Issues Paper:
Proposed Access Arrangement for the South West Interconnected Network

Submitted by
Western Power Corporation
(Networks Business Unit)

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Economic Regulation Authority
WESTERN AUSTRALIA

CONTENTS

1 INVITATION TO MAKE A SUBMISSION

The Economic Regulation Authority has prepared this issues paper to assist interested parties in making submissions on Western Power's proposed Access Arrangement and access arrangement information for the South West Interconnected Network (**SWIN**) in the South West Interconnected System (**SWIS**). It is intended to assist stakeholders to understand the nature of Western Power's proposals and to facilitate public comment and debate.

Submissions on any matters raised in Western Power's proposed Access Arrangement or access arrangement information, including reference to the matters highlighted in this issues paper, should be in printed and electronic form and addressed to:

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Or provided to the email address: electricity.networks@era.wa.gov.au

Submissions should be received by **4:00pm WST, Thursday 13 October 2005.**

Confidentiality

In general, all submissions from interested parties will be treated as in the public domain and placed on the Economic Regulation Authority's website. Where an interested party wishes to make a submission in confidence, it should clearly indicate the parts of the submission in respect of which confidentiality is claimed, and specify in reasonable detail the basis upon which the claim is made. Any claim of confidentiality will be considered in accordance with the provisions of section 14.14 of the *Electricity Networks Access Code 2004*.

The receipt and publication of any submission lodged for the purposes of the *Electricity Networks Access Code 2004* (WA) shall not be taken as indicating that the Economic Regulation Authority has formed an opinion as to whether or not any particular submission contains any information of a confidential nature.

Public access to submissions

Subject to any confidentiality constraints, submissions will be available for public inspection at the offices of the Economic Regulation Authority, or on its website at www.era.wa.gov.au. If you experience any difficulty gaining access to documents please contact the office on (08) 9213 1900.

INTRODUCTION AND OVERVIEW

2 INTRODUCTION

2.1 Background

In order to facilitate greater competition in the electricity supply industry, the Minister for Energy established the *Electricity Networks Access Code 2004* (**Access Code**), which came into effect on 30 November 2004. The Access Code provides a basis for third party access to electricity networks and seeks to promote economically efficient investment in, and use of, electricity networks to promote competition in upstream and downstream markets.

Amongst other things, the Access Code imposes an obligation on a regulated service provider to submit a proposed access arrangement, access arrangement information and technical rules for the assessment and approval by the Economic Regulation Authority (**Authority**).

The purpose of this issues paper is to highlight issues relevant to the Authority's consideration of the proposed Access Arrangement for the South West Interconnected Network (**SWIN**) (the regulated network within the South West Interconnected System) submitted on 24 August 2005 by Western Power Corporation Networks Business Unit (**Western Power**).

Western Power's proposed Access Arrangement, access arrangement information and technical rules were published on 31 August 2005 on the Authority's website: www.era.wa.gov.au/electricity/proposedAccessArrangement.cfm.

Also on 31 August 2005 the Authority published a notice inviting submissions on Western Power's proposed Access Arrangement and access arrangement information, and advising that the Authority would shortly produce an issues paper – this paper – to facilitate public comment on Western Power's proposals.

2.2 Purpose and Structure

An overview of the Access Code, the South West Interconnected Network and the assessment process and timelines is provided in section 3 of this issues paper.

This issues paper is structured in two parts:

- Part A (sections 4 and 5) – Tariff issues: discussion regarding tariff-related issues such as network valuation, expenditure on capital, expenditure on operating and maintenance, forecasts of demand, rate of return on investment, prices and price controls, and service standards; and
- Part B (section 6) – Non-tariff issues: discussion regarding non-tariff matters such as reference services, standard access contract, applications and queuing policy, capital contributions policy, transfer and relocation policy, efficiency and innovation benchmarks, trigger events, supplementary matters and revisions submission and commencement dates.

Section 7 of the issues paper briefly overviews the access arrangement information and Section 8 outlines the process for the assessment of Western Power's proposed Technical Rules.

The issues paper also makes reference to a number of appendices and additional documents produced to assist interested parties. These are:

- Appendix 1 – references;
- Appendix 2 – map of the South West Interconnected System;
- Appendix 3 – a glossary of terms used in this issues paper;
- Network Advisory Service's report on service standards;
- Talbot Olivier's comparative table on differences between the model applications and queuing policy (Appendix 2 to the Access Code) and Western Power's proposed applications and queuing policy;
- Talbot Olivier's comparative table on differences between the model capital contributions policy (Appendix 4 to the Access Code) and Western Power's proposed capital contributions policy; and
- Talbot Olivier's comparative table on differences between the model standard access contract (Appendix 3 to the Access Code) and Western Power's proposed standard access contract.

