues Paper identifies those parts of the access arrangement for which revisions are proposed and identifies those revisions.

4 Specific Issues for Consideration

The Authority has identified a number of specific issues which interested parties may be in a position to provide comment on. These issues are in addition to the issues raised in section 5 of this Issues Paper, as well as other matters interested parties may wish to comment on. The specific issues identified in this section include:

- the recovery of revenue deferred in AA2;
- rate of return issues (appropriate credit rating, tax treatment and equity beta) and equity raising costs;
- inclusion in the capital base of investment from prior periods which was previously determined by the Authority to be inefficient;
- changes to the service standard benchmarks and the service standards adjustment mechanism;
- the calculation of the revenue requirement including moving to mid-year capital expenditure timing, allowance for the recovery of taxation on capital contributions and an allowance for working capital; and
- changes to the application and queuing policy.

4.1 Recovery of Deferred Revenue from AA2

Western Power's proposed revised access arrangement contains a significant increase to the transmission and distribution target revenue of a total $967 million (in real 30 June 2012 dollars) over AA3 to recover an amount of deferred revenue from AA2.

In AA2, Western Power proposed an alternative treatment of capital contributions from its approach in AA1, which had the effect of significantly increasing the revenue requirement. In its Final Decision, the Authority considered that to avoid price shocks (as required by section 6.4(c) of the Access Code) and considering that the change in treatment of capital contributions policy should have a neutral commercial effect on Western Power's business in present value terms, an amount of revenue should be deferred from AA2 to subsequent access arrangement periods. The Authority noted that it preferred a recovery of this deferred revenue over a period equal to the average life of network assets. However, the Authority also noted it would consider an alternative timing of recovery as part of an access

arrangement revision, 'having regard to the extent of any change in reference tariffs that is caused by recovery of part or all of the amount of deferred revenue.'[6]

The amount of deferred revenue was $64.5 million for the transmission network and $484.2 million for the distribution network (Present Value).

On 30 September 2011, the Access Code was revised to include a specific reference (section 6.5A to 6.5E) to Western Power's deferred revenue to codify the requirements stated in the current access arrangement for the recovery of this deferred revenue.

Western Power has proposed to recover all of the deferred revenue in AA3 as a real annuity over the five-year period. This represents a revenue increase of $967 million (in real 30 June 2012 dollars) in AA3. This value of deferred revenue has been adjusted to account for the time value of money.

Western Power does not consider that the 'recovery of all of the deferred revenue as a real annuity causes price shock during AA3', as the proposed average price increases for AA3 is equal to or lower than the average price increases over AA2. Western Power also considers that recovering all deferred revenue during AA3 will improve inter-generational equity as future users are not paying for assets used by current users and it will avoid Western Power imposing equity raising costs (see section 4.2.5 for further discussion of equity raising costs).[7] As set out above, the Authority's preference as noted in AA2 was that the recovery period should equal the average life of network assets. The average life of network assets during AA2 was 42 years for distribution assets and 50 years for transmission assets.

Submissions are invited from interested parties on the appropriate time period over which deferred revenue from AA2 should be recovered from network users.

4.2 Rate of Return Issues

The return on the capital base is a key component of the amount of target revenue which Western Power can earn. Western Power has forecast a return on the capital base for AA3 of around $3.7 billion (in real dollar terms), which represents around 36 per cent of the forecast target revenue estimated by Western Power. The return on the capital base is arrived at by applying the Weighted Average Cost of Capital (**WACC**) to the regulated capital base. The WACC is therefore a significant parameter in determining the total revenue requirement.

The Authority welcomes comment from interested parties on a number of key issues regarding the WACC. These key issues include the appropriate credit rating; treatment of taxation; and the equity beta to use to determine the WACC to apply to Western Power for AA3. The Authority also welcomes comment on Western Power's proposal to include equity raising costs if its proposed revised access arrangement is not approved in full. These matters are discussed below.

For further information on the WACC parameters proposed by Western Power for AA3, refer to section 5.1.2 of this Issues Paper.

[6] 4 December 2009, ERA, Final Decision, Proposed Revisions to the Access Arrangement for the South West Interconnected Network, p318.

[7] Revised Access Arrangement Information, Section 12.5, 283-285.

The WACC incorporates both the cost of debt and cost of equity. Determining an appropriate credit rating is required in order to assess the cost of debt. This Issues Paper presents two possible methods in determining the appropriate credit rating – continue with the existing approach, that is, a benchmark credit rating (section 4.2.1) or apply a credit rating appropriate for a government-owned public utility in Western Australia (section 4.2.2).

4.2.1 Benchmark Credit Rating

The Authority and other Australian regulators such as the AER generally adopt benchmark assumptions for the estimate of the cost of debt that reflect the latest evidence on the market for funds for privately owned efficiently financed energy businesses. The benchmark cost of debt is generally used rather than actual borrowing costs because it provides incentives for regulated energy businesses to pursue efficient financing arrangements.

For the assessment of Western Power's AA2, the Authority was locked-in to using a credit rating of BBB+ from its WACC review on 25 February 2005, which applied until 25 February 2010.[8]

In its WACC Review in 2009, the Australian Energy Regulator (AER) was of the view that the most appropriate approach to determining the credit rating of a benchmark efficient network service provider is observing the "median credit ratings" of a sample of efficient service providers, and using the "best comparators" approach.[9]

As a consequence, in its Draft Decision, the AER proposed an increase in the benchmark credit rating used in the estimation of the debt margin, from BBB+ to A-. The AER argued that there was sufficient evidence to increase the benchmark credit rating from BBB+ to A-. The AER based its analysis on:

- the S&P's ratings process, which indicates that qualitative factors in the regulated utilities ratings process result in credit ratings higher than BBB+; and
- the quantitative analysis of credit ratings of a sample of utility issued debt which was considered by the AER.

In its Final Decision released in May 2009, the AER noted that:[10]

> "The AER observes that these different techniques provide a range of credit ratings from BBB+ to A-. The AER considers there is more evidence to support a credit rating of A- than there is to support a credit rating of BBB."

However, after considering the submissions it received on its Draft Decision, the AER was not persuaded at that time that the previously adopted credit rating of BBB+ should be departed from.

Submissions are invited from interested parties on the most appropriate benchmark credit rating for electricity transmission and distribution service providers in Western Australia.

[8] Economic Regulation Authority, 25 February 2005, Determination of the preferred methodology for calculating the weighted average cost of capital for covered electricity networks.

[9] Australian Energy Regulator, May 2009, Final Decision, *Electricity Transmission and Distribution Network Service Providers – Review of the Weighted Average Cost of Capital,* pp. 273-83.

[10] Australian Energy Regulator, May 2009, Final Decision, *Electricity Transmission and Distribution Network Service Providers – Review of the Weighted Average Cost of Capital,* p. 389.

4.2.2 Credit Rating for Government-Owned Public Utilities in Western Australia

Under AA2, Western Power was compensated for borrowing at a credit rating of BBB+, despite the fact that Western Power has borrowed via Western Australian Treasury Corporation at the Western Australian State Government's credit rating of AAA plus a 20 basis point margin. The issues of ownership and risk of default were not considered by the Authority in the AA2 decision, or by the AER in its assessment of the benchmark credit rating. However, as the risk of default for Western Power and other Government-owned public utilities in Western Australia is virtually nil, ignoring this factor when assessing the credit rating may lead to an inappropriate credit rating.

As the risk of default for Western Power is lower than the risk of default for private businesses in the benchmark sample, there is an issue about whether the benchmark approach should apply to Western Power.

The Authority is aware that the Essential Service Commission (**ESC**) in Victoria has adopted a debt margin estimate based on advice from the Treasury Corporation of Victoria (**TCV**) on its lending rates in its 2009 Water Price Review Final Decision.[11] This approach was also used in the ESC's 2008 water price review for the regional urban and rural water businesses. Water businesses are government-owned in Victoria.

It is important that regulated utilities such as Western Power are provided with incentives for efficient investment in the long term interests of consumers in Western Australia. In doing so, the credit rating on which the cost of debt is based must be an appropriate reflection of the level of risk faced by the holders of the utility's debt.

If the cost of debt is set too high, then the allowed rate of return could create an incentive for a government-owned public utility to pursue inefficient investment.

On the other hand, if the cost of debt is set too low, then this will hinder investment by the government owned public utility.

As government-owned public utilities in Western Australia can borrow through the Western Australian Treasury Corporation (WATC) as opposed to private debt markets it may be more appropriate to base the cost of debt on a benchmark using rates applicable to the WATC rather than corporate bond rates.

Submissions are invited from interested parties on whether a benchmark credit rating should be applied to Western Power given the different risks faced by government owned public utilities, such as Western Power, in Western Australia.

4.2.3 Treatment of Taxation

A service provider's tax liability is a business cost which needs to be included in its revenue requirement. Broadly speaking, taxation liabilities can be incorporated by either:

- using a pre-tax weighted average cost of capital which estimates the return on the regulatory asset base required to cover both tax payable and an appropriate post-tax return; or

[11] Essential Services Commission, June 2009, Final Decision, Metropolitan Melbourne Water Price Review 2009.

- including tax liabilities as a separate building block component (rather than being part of the return on capital) and using a post-tax return to calculate the return on the regulatory asset base.

When using the first approach the tax liability can either be based on the statutory rate of corporate taxation or an estimate of the effective rate of taxation.

When using the second approach consideration needs to be given to the various components required to calculate tax payable. In particular, it is necessary to decide whether the estimate of tax payable should be based on company specific or benchmark assumptions.

While all regulators of utility industries in Australia use the CAPM to estimate the cost of equity, a number of different approaches have been taken on the form of the WACC to be used (i.e. pre-tax or post-tax, real or nominal).

IPART, which has historically used a pre-tax real WACC, recently undertook a review and published a draft decision in September 2011 stating that it proposed to include tax as a separate cost building block and use a post-tax WACC.[12]

In September 2011 the AER proposed changes to the rate of return provisions of the National Gas Rules to make use of a post-tax nominal WACC mandatory.[13]

The AER and IPART have consistently argued that the use of a pre-tax WACC tends to over-compensate service providers for their tax liabilities. Reasons they give for this include differences in the calculation of depreciation for taxation and regulatory purposes and the tax deductibility of interest expenditure.

To date, the Authority has used a real pre-tax WACC approach in its regulatory decisions because this method:

- simplifies financial modelling;
- is consistent with the preferences of major utilities in Western Australia (e.g. Water Corporation and Western Power); and
- allows consistency across regulated utilities in Western Australia.

Submissions are invited from interested parties on the most appropriate method of incorporating taxation liabilities in a service provider's revenue requirement.

4.2.4 Equity Beta

Western Power has proposed that the equity beta is in the range of 0.9 – 1.1 for AA3. This proposal is based on its consultant's advice, the Strategic Finance Group (SFG). SFG is of the view that the average equity beta for all listed companies is 1.0 and that it is the natural starting point or default value when estimating equity betas.

SFG has stated that two factors determine the relative systematic risk, or equity beta, of a particular firm: the type of business that the firm operates; and the amount of financial

[12] Independent Pricing and Regulatory Tribunal, September 2011, Draft Report, The incorporation of company tax in pricing determination..

[13] Australian Energy Regulator, Rule Change Proposal, AER's proposed changes to the rate of return provisions in the National Gas Rules..

leverage employed by the firm. SFG argued that while it is generally accepted that the business activities of regulated network transmission and distribution businesses have lower than average systematic risk (which lowers the average systematic risk of the entire market of risky assets), it is also clear that such businesses have much higher financial leverage than the average firm (which increases the average systematic risk of the entire market of risky assets). Because these two effects operate in different directions, they are generally cancelled out. And, as a consequence, SFG considered that the equity beta of 1, or in the range of 0.9 and 1.1, is appropriate.

In order to estimate the cost of equity, the Authority's current practice is to adopt the Sharpe-Lintner CAPM, which is the most widely used CAPM model by Australian regulators, practitioners, and academics.