The additional documents prepared by Network Advisory Services and Talbot Olivier are available from the Authority's website:

http://www.era.wa.gov.au/electricity/consultationPapers.cfm.

3 OVERVIEW

This section of the issues paper provides a brief description of the Access Code, which was established to provide a framework for third party access to electricity transmission and distribution networks in Western Australia. The section also provides an overview of Western Power's regulated networks and outlines the Authority's assessment process for the proposed Access Arrangement and the related timelines under chapter 4 of the Access Code.

3.1 Description of the Access Code

The objective of the Access Code as detailed in section 2.1 is:

> to promote the economically efficient:
>
> (a) investment in; and
>
> (b) operation of and use of,
>
> networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the networks.

This is the overriding objective of the regime (**Access Code objective**), and is a factor which the Authority must have regard to when making decisions under the Access Code.

The Access Code imposes an obligation upon the owner of a regulated network to submit an access arrangement, access arrangement information and technical rules to the Authority for assessment and approval. The access arrangement is required to deal with all the matters listed in chapter 5 of the Access Code, and the Authority's approval process is provided for in chapter 4. The Authority will have regard to the views of interested parties and the owner of the network in making its decisions.

3.2 Description of Western Power's South West Inter-connected Network

Western Power is the major electricity supplier in the State. It was established as a vertically integrated State owned corporation on 1 January 1995 under the *Electricity Corporation Act 1994* following the disaggregation of the State Energy Commission of Western Australia into separate electricity and gas businesses.

During 2004, Western Power created four operational units – generation, networks, retail and regional – as separate Strengthened Business Units (**SBU**) and has advised the Authority that it is in the process of establishing transparent and commercially based contractual arrangements between the SBUs so that they will increasingly operate independently. Despite this, and until the passage of the *Electricity Corporations Bill 2005* and any transfer orders made under that instrument, it is understood that in the immediate term Western Power will remain a single legal entity which, amongst other things, means that one company employs all the staff, owns all the assets, shares information systems, reports its financial performance as a consolidated entity and uses common branding to market itself to its customers.

3.2.1 South West Interconnected System

Western Power's principal areas of operation are in the South West Interconnected System, or SWIS, which extends from Perth to Kalbarri in the north, Kalgoorlie in the east and Albany in the south. Appendix 1 of this issues paper includes a map of the area serviced by the SWIS.

Generation in the SWIS is mainly provided by:

- four coal-fired power stations (Collie, Muja, Kwinana and Worsley); and
- eleven gas-fired power stations (Alcoa Kwinana, Alcoa Pinjarra, Alcoa Wagerup, Kwinana, Mission Energy, Cockburn, Mungarra, Parkeston, Pinjar, South West Co-generation Joint Venture and Southern Cross Energy).

The installed capacity in the SWIS is approximately 4,158 MW. Over the past four years, energy consumption in the SWIS has grown on average by 2.7 percent per annum and the peak demand is approximately 3,000 MW.

There are also a small number of privately owned generators and transmission and distribution lines across the State, which mainly service mining and mineral processing operations.

3.2.2 South West Interconnected Network

Western Power owns and operates the major electricity transmission and distribution networks in the SWIS, and these networks are regulated networks pursuant to section 3.1 of the Access Code. For the purposes of the Authority's assessment, the regulated networks owned by Western Power in the SWIS are described as the South West Interconnected Network or SWIN.

The SWIN is the largest and most significant interconnected system in Western Australia in terms of its geographical span, the amount of electricity it transmits and distributes, and the number of users and end consumers. It contains more than 140 major substations, 6,000 km of transmission lines (66 kV and greater) and over 64,000 km of high voltage distribution lines (33 kV and lower).

The Authority understands that the SWIN is interconnected with two other networks[1]:

- a 132 kV transmission network owned by Southern Cross Energy, which runs between Boulder and Kambalda; and
- a 900 metre transmission line owned by International Power Mitsui LLP at Kwinana.

Western Power has provided a description of its regulated electricity networks in its access arrangement information.

3.3 Description of Assessment Process and Timelines

As part of the process of assessment of Western Power's Access Arrangement, the Authority must consult the public in accordance with chapter 4 of the Access Code.

[1] Which satisfy the definition of "network infrastructure facilities" in the *Electricity Industry Act 2004*.

Chapter 4 sets out the general process for public consultation and the time within which the process must be undertaken. Specifically, chapter 4, amongst other things, requires the Authority to:

- invite a first round of public submissions;
- publish a draft decision;
- invite a second round of public submissions;
- publish a final decision; and
- if necessary, publish a further final decision (final approval).

The assessment process and relevant timelines are set out in sections 4.11 to 4.25 of the Access Code, and are summarised in the table below.

The Authority cannot extend any deadline under sections 4.64 to 4.67 of the Access Code without being satisfied that a longer period of time is essential for all matters to be considered, or the satisfactory performance of the relevant obligations, and provided that the relevant party has taken all reasonable steps to fully utilise the times and processes set out in chapter 4 of the Access Code.

The Authority is required to publish a notice advising of any deadline extension, and the reasons for that extension.

The deadlines set out in the table below may be suspended when the Authority exercises its powers to obtain information and documents under section 51 of the *Economic Regulation Authority Act 2003*, or when judicial proceedings commence which relate to the Authority's assessment of the proposed Access Arrangement.

Assessment Process and Timelines

Assessment Stage	Section of Code	Deadlines (Business Days)	Extensions permitted under section 4.66 (Business Days)	Extensions permitted under section 4.67 (Business Days)
Invitation for Submissions	4.9	5 days after Access Arrangement is submitted	5 days	
Issues Paper (optional)	4.10	20 days after invitation for submissions	20 days	
1st Round Public Submissions	4.11	The later of 30 days after the invitation for submissions or 10 days after the publication of the Issues Paper	30 days and 10 days respectively	
Publication of Draft Decision	4.13	42 days after the due date for submissions under 4.11	42 days	10 days
2nd Round Public Submissions	4.15	20 days after the invitation for submissions on the Draft Decision	20 days	
Publication of Final Decision	4.18	30 days after the due date for submissions under 4.15	30 days	10 days
Submission of amended Access Arrangement	4.19	The Service Provider may submit an amended Access Arrangement within 20 days after a Final Decision (to not approve) is published	20 days	
Publication of Final Approval	4.22	If the Authority's decision is to not approve the Access Arrangement, 15 days after an amended Access Arrangement is submitted or otherwise within 25 days after the Final Decision is published	15 days and 25 days respectively	
Publication of Authority's own Access Arrangement	4.25	If the Authority is required to draft its own Access Arrangement, 20 days after a Final Approval is published	20 days	

PART A – TARIFF MATTERS

4 REQUIREMENTS OF A PROPOSED ACCESS ARRANGEMENT – TARIFF

Chapter 5 of the Access Code prescribes the required content of an access arrangement. An access arrangement must:

- specify one or more reference services;
- include a standard access contract for each reference service;
- include service standard benchmarks for each reference service;
- include price control;
- include pricing methods;
- include a current price list and a description of the pricing years for the access arrangement;
- include an applications and queuing policy;
- include a capital contributions policy;
- include a transfer and relocation policy;
- if required, include efficiency and innovation benchmarks;
- include provisions dealing with supplementary matters; and
- include provisions dealing with:
  - the submission of proposed revisions; and
  - trigger events.

This section of the issues paper discusses the elements of an access arrangement that are categorised as tariff-related. These predominantly relate to the price control, pricing methods and current price lists section. The components making up these tariff-related matters include network valuation, capital expenditure, operating and maintenance expenditure, demand forecasts, rate of return, prices and price controls, and service standards and service standard adjustment mechanism. These issues are discussed in accordance with the provisions contained within chapters 5 to 8 of the Access Code.

4.1 Network Valuation

[Reference: Access arrangement information Part B and Part C]

The Access Code requires a covered network to have a capital base determined at the start of each access arrangement period. Section 6.46 of the Access Code further requires the service provider to use either the depreciated optimised replacement cost (**DORC**) or optimised deprival value (**ODV**) methodology for determining the capital base for the start of the first access arrangement period.

Sections 6.46 to 6.61 prescribe the requirements for assessing new facilities investment, capital contributions, recoverable portion, speculative investment and redundant capital in determining the capital base.

Specifically the Access Code prohibits the following from being included in the capital base:

- an amount in respect of forecast new facilities investment, except that which falls under section 6.50;
- investment for which a capital contribution is provided;[2] and
- any redundant capital which has ceased to contribute in any material way to the provision of services.