The systematic risk (beta) of a firm is the measure of how the changes in the returns on the firm's stock are related to the changes in returns to the market as a whole. It reflects the firm's exposure to non-diversifiable risk, which is that portion of the variance in the return on an asset that arises from market-wide economic factors that affect returns on all assets, and which cannot be avoided by holding the assets as part of a diversified portfolio of assets.

In the Sharpe-Lintner CAPM, the equity beta value is a scaling factor applied to the market risk premium to reflect the relative risk to equity funds for a particular firm or activity in question.

In its 2009 WACC review for electricity transmission and distribution network service providers, with the assistance of Associate Professor Henry of the University of Melbourne, the AER established a sample of Australian businesses, comprising gas-only network businesses, one electricity-only network business, network businesses active in both electricity and gas, and general utility businesses. Given the limitations of available Australian data, the AER considered that gas network businesses could be considered as reasonable but not perfect comparators to electricity network businesses, given that both industries involve the transportation of energy.[14]

The AER considered that the reasonable range of the equity beta for a gas or electricity distribution network is between 0.4 and 0.7 which it justified on the grounds of empirical information. The AER has also considered the need for regulatory certainty and adopting a conservative approach in estimating the equity beta, commensurate with prevailing market conditions and the risks involved in providing reference services. On this basis, the AER considers that a value of 0.8 provides the best estimate of the equity beta arrived at on a reasonable basis for gas and electricity transmission and distribution networks.[15]

In AA2, the Authority considered that a reasonable range for the equity beta at a gearing level of 60 per cent debt to assets is 0.50 to 0.80 which is based on Henry's empirical study for the AER in 2009.

[14] The main sample consisted of: AGL (2002 to 2005); Alinta (2002 and 2007); Alinta Network Holdings Pty Ltd (2003 to 2006); Country Energy (2002 to 2006); Diversified Utility and Energy Trusts (2003 to 2008); ElectraNet Pty Ltd (2002 to 2008); Energy Australia (2002 to 2006); Envestra Ltd (2002 to 2008); Ergon Energy Corporation (2002 to 2008); ETSA Utilities (2002 to 2008); GasNet Australia (Operations) Pty Ltd (2002 to 2007); Integral Energy (2002 to 2006); SP AusNet Group (2006 to 2008), and SPI PowerNet Pty Ltd (2002 to 2005).

[15] See for example: Australian Energy Regulator 2009-10, Final decision: WACC review, May 2009; Jemena: Access arrangement proposal for the NSW gas networks 1 July 2010 – 30 June 2015 (Final Decision June 2010).

Submissions are invited from interested parties on the appropriate range or value for the equity beta for Western Power.

4.2.5 Equity Raising Costs

Western Power has raised the prospect of requiring a provision for equity raising costs in its target revenue.[16] Even though Western Power, as a government enterprise, does not incur equity raising costs, Western Power considers that equity raising costs are a forward-looking and efficient cost of providing covered (regulated) services. While Western Power's proposal for AA3 does not include an amount for equity raising costs, its proposed methodology could result in Western Power requesting an allowance for these costs if modelling assumptions and parameters are changed. For example, Western Power has noted that a change to the recovery period of deferred revenue could result in it requesting equity raising costs.

Equity raising costs are generally incurred when a firm chooses to finance capital expenditure via additional external equity funding instead of debt financing and/or internal funding using retained earnings. The equity raising costs are usually upfront expenses with little or no ongoing costs over the life of the equity. Legal fees, marketing costs and other transaction costs with regard to additional external equity funding are generally considered as equity raising costs. It is understood that the AER is the only regulator in Australia to allow a provision for equity raising costs in target revenue for energy service providers. Internationally, UK regulators such as Ofgem and OfWat and the New Zealand Commerce Commission do not allow equity raising costs in target revenue.

In its 2010 Final Decision for the Victorian Distribution Network Service Providers,[17] the AER indicated that only the direct costs of new equity raisings are compensated as an equity raising cost. Also, the AER considered that the best estimate of the direct costs of raising equity varies depending on the method that a firm employs to raise new equity:

- 0 per cent of equity obtained via retained earnings
- 1 per cent of equity obtained via dividend reinvestment plans
- 3 per cent of equity obtained via external Seasoned Equity Offerings (placements and rights issues).

Western Power has indicated that it has used the same method of cash-flow modelling as the AER to calculate whether equity raising costs are recovered. Western Power has also used assumptions for calculating the cost which it considers to be consistent with the AER's methodology.

Submissions are invited from interested parties on whether equity raising costs should be included in Western Power's revenue requirement and if so what is the appropriate methodology for calculating these costs.

[16] Revised access arrangement information, Section 10.2.8, p 246.

[17] The Australian Energy Regulator, 2010, Victorian Electricity Distribution Network Service Providers: Distribution Determination 2011-2015, Final Decision, October 2010, page 505.

4.3 Investment from Prior Periods

Western Power has proposed to include $244.4 million (real dollars at 30 June 2012) in the opening capital base for AA3 for capital expenditure in AA1 that did not meet the requirement of the new facilities investment test (NFIT). In its Final Decision for AA2, the Authority determined that an amount of $261.1 million (real dollars at 30 June 2009) of capital expenditure incurred in AA1 did not meet the NFIT.[18]

Western Power has subsequently reviewed the capital expenditure removed from its opening regulated capital base for AA2 and claims that most of this capital expenditure does meet the requirements of the NFIT. Western Power has proposed that an amount of $244.4 million (real dollars at 30 June 2012) be added to the opening capital base for AA3 in accordance with the provisions in the Access Code for speculative investment.

Sections 6.58 to 6.60 of the Access Code set out the definition of a 'speculative investment amount' and whether it can be added to the capital base.

Western Power has provided supporting information on the amount of new facilities investment from prior periods in Appendix C of the revised access arrangement information.

Submissions are invited from interested parties on whether this investment from AA1 should be considered as 'speculative investment' and if so, should it be added to the AA3 capital base.

4.3.1 Service Standards Adjustment Mechanism

While not affecting the target revenue for AA3, Western Power has proposed significant changes to its service standard incentive mechanism which will impact its target revenue for the following access arrangement period (expected to begin on 1 July 2017).

As outlined below in section 5.5, Western Power has proposed a number of revisions to service standards, removing some that are in use in the current access arrangement, adding new service standards and re-defining the service standards to apply in respect of distribution and transmission reference services. Western Power has proposed service standard benchmarks based on historical performance at a level which it expects it will achieve 97.5 per cent of the time. The proposed benchmarks reflect a minimum service standard rather than the service levels expected from the operating and capital expenditure forecasts during the access arrangement. Western Power has lowered the benchmarks that applied in AA2 in order to ensure it meets its licence conditions and also to reduce the possibility of not receiving benefits under the gain sharing mechanism.

These benchmarks levels are not the same as the levels used to determine whether Western Power will receive a benefit or penalty under the service standards adjustment mechanism (**SSAM**). The target service quality levels for the SSAM will be based on Western Power's assessment of having an ability to meet the target levels 50 per cent of the time. Also, the SSAM will include other changes such as revised incentive rates and a further one-off adjustment to transition to the new SSAM. The outcomes of Western Power's service quality performance against this scheme will determine the level of financial reward

[18] 4 December 2009, ERA, Final Decision, Proposed Revisions to the Access Arrangement for the South West Interconnected Network, p202.

or penalty to apply to Western Power's access arrangement in the following access arrangement period (which is expected to begin from 1 July 2017).

Western Power's proposed SSAM will apply to the proposed service standard benchmark measures for AA3, except for the measures for street light repair times and the individual customers service measure.

The proposed SSAM targets and incentive rates for the SSAM are as follows:

Table 2 SAIDI SSAM targets (for year ending 30 June) and incentive rates ($ real as at 30 June 2012)

	SSAM target (SST_t)	Incentive rate ($ per SAIDI minute)
SAIDI - CBD (minutes)	28	68,346
SAIDI - Urban (minutes)	163	488,756
SAIDI - Rural Short (minutes)	254	199,256
SAIDI - Rural Long (minutes)	616	62,535

Table 3 SAIFI SSAM targets (for year ending 30 June) and incentive rates ($ real as at 30 June 2012)

	SSAM target (SST_t)	Incentive rate ($ per event)
SAIFI - CBD (events)	0.22	7,691,084
SAIFI - Urban (events)	1.90	43,177,909
SAIFI - Rural Short (events)	2.91	18,879,174
SAIFI - Rural Long (events)	4.77	8,779,766

Table 4 Call centre performance SSAM target (for year ending 30 June) and incentive rate ($ real as at 30 June 2012)

	SSAM target (SST_t)	Incentive rate ($ per 0.1%)
Call centre performance (Percentage of calls responded to within 30 seconds)	88.0%	-60,190

Table 5 Circuit availability SSAM target (for year ending 30 June) and incentive rate ($ real as at 30 June 2012)

	SSAM target (SST_t)	Incentive rate ($ per 0.1%)
Circuit availability (Percentage of total possible hours available)	97.7%	-712,798

Western Power has also revised the method to calculate the service standard difference which is applied to the incentive rates listed in the tables above. The service standard difference will now only reflect the service performance improvement/deterioration in that year, rather than with a reference to the prior year's performance. That is, under the current access arrangement, if the service performance was above the benchmark in 2011/12 by five units and above the benchmark by three units in 2010/11, then the service standard difference for 2011/12 would be two units (five minus three). Also, if the actual service performance is worse than the service standard benchmark, the service standard difference

would be limited to the difference between the SSAM target and the service standard benchmark level.[19]

Western Power is proposing a one-off adjustment to transition from the SSAM in AA2 to the proposed SSAM for AA3 which will apply the applicable transitional incentive rate to the service standard adjustment difference. The service standard adjustment difference is calculated by deducting the transitional SSAM target from the actual service quality performance in the last year of the current access arrangement (2011/12).

The transitional SSAM targets and transitional incentive rates for the transitional SSAM SSBs are as follows:

Table 6 SAIDI transitional SSAM targets (for year ending 30 June) and transitional incentive rates ($ real as at 30 June 2012)

	Transitional SSAM target (TSST)	Transitional incentive rate ($ per SAIDI minute)
SAIDI - CBD (minutes)	26	240,758
SAIDI - Urban (minutes)	152	240,758
SAIDI - Rural Short (minutes)	243	8,974
SAIDI - Rural Long (minutes)	597	8,974

Table 7 SAIFI transitional SSAM targets (for year ending 30 June) and transitional incentive rates ($ real as at 30 June 2012)

	Transitional SSAM target (TSST)	Transitional incentive rate ($ per event)
SAIFI - CBD (events)	0.15	11,271,870
SAIFI - Urban (events)	1.72	11,271,870
SAIFI - Rural Short (events)	2.76	492,460
SAIFI - Rural Long (events)	4.34	492,460

Table 8 Circuit availability transitional SSAM target (for year ending 30 June) and transitional incentive rate ($ real as at 30 June 2012)

	Transitional SSAM target (TSST)	Transitional incentive rate ($ per 0.1%)
Circuit availability (Percentage of total possible hours available)	97.7%	-410,384

Western Power has proposed that the total rewards or penalties for the transmission system applied to each year is capped at 1 per cent of the target transmission revenue for that year. Also, it is proposed that the total rewards or penalties for the distribution system applied to each year is capped at 5 per cent of the target distribution revenue for that year. These arrangements are in line with those applying in the current access arrangement.

Submissions are invited from interested parties on proposed revisions to the access arrangement to allow adjustments to target revenue in the next access arrangement period for the service standard adjustment mechanism proposed by Western Power.

[19] Revised Access Arrangement, Section 7.5.4, p40-41

4.4 Calculation of Revenue Requirement Issues

4.4.1 Mid-year Capital Expenditure Timing

Western Power has proposed to add new facilities investment (capital expenditure) to the capital base assuming the expenditure is incurred half way through the year instead of at the end of the year. Western Power states that the 'mid-year timing is appropriate to simulate the impact of incurring new facilities investment throughout the year'.