New facilities investment considerations are addressed in the following capital expenditure (**capex**) section of this issues paper.

Western Power has proposed to use an ODV based method of asset valuation. This valuation is underpinned by a valuation completed by PricewaterhouseCoopers (**PwC**) and Sinclair Knight Merz (**SKM**) for a Valuation Committee comprising representatives from Western Power, the Electricity Reform Implementation Unit (**ERIU**) and the Department of Treasury and Finance, as at 30 June 2004.[3]

Section 119 of the Electricity Industry Act 2004 requires the Authority to adopt a "ministerial valuation", where one has been produced. While the asset valuation referred to above had considerable input from government, it is not a "ministerial valuation" that the Authority is required to adopt.

Western Power proposes that its capital base will have effect from 1 July 2006, and its approach to establishing this value is set out in section 6.3 of its access arrangement information. In deriving the capital base, Western Power adopted the PwC valuation, adding in capital expenditure between 1 July 2004 and 30 June 2006, indicating this represents "prudent and efficient levels of investment."[4]

4.1.1 Transmission Network Asset Valuation

The transmission network capital base ODV value proposed by PwC in its valuation process was $1,190 million.

Western Power has added to this the value of works in progress as at 30 June 2004, less depreciated capital contributions, leading to a closing capital base value of $1,132 million for the year ended 30 June 2004.[5]

Western Power has then added capex for the financial years ending 2005 and 2006 valued in excess of $250 million, less $90 million in depreciation over that two year period.[6]

The resultant proposed transmission network opening capital base at 1 July 2006 is $1,369 milllion.

[2] The Office of Energy recently commenced public consultation on several amendments to the Access Code. This includes the removal of section 6.56, which includes this prohibition.

[3] Western Power Physical Assets Valuation as at 30 June 2004 - Report to the Valuation Committee, June 2004 (attached as an appendix to the access arrangement information).

[4] Western Power's access arrangement information (page 74) 24 August 2005.

[5] Western Power's access arrangement information (page 78) 24 August 2005.

[6] Page 77 of the access arrangement information outlines the assumptions underpinning the allocation of these costs.

4.1.2 Distribution Network Asset Valuation

The distribution network capital base ODV value proposed by PwC in its valuation process was $1,963 million.

Western Power has added the value of works in progress as at 30 June 2004, less depreciated capital contributions, leading to a closing capital base value of $1,315 million for the year ended 30 June 2004.[7]

Western Power has then added capex for the financial years ending 2005 and 2006 valued in excess of $270 million, less $169 million in depreciation over that two year period.[8]

The resultant proposed distribution network opening capital base at 1 July 2006 is $1,482 million.

4.1.3 Redundant capital

Section 6.61 of the Access Code prescribes the requirements in relation to the treatment of redundant capital.

Western Power states that all capex undertaken since the ERIU valuation continues to be required to provide covered services and that there should be "no requirement for any further allowance for redundant assets."[9]

Additionally, Western Power contends that due to historic under-spend on assets, there is a requirement for the "repair and replacement" of assets.[10]

4.1.4 Depreciation

Section 6.70 of the Access Code prescribes the requirements in relation to the treatment of depreciation.

Western Power's approach to the treatment of depreciation is set out at pages 76 and 118 of its access arrangement information for transmission and distribution assets respectively.

The Authority is required to assess Western Power's proposed capital base for the regulatory period commencing 1 July 2006 in accordance with the Access Code provisions, in particular the requirements of section 6.70.

The Authority invites submissions from interested parties (focusing on the regulatory period commencing 1 July 2006) regarding:

1 the reasonableness, accuracy, timing and value of Western Power's proposed capital base valuation for its transmission and distribution

[7] Western Power's access arrangement information (page 120) 24 August 2005.

[8] Page 119 of the access arrangement information outlines the assumptions underpinning the allocation of these costs.

[9] Western Power's access arrangement information (page 75) 24 August 2005.

[10] Western Power's access arrangement information (page 56) 24 August 2005.

networks;

2 **Western Power's proposed treatment of depreciation in determining its transmission and distribution network capital bases;**

3 **Western Power's proposed treatment of redundant assets in determining its transmission and distribution networks capital base; and**

4 **any other matters interested parties wish to raise in relation to the assessment of the capital base valuations for both the transmission and distribution networks.**

4.2 Capital Expenditure

[Reference: Access Arrangement section 5.26(c)]

Capital expenditure during the regulatory period is added into Western Power's capital base subject to meeting the requirements of section 6.51 and 6.52 of the Access Code. It is from these amounts that the capital financing components of the revenue requirement are calculated.