The proposal assumes capital expenditure occurs throughout any given year and as such any capital expenditure incurred within a year should earn a return proportionate to the length of time that this expenditure has been incurred. As it would be too cumbersome to calculate the proportionate return on each item of capital expenditure as incurred throughout a year, an assumption is made that expenditure is capitalised evenly throughout the year. Therefore, Western Power considers that it should be capitalised mid-year.

This timing assumption and the application of it in Western Power's proposed real pre-tax revenue model is currently used by the AER in their 'post-tax revenue model'.

The change in timing assumption is a departure from that approved by the Authority in the past two access arrangement review periods which assumed end-of-year timing for capital expenditure incurred and revenue collected. A change in timing assumption for capital expenditure incurred mid-year would result in a one-off uplift in target revenue (target revenue would be maintained at a higher level due to the return on asset and depreciation being calculated on a higher regulatory asset value). Western Power is not proposing that the Authority should account for revenue collection on a mid-year basis.

Submissions are invited from interested parties on Western Power's proposed mid-year timing assumption for new facilities investment (capital expenditure), including:

- the appropriateness of a change in timing assumption from the historically (AA1 and AA2) approved approach for the current AA2 period and the future AA3 period; and
- the impact of differences existing between the capital expenditure timing assumptions, depreciation timing assumptions and revenue collected timing assumptions.

4.4.2 Tax on Capital Contributions

Western Power has included $240.5 million in its target revenue for net tax costs associated with forecast capital contributions and gifted assets provided by customers.[20] This represents approximately 25 per cent of the forecast capital contributions and gifted assets in AA3. Capital contributions can take the form of either cash payments or in some circumstances, customers will gift assets to Western Power.

As the Australian tax rules treat capital contributions as revenue in the year in which it is received, Western Power must pay tax on these amounts. While Western Power will get a tax deduction over time for the use of these assets through depreciation expense, there is a timing difference which creates a cost in present value terms.

[20] Revised access arrangement information, Section 12.6, p 285.

In AA2, Western Power proposed a different treatment of capital contributions whereby new facilities investment that is financed by capital contributions is not added to the capital base. However, it did not collect any provision for tax costs associated with capital contributions or gifted assets from these customers. Western Power believes this is inconsistent with section 6.4(a)(i) of the Access Code, which allows a service provider to earn revenue to meet the forward-looking and efficient costs of providing covered (regulated) services.

Western Power has calculated an amount for the net tax costs associated with capital contributions and gifted assets using the corporate tax rate (30 per cent) and adjusting for the statutory tax depreciation benefit, dividend imputation and for the requirement to pay tax on recovering the tax costs from users.

However, by including the amount in the target revenue, all network users will have to pay a share of the tax cost on infrastructure they may not benefit from directly.

An alternative approach is for the service provider to negotiate with the party providing the capital contribution to recover these tax costs.[21] It is understood that the party providing the gifted asset receives a tax benefit as a result of writing off the asset.

Submissions are invited from interested parties on whether an amount for tax on capital contributions should be allowed to be recovered from all network users.

4.4.3 Working Capital

Western Power has proposed an allowance for a return on working capital in line with the current access arrangement.[22]

The Authority noted in its Final Decision and Further Final Decision for AA2 that it was "… aware that regulators in other Australian jurisdictions have questioned whether an allowance for costs of working capital can reasonably be included in the determination of regulated revenues for utility businesses. The Authority intends to give this matter further consideration outside of the process of assessment of proposed revisions to the access arrangement...".[23] [24]

The AER does not allow for a return on working capital in its Post Tax Revenue Model (PTRM). In its Final Decision on the WA Gas Networks Pty Ltd access arrangement the Authority did not accept that the service provider required a working capital allowance on the basis that an established asset intensive business in a monopoly situation is only likely to experience working capital related cash flow problems if the business is not efficiently managed[25].

[21] 6 February 2009, ERA, Final Report, Inquiry into Pricing of Recycled Water in Western Australia, p61.

[22] Revised access arrangement information, Section 12.3, p281-282.

[23] 4 December 2009, ERA, Final Decision, Proposed Revisions to the Access Arrangement for the South West Interconnected Network, p252.

[24] 19 January 2010, ERA, Further Final Decision, Proposed Revisions to the Access Arrangement for the South West Interconnected Network, p49.

[25] 28 February, 2011, ERA, Final decision on WA Gas Networks Pty Ltd proposed revised access arrangement for the Mid-West and South-West Gas Distribution Systems, p 106

Submissions are invited from interested parties on the need to include an allowance for a return on working capital.

4.5 Applications and Queuing Policy

Western Power's applications and queuing policy is contained in Appendix 1 of the current access arrangement.

On 23 December 2010 the Authority received a proposal from Western Power to vary its Application and Queuing Policy (AQP). After a public consultation process and assessment of key issues raised, and noting the short period of time before the AA3 review was to commence, the Authority determined not to vary the AQP but refer it for assessment in the AA3 review.

Western Power has proposed substantial amendments to its applications and queuing policy for AA3 including:[26]

- the addition of a formal enquiry stage;
- creating a 'competing applications group' where applicants will be grouped based on a common network constraint, with Western Power identifying solutions which will provide access to all applicants within the group; and
- limited use of queuing, with applicants only queuing if a competing applications group is over-subscribed.

These amendments were proposed by Western Power in its mid-period revisions proposal.[27] Western Power has incorporated further revisions which it believes addresses the issues raised in the Authority's consultation process. These further revisions include:[28]

- Timelines for various stages have been inserted into the AQP, including:
    - the time to process enquiries (40 business days)
    - the time to resolve objections to applicant-specific solutions (40 business days)
    - indicative timeframes for Western Power's provision of preliminary and final access offers to applicants in a competing applications group.
- An enquiry response letter will include details on capacity, network constraints and the existence of competing applications.
- An opportunity to object if one applicant within a competing applications group is offered an applicant-specific solution.
- Informing applicants in writing seven business days prior to a 'deemed withdrawal' if the applicant has not paid necessary fees and charges.
- Provisions to not delay commenced processes to develop joint network solutions for a competing applications group if a new applicant wishes to join after

[26] Revised access arrangement information, Section 16.3.3, p326.

[27] 30 December 2010, Western Power's Proposed Modifications to the Applications and Queuing Policy, available on the Authority's website: http://www.erawa.com.au/3/1140/48/electricity_access__access_arrangement_variations_.pm

[28] Revised access arrangement information, Section 16.3.4, p327.

commencement (except if existing applications have been withdrawn or new applications can replace existing applications without delaying the process).

Submissions are invited from interested parties on

- the operation of the applications and queuing policy in the current access arrangement period;
- the revisions proposed by Western Power; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of the Access Code.

5 Overview of Western Power's Proposal

5.1 Total Costs and Target Revenue

5.1.1 Current Access Arrangement

Consistent with the requirements of the Access Code, during the first two access arrangement periods, Western Power has determined a level of target revenue using a 'building-block' approach. Target revenue is comprised of:

- operating costs (non-capital costs);
- depreciation;
- return on the regulated capital base;
- return on working capital; and
- tariff equalisation contributions (TEC)[29].

The regulated capital base is derived as follows:

opening capital base + forecast capital expenditure (new facilities investment) – depreciation – redundant assets = closing capital base

5.1.2 Proposed Revisions

5.1.2.1 Target Revenue

Western Power has proposed values of target revenue for the transmission and distribution networks as indicated in Figure 1. A breakdown of transmission and distribution network target revenue for each year of AA3 is provided in Appendix 1.

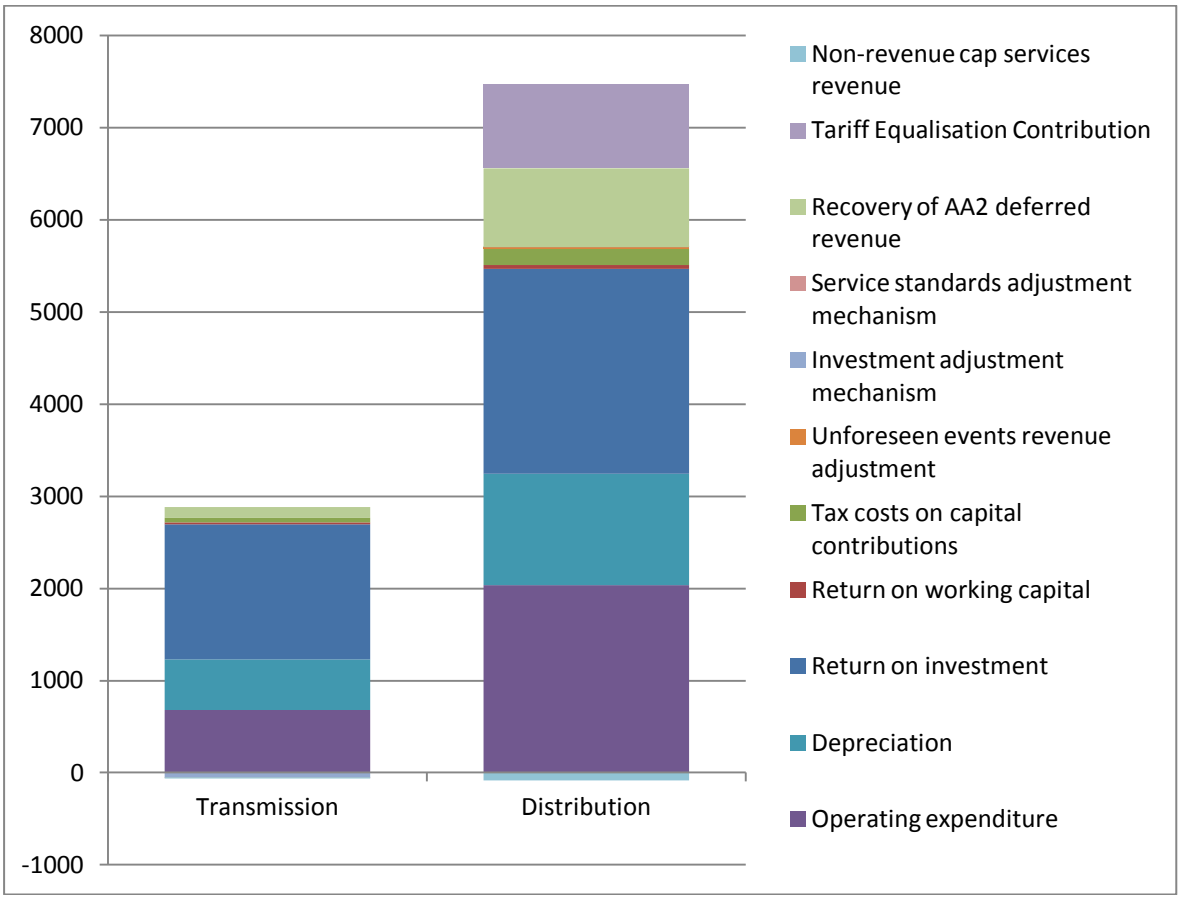
Western Power has proposed that the maximum transmission and distribution reference service target revenue be smoothed across the five year period to ensure a less volatile price path. Western Power's smoothed target revenue translates to real increases in transmission charges of 12.9 per cent from 2011/12 to 2012/13 and subsequent annual real increases in the remaining four years in AA3 of 4.5 per cent (2013/14 to 2016/17). Western Power's smoothed target revenue translates to real increases in distribution charges of 17.6

[29] The tariff equalisation contribution is an amount that Western Power is required to pay the Western Australian Government to help finance a subsidy provided to Horizon network customers.

per cent from 2011/12 to 2012/13 and subsequent annual real increases in the remaining four years in AA3 of 13.4 per cent (2013/14 to 2016/17).[30]

Western Power proposed target revenue for AA3 is summarised in the following chart.

Figure 1 Western Power proposed transmission and distribution network target revenue (real $ million, dollar values at 30 June 2012)



Western Power's proposed 'building block' components of the target revenue for both the transmission and distribution network is proposed to now include the following major changes in AA3 (discussed in further detail in Section 4 of this Issues Paper):

- recovery of deferred revenue from AA2;
- adding return on capital expenditure deemed to be incurred mid-year;
- provision for equity raising costs if circumstances arise;
- recovery of tax on capital contributions;
- speculative investment from AA1.