In assessing capex forecasts for the Western Power transmission and distribution networks the Authority must ensure that the forecasts:

- provide for the prescribed "covered" transmission and distribution activities only;
- reflect an unbiased forecast of capex that would be undertaken by an efficient networks business, operating in accordance with good electricity industry practice, over the regulatory period;
- are consistent with the demand forecasts, service targets and other obligations;
- will pass the Access Code requirements for New Facilities Investment (section 6.52) and Regulatory Test (chapter 9); and
- are consistent with the Access Code objective.

Section 5.26(c) of Western Power's proposed Access Arrangement refers to Appendix 8 as listing "qualifying capital expenditure forecasts." Western Power proposes these projects be assessed for inclusion in the allowed capex and tariff price controls.

Western Power's Networks Business Unit, in its *2005 Transmission and Distribution Planning Report* qualitatively detailed its committed projects and development options.[11]

In its proposed Access Arrangement Western Power is forecasting significant increases to its capex for the initial (three year) regulatory period. Western Power's proposed capex requirements cover both transmission and distribution networks in the SWIN and reflect assumptions regarding:

[11] http://www.westernpower.com.au/downloads/pdf/apr/apr2005.pdf

- the need to augment the capacity of the network to meet demand growth (ie customer initiated capex);
- the replacement of ageing assets; and
- any capital improvements that are necessary for meeting established service quality targets and/or changes in regulatory or legislative standards.

4.2.1 Transmission Network capex

For capex forecasts to be included in the network valuation, Western Power is required to provide sufficient supporting information to demonstrate that the proposed investments satisfy the relevant Access Code tests:

- New Facilities Investment Test (section 6.52); and
- Regulatory Test (chapter 9).

Western Power has proposed to increase transmission capex from $95.2m in 2003-4, peaking at $191 million in 2005-6 and declining to $167.3 million in 2008-9.

Western Power has provided the following rationale for the proposed increases in capex:[12]

- the impacts of previous budget constraints, stating the effect of which has been a significant increase in “backlog” replacement expenditure as a result of deferred asset replacement;
- facilitation of market reform, requiring standalone business and information and metering systems;
- asset replacement due to the advancing age of Western Power’s transmission network;
- connection of additional generation capacity required to accommodate forecast new generation capacity;
- achieving and maintaining network performance in accordance with approved planning criteria, noting the supply reliability risks arising from increased asset utilisation and demand growth; and
- compliance with more onerous statutory obligations.

Table 6 of Part B of Western Power’s access arrangement information details the expenditure categories of transmission capex.

In Part B of Western Power’s access arrangement information, Table 14 on page 97 contains line items for (i) “working capital” and (ii) “return on working capital.” Western Power has forecast transmission related working capital to increase substantially from $8.8 million in 2005-6 to $18.0 million in 2008-9.

[12] Western Power’s access arrangement information, Part B (page 55) 24 August 2005.

4.2.2 Distribution Network capex

For capex forecasts to be included in the network valuation, Western Power is required to provide sufficient supporting information to demonstrate that the proposed investments satisfy the relevant Access Code tests:

- New Facilities Investment Test (section 6.52); and
- Regulatory Test (chapter 9).

Western Power has proposed to increase distribution capex from $142.6 million in 2003-4, peaking at $280.5 million in 2008-9.

Western Power has provided the following rationale for the proposed increases in capex.[13]

- the impact of previous budget constraints - as for transmission;
- facilitation of market reform - as for transmission;
- load growth and review of design standards, driven by high levels of load growth (particularly air conditioning load) and population growth;
- reliability expenditure related to improvements in System Average Interruption Duration Index (**SAIDI**) performance for urban and rural customers across the SWIN and targeting the worst performing feeders;
- asset condition, including steadily ramping up replacement capex towards Western Power's proposed long-term sustainable level; and
- safety, environment and statutory compliance obligations.

A summary of the distribution capex proposals is provided at Table 17 of Part C of Western Power's access arrangement information with additional supporting detail provided in Appendix 7.[14]

In Part C of Western Power's access arrangement information, Table 23 on page 125 contains line items for (i) "working capital" and (ii) "return on working capital." Western Power has forecast distribution network related working capital to increase from $38 million in 2005-6 to $49 million in 2008-9.