This Issues Paper provides further discussion on these major changes to the calculation of the target revenue in AA3.

5.1.2.2 Operating Expenditure

Western Power has forecast total operating expenditure (non-capital costs) of $2,713.6 million (real dollars at 30 June 2012) over the five year AA3 period, with

[30] Revised access arrangement information, Section 13.3 Table 97.

$678.6 million required for the transmission network and $2,035.0 million for the distribution network. A breakdown of these amounts, together with the forecasts and estimated actual costs for AA2 are shown in Figures 2 and 3.

Figure 2 Transmission network operating expenditure (real $ million at 30 June 2012)[31]

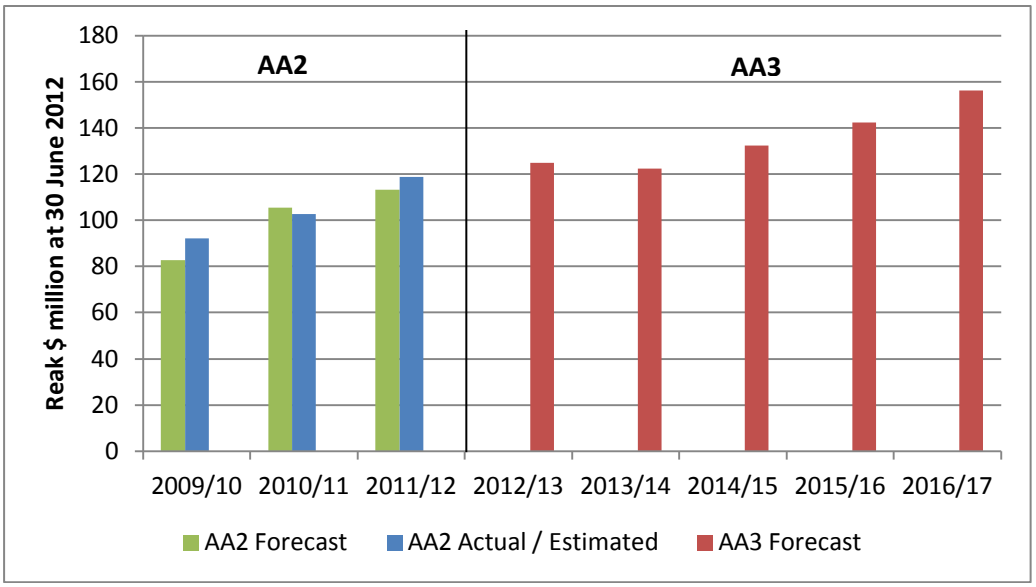
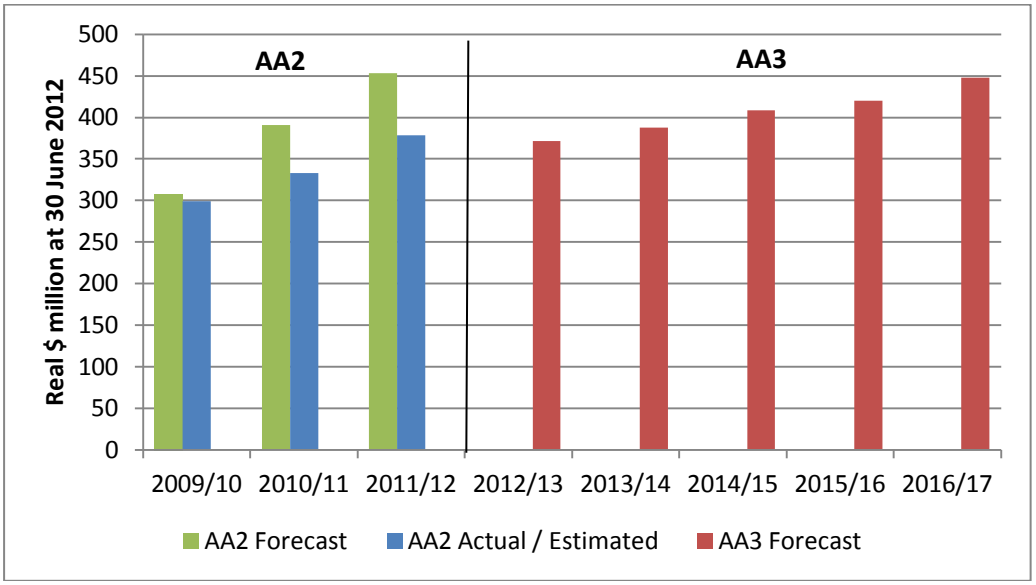


Figure 3 Distribution network operating expenditure (real $ million at 30 June 2012)[32]



Western Power has provided supporting information for its forecasts in Section 7 and Appendix A of the revised access arrangement information.

Western Power's actual operating expenditure for AA2 (in real dollar terms) was around 4 per cent in excess of the forecast (in real dollar terms) for the transmission network, but 12 per cent below the forecast for the distribution network.

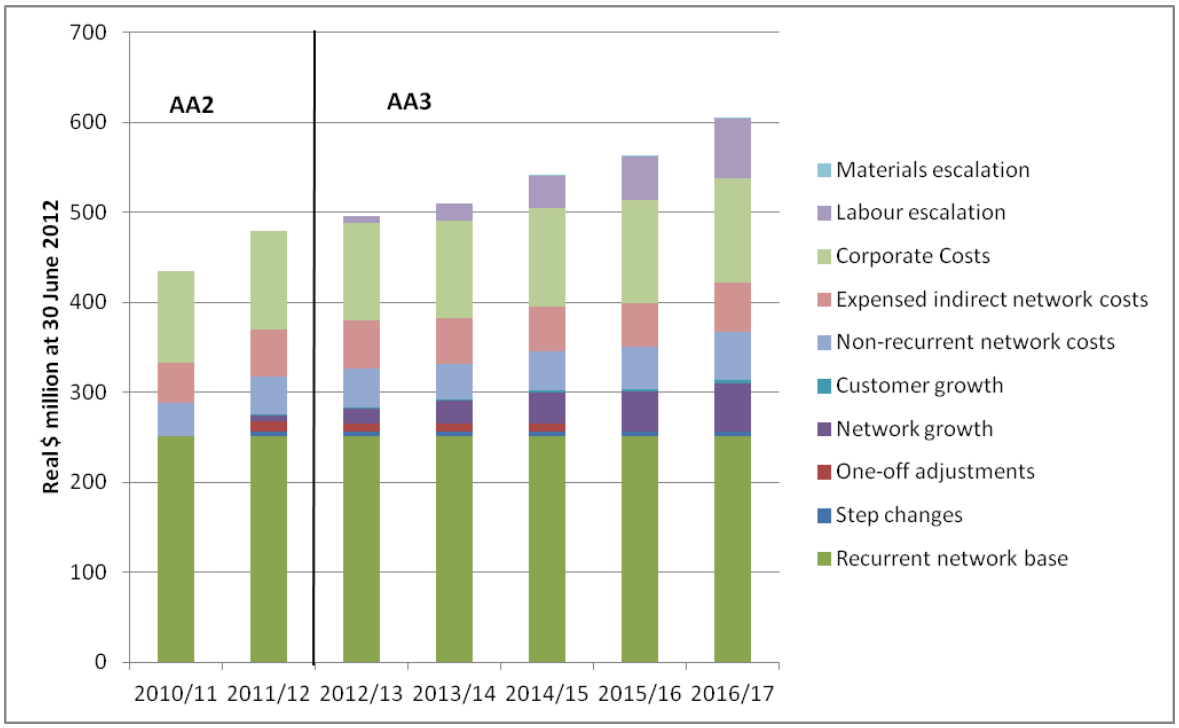
[31] 4 December 2009, ERA, Final Decision, Proposed Revisions to the Access Arrangement for the South West Interconnected Network; Revenue Model; and Revised access arrangement information for AA3.

[32] 4 December 2009, ERA, Final Decision, Proposed Revisions to the Access Arrangement for the South West Interconnected Network; Revenue Model; and Revised access arrangement information for AA3.

Western Power has forecast substantial real increases in operating expenditure over the actual costs incurred in the current access arrangement period, with the forecast level of operating expenditure in 2016/17 around 32 per cent higher for the transmission network and 18 per cent higher for the distribution network than the estimated level in 2011/12. The increases in forecast operating expenditure are attributed to:[33]

- growth in the size of the network and customer numbers;
- forecast movements in the market costs of labour, with real labour escalation factors of around 3.1 per cent for most years in AA3, except for 1.5 per cent in 2012/13 and 3.7 per cent in 2014/15. These labour escalation factors compare to a forecast of 1.9 per cent in 2011/12; and
- non-recurring costs for network control services, the introduction of new technologies, the field survey data capture project and removal of transmission lines that are no longer in service.

Figure 4 Components of total operating expenditure for transmission and distribution network (real $ million at 30 June 2012)[34]



Western Power has forecast its recurrent operating expenditure assuming that 2010/11 was an efficient base year and has maintained that cost in real terms across the forecast period. As shown in Figure 4 above, Western Power has then added to recurrent expenditure by including costs for step changes, one-off adjustments, network growth and customer growth. These increases on base recurrent expenditure, together with the escalation for labour costs are the driving factors behind increased operating expenditure. Western Power has not assumed any efficiency gains on base operating costs in its forecasts.

[33] Revised access arrangement information, Section 7.1, p 129.

[34] Revised access arrangement information, Section 7.2, Table 27.

Submissions are invited from interested parties on the level of actual operating expenditure for AA2, and whether or not the actual costs are consistent with a service provider efficiently minimising costs.

Submissions are also invited from interested parties on the level of underspend in operating expenditure in the distribution network from the forecast in AA2.

Submissions are also invited from interested parties on the forecast operating expenditure for AA3, the methods used by Western Power to derive its forecasts, whether the forecasts should include an amount for efficiency gains in base operating expenditure, and the adequacy of Western Power's supporting information for this forecast.

5.1.2.3 Opening Capital Base for AA3

The capital base values for each of the transmission and distribution networks have been calculated by Western Power for the beginning of AA3 using a roll-forward method that involves commencing with the opening value at the beginning of AA2 and:

- adding the actual (and forecast for 2011/12) values of capital expenditure (new facilities investment) during AA2 that Western Power considers to meet the requirements of the new facilities investment test under section 6.52 of the Access Code (excluding gifted assets and capital expenditure which is funded by customers via capital contributions);
- deducting values of redundant assets;
- deducting values of depreciation as allowed for in target revenue for AA2; and
- adjustment for inflation to be expressed in dollar values at 30 June 2012.

Western Power has also included the following new additional adjustments in order to calculate the opening value at the beginning of AA3:

- adding return on capital expenditure deemed to be incurred mid-year; and
- adding investment from AA1.

These adjustments were discussed in sections 4.4.1 and 4.3 of this Issues Paper.

Western Power's calculated values of the capital base for the transmission and distribution networks (incorporating forecast values for 2011/12) at the commencement of the AA3 (1 July 2012) are as follows.

Table 9 Transmission network capital base at 30 June 2012 (real $ million at 30 June 2012)[35]

	2009/10	2010/11	2011/12	2012/13
Opening asset value	**2,350.0**	**2,502.9**	**2,575.5**	**2,840.8**
New facilities investment	225.6	147.6	214.0	-
Mid-year timing assumption	8.6	5.8	7.6	-
Redundant assets	-6.0	-0.3	0.0	-
Depreciation	-75.3	-80.5	-91.1	-
Accelerated depreciation	0.0	0.0	0.0	-
Investment from prior periods	-	-	135.0	-
Closing asset base	**2,502.9**	**2,575.5**	**2,840.8**	**-**

Numbers do not add up due to rounding.

Table 10 Distribution network capital base at 30 June 2012 (real $ million at 30 June 2012)[36]

	2009/10	2010/11	2011/12	2012/13
Opening asset value	**3,042.3**	**3,338.4**	**3,625.2**	**4,257.2**
New facilities investment	438.8	441.8	597.9	-
Mid-year timing assumption	17.1	17.3	21.3	-
Redundant assets	-0.9	0.0	0.0	-
Depreciation	-154.7	-168.2	-186.0	-
Accelerated depreciation	-4.2	-4.1	-4.0	-
Investment from prior periods	-	-	202.8	-
Closing asset base	**3,338.4**	**3,625.2**	**4,257.2**	**-**

Details of forecast and actual new facilities investment for AA2 (exclusive of capital contributions and mid-year capital expenditure assumptions) are as follows.

[35] Revised access arrangement information, Section 10.2.3, Tables 57 and 58.

[36] Revised access arrangement information, Section 10.2.4, Tables 61 and 62.

Figure 5 Transmission network capital expenditure (real $ million at 30 June 2012)

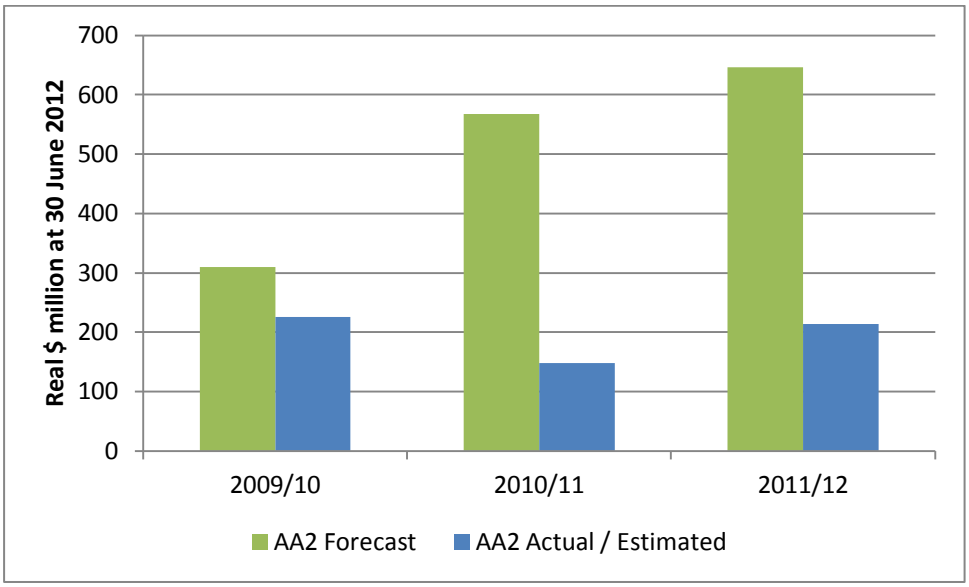
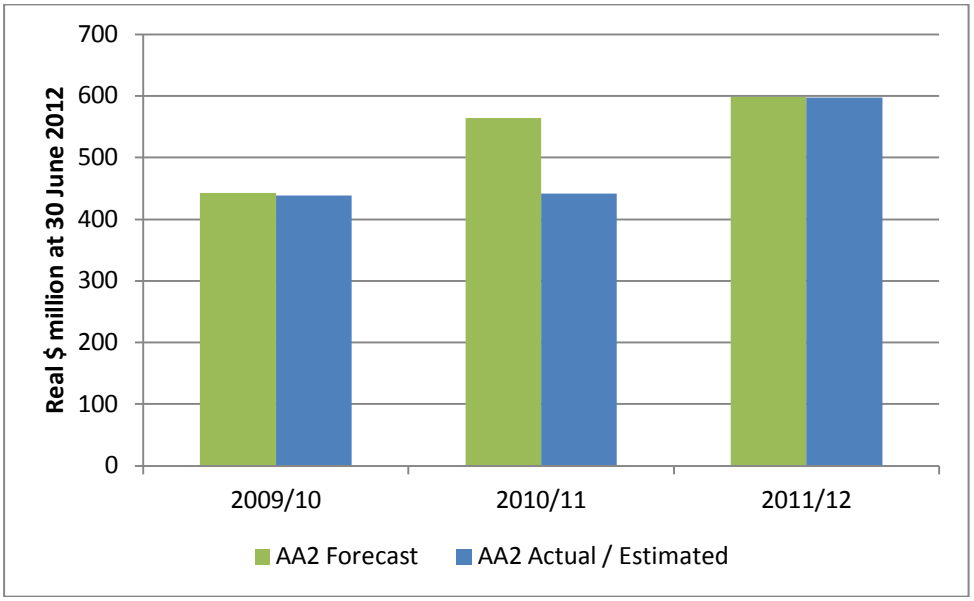


Figure 6 Distribution network capital expenditure (real $ million at 30 June 2012)



Western Power has provided supporting information for the actual and estimated (2011/12) capital expenditure for AA2 in Appendices B1 and B2 of the revised access arrangement information.

Western Power's capital expenditure for AA2 (net of capital contributions) was substantially below (61 per cent in real dollar terms) the amount forecast (the amount used to determine tariffs in AA2) for the transmission network. Western Power's capital expenditure for AA2 for the distribution network (net of capital contributions) was 8 per cent below the amount forecast (in real dollar terms). Under the investment adjustment mechanism, Western Power proposes to deduct $47.4 million from target revenue for the transmission network (dollar values at 30 June 2012) to reflect under-spending in growth related investment during AA2. This adjustment is because the forecast growth related capital expenditure was used to determine the target revenue for AA2 and is intended to neutralise any forecast errors relating to growth-related expenditure.

In order to include the actual (and estimated actual for 2011/12) capital expenditure in AA2 to the capital base, Western Power must satisfy the Authority that the new facilities investment meets the new facilities investment test under section 6.52 of the Access Code.

Western Power asserts that the entire capital expenditure in AA2 incurred or forecast to be incurred meets the new facilities investment test.[37]

Submissions are invited from interested parties on Western Power's calculation of the capital base values at the start of AA3 and, in particular, on whether Western Power has adequately demonstrated that new facilities investment in AA2 meets the requirements of the Access Code to be added to the capital base.

5.1.2.4 Forecast Capital Base for AA3

For the purposes of determining target revenue for AA3, Western Power has forecast values of the capital base for the transmission and distribution networks at the commencement of each year.

Western Power has forecast total capital expenditure (net of capital contributions) of $4,870.4 million over the five year AA3 period, with $1,838.9 million required for the transmission network and $3,031.5 million for the distribution network. Western Power has forecast that its total capital base will be around $10,414.8 million by the end of AA3, with a closing value for the transmission network and distribution network of $4,209.8 million and $6,205.0 million, respectively. Western Power's forecast opening and closing values of the capital base for each year of AA3 for the transmission and distribution network are shown in Table 11 and 12.

Western Power's forecast capital base values are as follows.

Table 11 Transmission network capital base values for AA3 (real $ million at 30 June 2012)[38]

	2012/13	2013/14	2014/15	2015/16	2016/17
Opening asset value	**2,840.8**	**3,102.2**	**3,277.1**	**3,526.2**	**3,931.8**
New facilities investment[39]	338.0	264.9	343.6	501.7	390.8
Mid-year timing assumption	14.6	11.0	14.7	21.7	16.9
Redundant assets	0.0	0.0	0.0	0.0	0.0
Depreciation	-91.2	-100.9	-109.2	-117.8	-129.6
Accelerated depreciation	0.0	0.0	0.0	0.0	0.0
Closing asset base	**3,102.2**	**3,277.1**	**3,526.2**	**3,931.8**	**4,209.8**

[37] Revised access arrangement information, Section 10.2.2, p 237.

[38] Revised access arrangement information, Section 10.3.1, Tables 66 and 67.

[39] New facilities investment is net of forecast capital contributions.

Table 12 Distribution network capital base values for AA3 (real $ million at 30 June 2012)[40]

	2012/13	2013/14	2014/15	2015/16	2016/17
Opening asset value	**4,257.2**	**4,614.4**	**5,037.7**	**5,452.5**	**5,832.5**
New facilities investment[41]	544.1	623.9	638.1	609.3	616.2
Mid-year timing assumption	23.5	26.8	27.4	26.4	26.5
Redundant assets	0.0	0.0	0.0	0.0	0.0
Depreciation	-206.7	-226.9	-250.8	-255.7	-270.2
Accelerated depreciation	-3.4	-0.5	0.0	0.0	0.0
Closing asset base	**4,614.4**	**5,037.7**	**5,452.5**	**5,832.5**	**6,205.0**

Western Power has provided supporting information for the forecasts of new facilities investment for AA3 in Appendix A of the revised access arrangement information.

Western Power has forecast substantial real increases in new facilities investment over the actual costs incurred in the current access arrangement period. These increases are attributed by Western Power to:

- improving the safety of the network through increased pole replacement and reinforcement rates and replacing unsafe customer service connections; and
- cope with maintaining network security and growth, particularly growth in peak demand;

Western Power acknowledges that its pole failure rate is the highest in Australia.[42] Its wood pole failure rate has been the subject of an order to repair by the Energy Safety Office. Western Power has proposed to reinforce and replace an average of 33,000 poles per year at a cost of $748 million. Western Power has estimated that its wood pole management plan will take 20 years of elevated investment before pole replacement is at a 'sustainable rate'.[43]

Submissions are invited from interested parties on whether information provided by Western Power in the revised access arrangement information is sufficient for the Authority to be satisfied that the forecast capital expenditure may be reasonably expected to meet the new facilities investment test.

Submissions are also invited as to Western Power's proposed management plan and expenditure on pole replacements and reinforcements to reduce a public safety risk.

5.1.2.5 Depreciation

Return of investment, or commonly referred to as deprecation, allows a service provider to recoup the loss in value of the capital base from physical use, age or obsolescence.

[40] Revised access arrangement information, Section 10.3.2, Tables 68 and 69.

[41] New facilities investment is net of forecast capital contributions.

[42] Revised Access Arrangement Information, Section 8.2.1, p176.

[43] Revised Access Arrangement Information, Section 8.2.1, p176

Western Power has forecast depreciation for AA3, which is included in the target revenue (and deducted from the forecast capital base), of around $1.8 billion (in real dollar terms) of which around 30 per cent is for the transmission network and around 70 per cent is for the distribution network.

Western Power's forecast depreciation for AA3 is a significant component (around 17 per cent) of the total revenue requirement.

5.1.2.6 Return on Regulated Capital Base

The return on the regulated capital base provides a service provider with a return on the amount of capital it has invested in its business and should be commensurate with a fair and reasonable rate of return given the risks of its business.

Western Power has forecast a return on investment for AA3, which is included in the target revenue, of about $3.7 billion (in real dollar terms) of which $1.5 billion is for the transmission network and the remaining $2.2 billion is for the distribution network.

Western Power's forecast return on investment is the largest 'building block' component, representing over a third of the target revenue.

Weighted Average Cost of Capital

Section 6.64 of the Access Code requires that an access arrangement set out a rate of return, also known as the weighted average cost of capital (**WACC**), for a covered network.

For the current access arrangement, the target revenue was determined in real dollar-value terms. As such, a real pre-tax WACC was applied on the regulatory asset base of the regulated business to derive the return on capital, one component of the target revenue. This WACC value was set by reference to a range of WACC values which was derived from estimates of values determined by the Authority for the input parameters to the capital asset pricing model (**CAPM**) and market observations of risk free rates and costs of debt.

In the proposed revised access arrangement, Western Power has applied a real pre-tax WACC of 8.82 per cent. This WACC value was derived by Western Power on the advice of its consultants for WACC inputs. It is noted that Western Power has significantly departed from the parameters that were adopted by the Authority for the purposes of the current access arrangement, particularly in relation to the equity beta and market risk premium. Western Power has applied a value of imputation credit that is consistent with the value used by the Authority in its recent decision on the DBNGP.