Appendix 7 to Western Power's access arrangement information also includes distribution capex for two special programs:[15]

- Rural Power Improvement Program (**RPIP**), jointly funded by the Office of Energy (50 percent).
- State Underground Power Program (**SUPP**), jointly funded by WA Government (25 percent) and Local Government Authority (50 percent).

4.2.3 Capital Contributions

[Reference: Access Arrangement sections 5.17, 5.27 and Appendix 7]

[13] Western Power's access arrangement information, Part C (page 104) 24 August 2005.

[14] Western Power's access arrangement information, Appendix 7 (page 86) 24 August 2005.

[15] Western Power's access arrangement information, Appendix 7 (pages 117 to 119) 24 August 2005.

Section 5.12 of the Access Code prescribes the requirements in relation to a capital contributions policy. Western Power's proposed capital contributions policy is discussed at section 6.4 of this Issues Paper.

In relation to the assessment of capital contributions Western Power, in its covering letter to the Authority of 24 August 2005, outlined a proposed modified regulatory treatment for capital contributions, subject to an amendment to section 6.56 of the Access Code.[16] Western Power has stated that its approach in dealing with capital contributions is revenue neutral whilst maintaining lower initial prices.

Western Power proposes to achieve revenue neutrality by subtracting from the allowed total revenue on the full asset value, an amount equal to the capital contributions, recovering this in subsequent years. Western Power states that the effect of this mechanism is to "increase future revenue due to growth in asset value, with substantially lower initial prices due to offset by the capital contributions portion of the target revenue."[17] Western Power also states that Energex and Ergon are regulated by the Queensland Competition Authority (**QCA**) in this manner.

Interested parties are referred to page 170 of the QCA Final Determination for Regulation of Electricity Distribution (April 2005) in this regard:

> For both distributors, the Authority deducted from the revenue caps amounts reflecting forecast capital contributions over the next regulatory period (step 1). Rather than separating contributed assets from the regulated asset base, the Authority prefers to include all contributed assets in the regulated asset base and to make an equal and offsetting reduction to the distributors' revenue in the year of acquisition. This avoids the complexities that would go with tracking contributed assets separately from other assets for the full life of the assets and leaves the distributor no better or worse off as a result.

Further, the QCA states at page 229:

> In certain circumstances, the Queensland distributors receive capital contributions in cash or in-kind as part of their customer connection arrangements. The basic principle applied to these contributions was that a return on investment should not be received for assets that were not funded by the distributor. Consequently, a decision must be made whether or not to incorporate the connection assets in the regulated asset base.
>
> Those assets that become part of the distributor's asset base on commissioning need to be recognised, as the responsibility for management of these assets remains with the distributor.
>
> The Government Trading Enterprise Guidelines state: "the fact that an asset is funded by an external party in no way affects the methodology adopted with respect to recognition and valuation of that asset.

Western Power's proposed Access Arrangement sections 5.17, 5.27 and Appendix 7 (pages 4 and 11) address the practical implementation of its proposal for determining the annual revenue requirement from 1 July 2006. Western Power's access arrangement information, pages 73 and 93 also makes reference to its proposed approach to capital contributions.

[16] It is noted that the Office of Energy commenced a public consultation process on a number of amendments to the Access Code on 5 September 2005. One amendment relates to the deletion of section 6.56, which precludes the inclusion of an amount related to a capital contribution into the capital base. This amendment is intended to ensure that Western Power's proposed regulatory treatment of capital contributions can be consistent with the Access Code.

[17] Covering letter to Access Arrangement submission, 24 August 2005.

Western Power's proposed Capital Contributions Policy is provided at Appendix 3 to the Access Arrangement. In addition, Western Power have included, in Appendix 9 of the access arrangement information, their reasons for modifying the "model" capital contributions policy that is contained in appendix 4 to the Access Code.

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The Authority invites submissions from interested parties regarding:

5 **the reasonableness, accuracy, timing and value of the capital expenditure proposals for the various asset and expenditure categories for the transmission and distribution networks;**

6 **whether Western Power has demonstrated that changes in functions, legislative obligations and asset management policies support the proposed increases in forecast expenditure;**

7 **the cost of Special Programs (Rural Power Improvement Program and State Underground Power Program) in relation to Western Power's actual contribution and expenditure timing;**

8 **the treatment of working capital proposed for each of the distribution and transmission networks; and**

9 **any other matters interested parties wish to raise in relation to Western Power's capital expenditure proposals for both the transmission and distribution networks.**

4.3 Operating and Maintenance Expenditure

Section 6.40 of the Access Code prescribes the requirements in relation to the assessment of non-capital costs.

Operating and maintenance expenditure (**opex**) during the regulatory period is to be added as a separate component into the total revenue requirement for the distribution and transmission businesses. The forecast opex requirements are added into the Western Power cost bases subject to meeting the requirements of sections 6.40 to 6.42 of the Access Code.

4.3.1 Transmission Network opex

Western Power has proposed increases in transmission opex from approximately $60 million in 2003-4 to approximately $87 million in 2008-9. Of this, maintenance expenditure remains reasonably constant, while transmission operating expenditure increases by 46 percent during the regulatory period.[18] This is attributed to the following cost drivers:[19]

[18] Figure 10 of Part B of Western Power's access arrangement information indicates that transmission opex is forecast to rise from approximately $60m in 2003-4 to just under $90m in 2008-9. Table 8 of Part B of

- the impacts of previous budget constraints;
- facilitation of market reform;
- asset replacement due to the advancing age of Western Power's transmission network;
- facilitating the connection of additional generation capacity;
- compliance with more onerous statutory obligations;
- further work required regarding the optimisation of asset maintenance expenditure; and
- forecast increases to insurance costs.

As noted in section 4.2 of this issues paper, Western Power is proposing substantial increases in its capex program over the forthcoming regulatory period. There is generally an inherent capex – opex trade off involved in network operations such that, over time, as a result of increased capex on network augmentation and asset replacement (as distinct from new connections) it is reasonable to expect a decreased maintenance expenditure requirement for those assets. Western Power has stated that it has factored in efficiency gains[20] in its transmission opex forecasts.

Western Power provides additional background information in Appendix 7 of its access arrangement information regarding transmission forecast opex.[21]

4.3.2 Distribution Network opex

Western Power has proposed to increase distribution operating expenditure from approximately $140 million in 2004-5 to approximately $182 million in 2008-9 which it attributes to similar drivers as for transmission opex, with the addition of the following:[22]

- reliability;
- whole of life efficiencies;
- increasing asset base;
- increasing resource costs;
- metering services;
- call centre costs; and
- corporate support.

Western Power provides additional background information in Appendix 7 of its access arrangement information.[23] The bulk of Western Power's forecast increase is in relation to maintenance of the distribution network.

Western Power's access arrangement information details only transmission maintenance expenditures which remain at approximately $20m per annum.

[19] Western Power's access arrangement information, Part B (page 64) 24 August 2005.

[20] Western Power's access arrangement information, Part B (page 67) 24 August 2005.

[21] Western Power's access arrangement information, Appendix 7 (page 72) 24 August 2005.

[22] Western Power's access arrangement information, Part C (page 112) 24 August 2005.

[23] Western Power's access arrangement information, Appendix 7, (page 120) 24 August 2005.

As noted previously, in Appendix 7 to its access arrangement information Western Power has included two Special Programs:[24]

- Rural Power Improvement Program (**RPIP**), jointly funded by the Office of Energy (50 percent).
- State Underground Power Program (**SUPP**), jointly funded by WA Government (25 percent) and Local Government Authority (50 percent).

The SUPP has a significant opex element in each year of the initial regulatory period (averaging approximately $3.5m per annum).

The Authority invites submissions from interested parties regarding:

10 the reasonableness, accuracy, timing and value of the operating and maintenance expenditure proposals for the transmission and distribution networks;

11 views on capex – opex trade offs;

12 the composition and cost allocation of actual historic operating and maintenance expenditure for the transmission and distribution networks;

13 the opex costs associated with the State Underground Power Program, Western Power's contribution and expenditure timing; and

14 any other matters interested parties wish to raise in relation to operating and maintenance expenditure proposals for the transmission and distribution networks.

4.4 Demand Forecasts

4.4.1 Background

Section 4.3 of the Access Code prescribes the required inclusions for access arrangement information which includes information regarding the service provider's system capacity and volume assumptions. Forecast levels of demand have a direct effect on reference tariffs.

Demand forecasts are an important matter, as recognised by Western Power in Part B section 2.1 of the access arrangement information:

> ….these forecasts provide a foundation for the company's forecasts of network development capital expenditure (including load and generation-related). The forecasts also provide the basis for developing the company's proposed price control and tariffs from its target revenue.