Western Power has proposed to calculate the debt risk premium by making use of 7 year BBB bonds extrapolated to 10 years using the differential between 7 year AAA and 10 year AAA bonds. This method uses data that has not been available since 22 June 2010. Western Power's proposed approach differs to the method proposed by the Authority in its discussion paper released in December 2010 entitled "Measuring the Debt Risk Premium: A Bond Yield Approach". The Authority subsequently applied that approach in its final decisions for the access arrangements for the WA Gas Networks Distribution Systems and the Dampier to Bunbury Natural Gas Pipeline.

The values of input parameters to the determination of the WACC values for both the current access arrangement and the proposed revised access arrangement are summarised as follows:

Table 13 Approved AA2 WACC and Proposed AA3 WACC

Parameter	Western Power's Approved WACC for AA2[44]	Western Power's Proposal for AA3 [45]
Nominal risk free rate of return (%)	5.51	5.4
Inflation rate (%)	2.47	2.7
Real risk free rate (%)	2.97	2.63
Equity beta	0.5-0.8	0.9-1.1
Market risk premium (%)	5.0-7.0	6.5-8.0
Debt to total value (%)	60	60
Debt margin (%)	4.205-4.315 (including debt raising costs of 0.125%)	3.96-4.43 (including debt raising cost of 0.125%)
Effective tax rate (%)	30	30
Value of imputation credits (gamma, %)	57-81	25
Range for the real pre-tax WACC (%)	6.59-8.32	8.49-10.25
Real pre-tax WACC (%)	**7.98**	**8.82**

Western Power established its proposed WACC value on the basis of a nominal risk free rate and a debt margin derived from capital market data over a 20 business day averaging period to 31 May 2011.

Western Power has indicated that it will seek an agreement with the Authority on the averaging period or "sampling period" to determine the market-based WACC parameters for the Authority's final decision (such as the estimates of the risk free rate and debt risk premium). Western Power also indicated that the agreed averaging period will be kept confidential until the Authority delivers its final decision.[46] The Authority notes that provision for such an agreement by a regulator exists under the *National Electricity Rules* (sections 6.5.2(c) and 6A.6.2(c)), but that there is no explicit provision for such an agreement under the Access Code.

Submissions are invited from interested parties on the rate of return (WACC), and various parameters, proposed by Western Power.

5.1.2.7 Adjustments to Target Revenue

The current access arrangement provides for several revenue adjustment mechanisms to adjust target revenue in AA3 to account for unforeseen events or other cost pass-throughs, over or under-recovery of revenue in preceding years or provide financial incentives to

[44] Economic Regulation Authority, 4 December 2009, Final Decision, pp247-250.

[45] Revised access arrangement information, Section 11.5, Table 76.

[46] Revised access arrangement information, Section 11.4.1, p 257.

Western Power to be more efficient or perform better. These adjustments occur under the following mechanisms:

- Correction factor – a year-on-year adjustment to allowed revenue to account for under-recover or over-recovery of revenue under the revenue cap.
- Unforeseen events adjustment – an adjustment to account for costs incurred in AA2 as a result of force majeure events.
- Technical rule change revenue adjustment – an adjustment to account for costs incurred as a result of changes to the Technical Rules that could not have reasonably been foreseen at the commencement of AA2.
- Investment adjustment mechanism – an adjustment to account for differences between forecast and actual costs of certain classes of new facilities investment.
- Gain sharing mechanism – an adjustment to account for the out-performance of the forecast operating expenditure in AA2.
- Service standards adjustment mechanism – an adjustment to account for any difference between service standard performance and service standard benchmarks in AA2
- D-factor – an adjustment to account for any additional operating expenditure incurred which was a result of deferring a capital expenditure project and any additional operating or capital expenditure in relation to demand management initiatives.
- Deferred revenue from AA2 – an adjustment to account for the amount of revenue deferred in AA2 which was to be recovered in subsequent access arrangement periods (discussed earlier in Section 4.1 of this Issues Paper).

Western Power has forecast adjustments to target revenue in AA3 in respect of the unforseen events adjustment, investment adjustment mechanism, service standards adjustment mechanism and a full recovery of deferred revenue from AA2.

Western Power is proposing to recover $7.5 million (in real dollar terms at 30 June 2012) in 2012/13 target revenue for an unforseen event – a severe storm on 22 March 2010. Western Power has provided a description of the event, a description of its insurance cover and an estimate of the unrecovered costs.[47]

Under the investment adjustment mechanism, Western Power proposes to deduct $47.4 million from target revenue for the transmission network and add $2.0 million to target revenue for the distribution network (dollar values at 30 June 2012). These adjustments reflect actual spending of relevant capital expenditure being below forecast for the transmission network in AA2 and slightly above forecasts for the distribution network.

Western Power has forecast a level of service performance for 2011/12 and determined that over AA2 it has incurred a penalty of $0.7 million for the transmission network and a reward of $3.1 million for the distribution network under the service standard adjustment mechanism. The current access arrangement requires that actual service performance for 2011/12 should be used rather than forecast, although an actual performance would not be known until after 30 June 2012.

Western Power has not indicated any adjustment to target revenue in 2012/13 and 2013/14 to account for under-recovery or over-recovery of revenue under the revenue-cap in 2010/11 and 2011/12.

[47] Revised access arrangement information, Section 12.2.4, pp 275-280.

5.1.2.8 Tariff Equalisation Contributions

Section 6.37A of the Access Code provides for target revenue to include an amount of tariff equalisation contributions, which comprises an amount levied on users of the Western Power Network to finance amounts paid to Horizon Power for the provision of electricity services in areas not serviced by the Western Power Network. Under the current access arrangement, an amount of tariff equalisation contributions of $491 million (in dollar values at 30 June 2012) was added to the target revenue for the 2009/10 to 2011/12 period.

Western Power has included $906.9 million (in dollar values at 30 June 2012) in its target revenue for tariff equalisation contributions for AA3. Western Power has stated that its forecast for the tariff equalisation contributions is based on forecasts provided in the State Budget and then indexed in line with inflation. The State Government periodically gazettes the tariff equalisation contributions amounts. The State Government has yet to gazette any amounts for the tariff equalisation contribution beyond 2011/12. The Authority is required to include an amount up to the gazetted amount for the tariff equalisation contribution into the target revenue for Western Power.

Table 14 Tariff equalisation contributions (real $ million at 30 June 2012)

	AA2			AA3				
	2009/10	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**
Approved tariff equalisation contributions[48]	129.7	180.1	181.2	-	-	-	-	-
Forecast tariff equalisation contributions[49]	-	-	-	181.2	180.7	180.8	181.7	182.5

5.2 Reference Services

5.2.1 Access Code Requirements

A reference service is a service described in the access arrangement and for which a reference tariff is specified in the access arrangement. A reference service is a service that would typically be sought by a third party seeking access to the network and is in the nature of a 'benchmark service' for those seeking to negotiate access. Parties are free to negotiate any service with the service provider, using the reference services in an access arrangement as the benchmark and basis of its negotiations.

Section 5.1(a) of the Access Code requires that an access arrangement specify one or more reference services. The requirements for reference services are set out in section 5.2 of the Access Code.

Section 1.3 of the Access Code defines a number of terms, such as 'contract for services', 'covered service', 'entry service', 'exit service', 'excluded service', 'reference service', 'non-reference service' and 'reference tariff', that are relevant to the Authority's assessment of Western Power's proposed reference services.

[48] Economic Regulation Authority, 4 December 2009, Final Decision, p 272 (forecast values of 30 June 2009 divided by 0.91 to derive values in dollars of 30 June 2012).

[49] Revised access arrangement information, Section 12.4, Table 88.

The designation of any service as an excluded service is subject to determination by the Authority under section 6.33 of the Access Code. Other than as determined by the Authority, all services are covered services.

5.2.2 Current Access Arrangement

The current access arrangement at sections 3.4 to 3.6A includes the following 14 reference services:

- Anytime Energy (Residential) Exit Service, A1
- Anytime Energy (Business) Exit Service, A2
- Time of Use Energy (Small) Exit Service, A3
- Time of Use Energy (Large) Exit Service, A4
- High Voltage Metered Demand Exit Service, A5
- Low Voltage Metered Demand Exit Service, A6
- High Voltage Contract Maximum Demand Exit Service, A7
- Low Voltage Contract Maximum Demand Exit Service, A8
- Streetlighting Exit Service, A9
- Un-Metered Supplies Exit Service, A10
- Transmission Exit Service, A11
- Distribution Entry Service, B1
- Transmission Entry Service, B2
- Time of Use (Residential) – Bidirectional Service , C1

The current access arrangement at section 3.12 also includes a description of a range of non-reference services that are in the nature of ancillary services.

The current access arrangement does not specify any services as excluded services.

5.2.3 Proposed Revisions

Western Power has proposed three new bi-directional reference services, with existing reference service ‘C1’ relabelled as ‘C3’:

- Anytime energy (residential) bi-direction service, C1
- Anytime energy (business) bi-direction service, C2
- Time of use (business) bi-directional service, C4

Western Power has introduced new terms in its proposed revised access arrangement for ‘revenue cap services’, ‘non-revenue cap services’ and ‘bi-directional services’.

- ‘revenue cap services’ – means the following covered services provided by Western Power by means of the Western Power Network:

  (a) connection service;

  (b) exit service;

(c) entry service;

(d) bi-directional service;

(e) the metering services provided ancillary to the services in paragraphs (a) to (d) that are defined as standard metering services in the most recent Model Service Level Agreement approved by the Authority under the *Electricity Industry Metering Code 2005*; and

(f) streetlight maintenance.

- 'non-revenue cap services' – means non-reference services provided by Western Power by means of the Western Power Network other than non-reference services that are provided as revenue cap services.
- 'bi-directional service' – means a covered service provided by Western Power at a connection point under which the user may transfer electricity into and out of the Western Power Network at the connection point.

Western Power has proposed that, in accordance with sections 6.1 and 6.2 (c) of the Code:

- a revenue cap will apply to revenue cap services that is set by reference to Western Power's approved total costs; and
- charges for non-revenue cap services will be:

(a) negotiated in good faith;

(b) consistent with the Code objective; and

reasonable.To date, when Western Power has connected large generation or load where an exemption from the Technical Rules has been agreed by the customer under section 12.34 of the Access Code, the related service has been treated as a reference service. Western Power has proposed that this service now be treated as a non-reference service.

Submissions are invited from interested parties on whether the set of reference services included in the current access arrangement have proven to meet the requirements of users, and the requirements of section 5.2 of the Access Code.

Submissions are also invited from interested parties on the proposed revisions to the list of reference services and the proposed new non-reference service.

5.3 Price Control

5.3.1 Access Code Requirements

Section 5.1(d) of the Access Code requires that an access arrangement include a price control. A "price control" is defined in the Access Code as meaning the provisions in an access arrangement, under section 5.1(d) and Chapter 6 of the Access Code, which determine target revenue. A note to this definition indicates that a price control can consist of direct or indirect limits, and consists of a limit on the level of tariffs through the control of overall revenue. This note also distinguishes between a price control and pricing methods by indicating that pricing methods deal with the structure of tariffs.

The specific requirements and objectives for the price control are set out in sections 6.1 to 6.5 to the Access Code. Sections 6.1 and 6.2 state requirements for the form of price control, while sections 6.4 and 6.5 set out the objectives that must be met by a price control.

5.3.2 Current Access Arrangement

The current access arrangement applies a "revenue cap" form of price control. Under this form of price control, reference tariffs are set in any year on the basis of an amount of required revenue for that year, plus corrections for under-recovery or over-recovery of required revenue in prior periods.

The price control also includes provision for adjustments to revenues from one access arrangement period to the next, including provision for adjustments for unforeseen events and technical rule changes, and adjustments under the investment adjustment mechanism and capital contributions adjustment mechanism.

The price control under the current access arrangement is applied subject to a "side constraint" on year-to-year changes to reference tariff charges. Under the current access arrangement, the side constraint comprised a factor of +/- (CPI + 13 per cent) for the transmission network and +/- (CPI + 18 per cent) for the distribution network.[50]

5.3.3 Proposed Revisions

Western Power proposes to maintain a revenue cap form of price control for 'revenue cap services'.

Western Power has proposed a new method of calculating the side-constraints for the transmission and distribution network which will vary annually based on CPI, percentage change in revenue requirements, correction factors (including an adjustment for under and over-recovery of revenue, adjustments to revenue from AA2 and the TEC) and an additional 2 per cent. The formula for calculating these side constraints is contained in Western Power's proposed revised access arrangement.[51]

Submissions are invited from interested parties on the changes proposed by Western Power to the side constraint on year-to-year changes in reference tariff components.

5.4 Pricing Methods, Price List and Price List Information

5.4.1 Access Code Requirements

5.4.1.1 Pricing methods

According to the Access Code, "pricing methods" refers to the structure of reference tariffs that are included in an access arrangement (section 7.1 of the Access Code).

[50] While expressed in this form, the side constraint is a maximum change in any tariff component by a factor of plus or minus the sum of the percentage change in the CPI and 13 percentage points for transmission tariffs and CPI and 18 percentage points for distribution tariffs.

[51] Proposed revised access arrangement, p 31-34.

Section 5.1(e) of the Access Code requires an access arrangement to include pricing methods in accordance with the requirements of Chapter 7 of the Access Code.

Section 7.2 of the Access Code indicates that an access arrangement may contain any pricing methods, provided that the pricing methods collectively meet the objectives set out in sections 7.3 and 7.4 and otherwise comply with the requirements of Chapter 7. A note under section 7.2 also indicates a number of examples of tariffs that may result from pricing methods, indicating that tariffs or parts of tariffs may be set to take into account matters, such as, different classes of users, different voltage levels, different connection points, demand levels, energy quantities and times of use.

Section 7.5 of the Access Code requires that the Authority, in reconciling any conflicting objectives for the pricing methods, or determining which objective should prevail, should have regard to the Code objective and should permit the objectives of section 7.3 to prevail over the objectives of section 7.4.

Section 7.6 to 7.12 provide guidance and requirements for establishing tariffs.

5.4.1.2 Price list and price list information

Section 5.1(f) of the Access Code requires an access arrangement to include a price list in accordance with the requirements of Chapter 8 of the Access Code. A "price list" is defined in the Access Code as a schedule of reference tariffs.

Chapter 8 of the Access Code sets out the requirements and processes for a service provider to submit price lists to the Authority for approval and for the Authority to approve or not approve a proposed price list.

An access arrangement may, or may not, include a requirement on a service provider to submit price lists to the Authority for approval. A determination of whether or not price lists must be approved by the Authority occurs under section 4.36 of the Access Code.

If a service provider's access arrangement requires the service provider to submit price lists to the Authority for approval, then section 8.1 of the Access Code requires that the service provider must submit a proposed price list to the Authority at least 45 business days before the start of each pricing year other than the first pricing year. A proposed price list must be accompanied by price list information. "Price list information" is defined as a document that would reasonably be required to enable the Authority, users and applicants to understand how the service provider derived the elements of the proposed price list; and assess the compliance of the proposed price list with the access arrangement.

Sections 8.2 to 8.6 of the Access Code sets out the process for the Authority to approve or not approve a proposed price list. The Authority is obliged to approve a proposed price list if it determines that the proposed price list complies with the price control and pricing methods in the service provider's access arrangement.

Sections 8.7 and 8.8 of the Access Code require a service provider to submit price lists to the Authority, even if the access arrangement does not require the service provider to submit price lists to the Authority for approval. In these circumstances, the role of the Authority is to publish the submitted price list and price list information.

5.4.2 Current Access Arrangement

"Pricing methods" are included in the current access arrangement at section 9 and indicate the allocation of costs to particular reference services and particular charges of reference tariffs.

A price list (2009/10) was included in the current access arrangement at Appendix 5. Subsequent to the Authority's approval of the current access arrangement, this price list was revised to incorporate variations to reference tariff charges made in accordance with the price control for the years 2010/11 and 2011/12.

5.4.3 Proposed Revisions

Western Power has not proposed substantive changes to the pricing methods or price list information in section 6 of the proposed revised access arrangement. Except for the first pricing year of AA3, Western Power will seek the Authority's approval at least 45 business days before the start of each pricing year. The first pricing year (2012/13) will be approved in the Authority's review of Western Power's proposed revised access arrangement.[52]

5.5 Service Standard Benchmarks

5.5.1 Access Code Requirements

Service standard benchmarks are the benchmarks (or targets) for reference services, as specified in an access arrangement. A service provider is required to provide reference services at a standard at least equivalent to these benchmarks. "Service standards" is defined under the Access Code as meaning either or both of the technical standard, and reliability, of delivered electricity. Section 5.1(c) of the Access Code requires that an access arrangement include service standard benchmarks for each reference service.

The requirements for service standard benchmarks are set out in section 5.6 of the Access Code. A service standard benchmark must be reasonable and must be sufficiently detailed and complete to enable a user or applicant to determine the value represented by the reference service at the reference tariff.

5.5.2 Current Access Arrangement

The current access arrangement includes the following service standard benchmarks:

- distribution services:
  - system average interruption duration index (SAIDI);
  - system average interruption frequency index (SAIFI); and
  - SAIDI and SAIFI specified separately for urban areas, rural-short and rural-long feeders and the Perth central business district.
- transmission services:
  - circuit availability;
  - system minutes interrupted (for the meshed and radial network);

[52] The 2012/13 Price List is at Appendix F.1 of Western Power's proposed revised access arrangement.

- loss of supply events; and
- average outage duration.

The SAIDI and SAIFI benchmarks are used as reliability measures, where SAIDI measures the average number of minutes per customer of outages on the distribution network in a year, and SAIFI measures the average number of interruptions per customer in a year. For these benchmarks, a lower value corresponds to a higher service standard.

Circuit availability refers to the availability of the transmission network, that is, the transmission network available to users that are directly connected. Essentially, the circuit availability benchmark is used to measure network availability and is measured as a percentage of total possible hours available (i.e. the actual circuit hours available for transmission circuits divided by the total possible defined circuit hours available), where a higher percentage corresponds to a higher service standard.

System minutes interrupted records the period of network outages measured in minutes and is recorded for transmission meshed and radial networks separately. A meshed network refers to an electricity network where there is more than one path between network nodes. Specifically, the system minutes interrupted benchmark is the summation of megawatt minutes of unserved energy at substations that are connected to the meshed/radial transmission network divided by the system peak megawatts. A lower value of system minutes interrupted corresponds to a higher service standard.

Loss of supply events records the frequency of events per annum where loss of supply occurs and is reported separately for events exceeding 0.1 system minutes and 1.0 system minutes. The lower the number of events the higher the service standard.

Average outage duration records the average duration in minutes of all unplanned outages on the transmission network in the year. The lower the minutes per annum the higher the service standard.

A range of exclusions are specified for the service standard benchmarks for both transmission and distribution services.

5.5.3 Proposed Revisions

Western Power has proposed a number of significant revisions to the service standards it will provide to users and has proposed lower service standard benchmarks. Western Power has noted that due to not meeting all of the benchmarks set in AA2, it was at risk of non-compliance with its licence and was not entitled to receive rewards under the gain sharing mechanism.[53] It has proposed moving away from the 'ambitious' benchmarks of AA2 to 'minimum service standards'.[54]

Western Power states that its service levels should not decline despite the lower minimum standards because of the service standard adjustment mechanism (discussed in section 4.3.1 of this Issues Paper).

Western Power provides supporting information for the proposed revisions to service standard benchmarks in the revised access arrangement information.[55] Additional information relevant to the consideration of Western Power's proposed service standard

[53] Revised Access Arrangement Information, p 91.

[54] Revised Access Arrangement Information, p 91.

[55] Revised access arrangement information, Appendix Y.

benchmarks is Western Power's Service Standard Performance Report for 2010/11[56] and the Authority's March 2011 report titled "*2009/10 Annual Performance Report: Electricity Distributors*" that is available from the Authority's website.[57]

The Authority will give consideration to the level of expenditures undertaken by Western Power during the current access arrangement period and levels of expenditure proposed for AA3, and whether Western Power's service standards are reasonable.

5.5.3.1 Distribution Reference Services

Western Power has removed the 'total network' SAIDI and SAIFI measures and added a new measure of call centre response to its list of measures for the distribution services (reference services A1 to A10, B1, C1 to C4). Western Power has also included transmission outages into its calculation of SAIDI and SAIFI for customers connected to the distribution network. Previously, the level of SAIDI and SAIFI only included outages on the distribution network.

Western Power has added a new benchmark for distribution services capturing the call centre performance. This measure will record the percentage of calls in relation to interruptions and life-threatening emergencies that were responded to in 30 seconds or less (after exclusions) over a 12 month period,

A service standard benchmark for circuit availability will also apply to distribution reference services.

The service standard benchmarks for Distribution services (in terms of SAIDI and SAIFI) for AA2 and AA3 (for each of the five years) are shown as follows:

Table 15 Distribution services – SAIDI

		Current Access Arrangement			Proposed Revisions
		June 2010	June 2011	June 2012	2013 - 2017
SAIDI	SWIN total	230	224	213	n/a
	CBD	38	38	38	56
	Urban	165	162	153	200
	Rural Short	259	253	244	360
	Rural Long	612	588	556	720
SAIFI	SWIN total	2.5	2.46	2.41	n/a
	CBD	0.24	0.24	0.24	0.4
	Urban	1.92	1.89	1.83	2.30
	Rural Short	3.12	3.06	2.98	4.20
	Rural Long	5.00	4.85	4.80	5.70

The proposed service standard benchmarks for Distribution services (in terms of call centre performance and circuit availability) are as follows:

[56] Western Power, 1 September 2011, Service Standard Performance Report Year Ending 30 June 2011. Available from the Authority's website: http://www.erawa.com.au/2/721/48/electricity_access__service_standards.pm

[57] Economic Regulatory Authority website: http://www.erawa.com.au/2/1152/51/electricity_licensing__performance_reports.pm

Table 16 Distribution services – call centre performance and circuit availability

Year ending	Call centre performance (% of calls)	Circuit availability (% of total time)
Proposed Revisions		
2013 - 2017	75	97.3

No data is shown for AA2 as these service standards were not applicable to distribution services in AA2.

5.5.3.2 Transmission Reference Services

Western Power has removed the system minutes interrupted, loss of supply and average outage duration benchmarks for AA3 for transmission services (reference services A11 and B2). Western Power has maintained a service standard benchmark for circuit availability.

Western Power has proposed to include an 'individual customer service measure' to the service standard benchmarks for transmission services in AA3. This measure records, over a 12 month period (pro-rated as required), the percentage of users procuring a reference service A11 or B2 (after exclusions) that have:[58]

- an account manager for the full 12 month period, and
- an annually reviewed customer service management plan, and
- an invitation to participate in an annual satisfaction survey.

The service standard benchmarks for Transmission services (in terms of circuit availability) for AA2 and AA3 (for each of the five years) are shown as follows:

Table 17 Transmission services – circuit availability

	Current Access Arrangement			Proposed Revisions
	June 2010	June 2011	June 2012	2013 – 2017
Circuit availability (% total time)	98	98	98	97.3
System minutes interrupted (meshed network)	9.3	9.3	9.3	n/a
System minutes interrupted (radial network)	1.4	1.4	1.4	n/a
Loss of supply events (>0.1 system minutes)	25	25	25	n/a
Loss of supply events (>1.0 system minutes)	2	2	2	n/a
Average outage duration	764	764	764	n/a

The proposed service standard benchmark for the individual customer service measure is 100 per cent for each of the five years of AA3.

5.5.3.3 Street Lighting Reference Services

Western Power has proposed that the service standard benchmarks for the reference service A9 for each of the five years of the proposed revised access arrangement will be as follows:

[58] Revised Access Arrangement Information, p 89.

Table 18 Street lighting services – response times

Region	**Average number of business days** (to repair faulty streetlights)
Metropolitan area	5 days
Regional area	9 days

The current access arrangement has two categories of services standards outside the Perth Metropolitan area – 'Major regional towns' and 'Remote and rural towns' (with standard service benchmarks of 5 days and 9 days respectively).

Submissions are invited from interested parties on Western Power's proposed revisions to the service standard benchmarks, including:

- the level of service standard benchmarks proposed by Western Power for AA3;
- the proposed exclusions for the measures of SAIDI, SAIFI, circuit availability and call centre performance; and
- whether the supporting information provided by Western Power is sufficiently detailed to enable users or applicants to determine the value represented by the reference service at the reference tariff.

Submissions are also invited on whether Western Power's revised service standards are reasonable, given the levels of actual and forecast expenditures for AA2 and AA3.

5.6 Adjustments to Target Revenue in the Next Access Arrangement Period

5.6.1 Access Code Requirements

Sections 6.6 to 6.32 of the Access Code provide for the target revenue for an access arrangement period to be adjusted to reflect certain events, or outcomes of the previous access arrangement period. In the circumstances of the access arrangement for the Western Power Network, these provisions of the Access Code provide (to the extent enabled by the access arrangement) for the target revenue for AA4 (due to commence on 1 July 2017) to be adjusted for the relevant events, or outcomes in AA3.

The events and outcomes that may give rise to adjustments to target revenue under these sections of the Access Code are:

- the service provider incurring certain costs during the AA3 as a result of unforeseen (force majeure) events (sections 6.6 to 6.8 of the Access Code);
- the service provider incurring greater or lesser non-capital costs, or capital related costs as a result of changes in the Technical Rules for the Western Power Network (sections 6.9 to 6.12 of the Access Code);
- the amount, nature and timing of new facilities investment in AA3 being different to that forecast for that period, consistent with an investment adjustment mechanism set out in the access arrangement (sections 6.13 to 6.18 of the Access Code);
- demand growth and/or efficiency gains achieved by the service provider, consistent with a gain sharing mechanism set out in the access arrangement (sections 6.19 to 6.28 of the Access Code);

- the service provider achieving service standards during AA3 that are different to the service standard benchmarks established in the access arrangement, consistent with a service standards adjustment mechanism set out in the access arrangement (sections 6.29 to 6.32 of the Access Code).

5.6.2 Current Access Arrangement

Section 5.1.2.7 of this Issues Paper outlined the proposed adjustments to target revenue of AA3 in respect of outcomes and events from AA2.

5.6.3 Proposed Revisions

Western Power has retained provisions for most of the adjustments that were contained in the current access arrangement, except for the deferral of revenue, as Western Power has proposed to recoup this revenue during AA3. However, Western Power has made a number of amendments to the existing adjustment mechanisms detailed below. Western Power's amendments to the service standard adjustment mechanism was discussed at section 4.3.1 of this Issues Paper.

5.6.3.1 Gain sharing mechanism and efficiency and innovation benchmarks

In section 7.4.2 Western Power has proposed the following revisions to the calculation of the 'above benchmark surplus (ABS)'.

The values of 'EIB' (the efficiency and innovation benchmark for each year in $M real 2012) are listed in the table below:

Table 19 Efficiency and innovation benchmarks (real dollars at 30 June 2012)

Period	Efficiency and Innovation Benchmark
2012/13	$471.1 million
2013/14	$484.0 million
2014/15	$513.6 million
2015/16	$534.5 million
2016/17	$574.6 million

The EIB values have been adjusted for:

- any difference between the actual scale escalation factors and the forecast scale escalation factors used to establish the non-capital costs component of approved total costs. The scale escalation factors are a customer growth rate based on growth in customer numbers and a network growth rate based on increases in line length, increases in zone substation capacity and increases in the number of feeders; and
- the effects of inflation.

The value 'A' for each year has been re-defined as 'the sum of the actual non-capital costs incurred by Western Power for the transmission system and distribution system, excluding any amount of non-capital costs incurred by Western Power:

- in accordance with the D-factor scheme in this access arrangement and providing that the expenditure has been approved by the Authority (this was excluded in the current access arrangement);

- in accordance with any adjustment made under section 7.1 of this access arrangement; ("Adjusting target revenue for unforeseen events");
- in accordance with any adjustment made under section 7.2 of this access arrangement; ("Adjusting target revenue for technical rule changes");
- in relation to superannuation for defined benefits schemes;
- in relation to non-revenue cap services;
- in relation to licence fees;
- in relation to the energy safety levy.

5.6.3.2 The D factor scheme

Western Power has proposed retaining the D factor in its current format but has proposed that in relation to clause 7.6.2(a) of its proposed revised access arrangement (the deferral of a new facilities investment project), the project that has been deferred must have been included in the D factor Project List (provided to the Authority as confidential material) and Transmission Network Development Plan.

The D factor mechanism provides for a carry-over from one access arrangement period to the next of certain operating expenditure and capital expenditure that are incurred by Western Power as a result of deferring a capital expenditure project or in relation to demand-management initiatives. There is no explicit contemplation of such an adjustment in the Access Code.

Submissions are invited from interested parties on proposed revisions to the access arrangement to allow adjustments to target revenue in the next access arrangement period, including by:

- the proposed gain sharing mechanism; and
- the "D factor scheme".

5.7 Standard Access Contract

5.7.1 Access Code Requirements

A standard access contract sets out the terms and conditions under which a user may obtain access to a reference service at the reference tariff. Section 5.1(b) of the Access Code requires that an access arrangement include a standard access contract for each reference service.

The requirements for standard access contracts are set out in sections 5.3 to 5.5 of the Access Code.

5.7.2 Current Access Arrangement

The current access arrangement includes a standard access contract (the "electricity transfer access contract") that applies to all of the reference services offered under the access arrangement.

5.7.3 Proposed Revisions

Western Power has proposed a number of minor revisions to the electricity transfer access contract, as summarised below: [59]

- removal of clause 3.1(d) which had been used for the provision of a modified service within the electricity transfer access contract. Western Power has proposed that this service be provided as a non-reference service to ensure that the electricity transfer access contract is only used for access to reference services;
- removal of the reference to 'de-energisation' in clause 3.6 to ensure that a connection point is not unintentionally deleted from an electricity transfer access contract when the intent was to simply de-energise the connect point (e.g. where a user seeks a temporary interruption of service to be followed by a subsequent re-energisation);
- amendment of the definition of 'payment error' in clause 8.6 to cover all of the situations covered by the clause, and the insertion of new clauses 8.6(f) and 8.6(g) to allow clause 8.6 to operate correctly; and
- amendments to clause 9, including insertion of new clauses 9(c) which will require users, on request, to provide updated security when the previous security provided is no longer equal to the charges for two months service; and 9(e) to manage security in situations where a parent company's circumstances change.

In considering the proposed revised access arrangement, the Authority will also give consideration to whether, in view of practical experience, the terms and conditions of the electricity transfer access contract that are proposed to continue, are consistent with the requirements of the Access Code.

Submissions are invited from interested parties on any practical issues and/or difficulties experienced with the electricity transfer access contract during the current access arrangement period, and whether interested parties foresee any potential issues arising from the revisions proposed by Western Power to the electricity transfer access contract for AA3 that:

- may impact on a commercially workable access contract, or
- might present difficulties for a user or applicant in determining the value represented by the reference service at the reference tariff.

5.8 Contributions Policy

5.8.1 Access Code Requirements

The contributions policy sets out the principles and processes for determining when a contribution will be required from a user, including for a network augmentation, and for determining the amount of the contribution. A "contribution" is defined in section 1.3 of the Access Code as a capital contribution, a non-capital contribution or a headworks charge.

Section 5.1(h) of the Access Code requires that an access arrangement include a contributions policy, defined in section 1.3 of the Access Code as a policy in an access arrangement under section 5.1(h) dealing with contributions by users.

[59] Proposed revised access arrangement, Appendix A.

The particular requirements for a contributions policy are set out in sections 5.12 to 5.17D of the Access Code.

5.8.2 Current Access Arrangement

A contributions policy is contained in Appendix 3 of the current access arrangement.

5.8.3 Proposed Revisions

Western Power has proposed the following changes to the contributions policy:

(a) section 5.2(a) has been revised such that headworks associated with a headworks scheme are excluded when the contribution payable is calculated.

(b) the headworks price list will be inflated on an annual basis (using March CPI data) rather than quarterly.

(c) the distribution headworks methodology price list will be reviewed prior to the start of each access arrangement period (based on distribution construction cost estimates) rather than annually.

Submissions are invited from interested parties on the operation of the contributions policy during the current access arrangement period and on Western Power's proposed revisions to the contributions policy.

Appendix 1 – Target Revenue

Table 20 Western Power proposed transmission network target revenue (real $ million, dollar values at 30 June 2012)[60]

	2012/13	2013/14	2014/15	2015/16	2016/17	Present Value
Operating expenditure	125.0	122.5	132.3	142.4	156.3	525.0
Depreciation	91.2	100.9	109.2	117.8	129.6	422.7
Redundant assets (accelerated depreciation)	0.0	0.0	0.0	0.0	0.0	0.0
Return on investment	250.6	273.6	289.0	311.0	346.8	1,134.7
Return on working capital	1.2	3.0	3.7	3.6	3.2	11.3
Tax costs on capital contributions	10.6	10.7	10.9	11.0	11.4	42.5
Forward-looking efficient costs	**478.5**	**510.7**	**545.2**	**585.9**	**647.4**	**2,136.2**
Gain sharing mechanism	0.0	0.0	0.0	0.0	0.0	0.0
Unforeseen events revenue adjustment	0.0					0.0
Technical rule change adjustment	0.0					0.0
Investment adjustment mechanism	-47.4					-43.6
Service standards adjustment mechanism	-0.7					-0.7
D-factor	0.0					0.0
Recovery of AA2 deferred revenue	22.7	22.7	22.7	22.7	22.7	88.8
Total adjustments	**-25.5**	**22.7**	**22.7**	**22.7**	**22.7**	**44.5**
Revenue cap correction factor	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Non-revenue cap services revenue	**-3.1**	**-3.2**	**-3.4**	**-3.6**	**-3.9**	**-13.3**
Maximum transmission reference service revenue	**449.9**	**530.3**	**564.5**	**605.1**	**666.2**	**2,167.4**

[60] Revised access arrangement information, Section 13.2, Table 95.

Table 21 Western Power proposed distribution network target revenue (real $ million, dollar values at 30 June 2012)[61]

	2012/13	2013/14	2014/15	2015/16	2016/17	Present Value
Operating expenditure	371.4	387.4	408.3	420.1	447.9	1,578.3
Depreciation	206.7	226.9	250.8	255.7	270.2	935.7
Redundant assets (accelerated depreciation)	3.4	0.5	0.0	0.0	0.0	3.6
Return on investment	375.5	407.0	444.3	480.9	514.4	1,713.6
Return on working capital	5.1	7.7	8.0	8.7	9.3	29.7
Tax costs on capital contributions	41.6	37.9	35.1	35.3	36.0	146.2
Forward-looking efficient costs	**1,003.7**	**1,067.4**	**1,146.4**	**1,200.7**	**1,277.8**	**4,407.0**
Gain sharing mechanism	0.0	0.0	0.0	0.0	0.0	0.0
Unforeseen events revenue adjustment	7.5					6.9
Technical rule change adjustment	0.0					0.0
Investment adjustment mechanism	2.0					1.8
Service standards adjustment mechanism	3.1					2.8
D-factor	0.0					0.0
Recovery of AA2 deferred revenue	170.7	170.7	170.7	170.7	170.7	667.2
Total adjustments	**183.3**	**170.7**	**170.7**	**170.7**	**170.7**	**678.7**
Tariff Equalisation Contribution	**181.2**	**180.7**	**180.8**	**181.7**	**182.5**	**708.6**
Revenue cap correction factor	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Non-revenue cap services revenue	**-14.9**	**-15.3**	**-16.0**	**-16.8**	**-17.9**	**-62.8**
Maximum distribution reference service revenue	**1,353.3**	**1,403.5**	**1,481.9**	**1,536.3**	**1,613.2**	**5,731.6**

[61] Revised access arrangement information, Section 13.2, Table 96.