[24] Western Power's access arrangement information, Appendix 7 (pages 117 to 119) 24 August 2005.

4.4.2 Network planning

Part A section 4.2 of the access arrangement information sets out the network planning process used by Western Power which includes a three level consideration of capacity.

In each case, the focus is on understanding the most onerous conditions that will affect each network element. The most onerous operating condition for each load area is derived from a combination of the demand at time of system peak and local demand peaks, depending on the characteristics of that load area with the peak demand for electricity being highly sensitive to temperature. The forecasts used by Western Power for network planning purposes are said to be based on a 10 percent Probability of Exceedance.

4.4.3 Transmission Demand Forecast

Part B section 2 of the access arrangement information outlines the transmission system demand and energy forecasts. The Independent Market Operator (**IMO**) in the *Statement of Opportunities South West Interconnected System* (July 2005)[25] report assesses capacity needs. The IMO replaces the function previously undertaken by Western Power in its Generation Status Review (**GSR**) and the report gives a background to demand and energy forecasts.[26]

Western Power commissioned National Institute of Economics & Industry Research (**NIEIR**) to review the company's forecasts for energy and demand for the transmission network, for each year of the forthcoming access arrangement (2006-7 to 2008-9 inclusive). This consultant was also involved in the IMO generation forecast.

NIEIR was asked to verify that Western Power's forecasts were suitable for the purpose of establishing the access arrangement. Specifically, it was noted that the transmission energy and demand forecasts should be prepared on a consistent basis, and should be reconcilable to the forecasts contained in the GSR.[27]

Peak Demand

Western Power's transmission forecasts are described in Part B section 2 of its access arrangement information. Western Power notes that it has not yet been able to reconcile the inconsistency of its forecasts with the forecast produced by the IMO.[28]

The IMO's demand estimates (with 90 percent, 50 percent and 10 percent probability of being exceeded) are:

[25] The report is available on The Independent Market Operator's website: http://www.imowa.com.au/Attachments/Statement%20of%20Opportunities%202005.pdf.

[26] IMO "Statement of Opportunities South West Interconnected System" (July 2005) page 15.

[27] Western Power's access arrangement information, Part B, section 2.1, 24 August 2005.

[28] Western Power's access arrangement information, (page 49) 24 August 2005

Maximum Demand Forecasts With Expected Growth (MW)

	10% PoE	50% PoE	90% PoE
2005/06	3372	3135	2965
2006/07	3519	3267	3085
2007/08	3655	3388	3196
2008/09	3779	3497	3294
2009/10	3917	3620	3406
2010/11	4044	3734	3510
2011/12	4171	3847	3614
2012/13	4291	3955	3712
2013/14	4409	4060	3808
2014/15	4539	4178	3918

Energy

Western Power describes its energy forecast in Part B section 2.3 of the access arrangement information. Table 3.2 of the NIEIR report provides details of Western Power's transmission energy forecast as presented in the GSR. The energy forecasts are most relevant to the setting of the price control formulae (which Western Power proposes to be a revenue yield approach), but Western Power notes these forecasts have minimal impact on the company's transmission investment plans.[29]

Western Power's has stated "that the information presented demonstrates that Western Power's transmission demand and energy forecasts are robust and fit for purpose. In particular, the forecasts used are broadly consistent with the GSR forecast, taking account of the need for more detailed transmission demand forecasts in order to inform Western Power's transmission investment plans."[30] However, there is a difference between the IMO report and the Western Power energy estimates.

The IMO forecast energy is:

APPENDIX 3. FORECAST OF SENT OUT ENERGY - GWh

	Expected growth	High growth	Low growth
2005/06	13053	13197	12987
2006/07	13448	13715	13292
2007/08	13803	14175	13556
2008/09	14059	14604	13758
2009/10	14379	15114	13929
2010/11	14728	15595	14147
2011/12	15107	16126	14359
2012/13	15471	16674	14618
2013/14	15817	17281	14854
2014/15	16237	17945	15081

[29] Western Power's access arrangement information,(page 47) 24 August 2005

[30] Western Power's access arrangement information,(page 49) 24 August 2005

4.4.4 Distribution Demand Forecast

Forecasts

The Western Power demand forecasts for distribution are given in its access arrangement information Part C section 2.3.

Air conditioning

Western Power states that growth in air conditioning load is a very significant driver in its demand forecasts:[31]

> As a result of Western Australia's unprecedented high levels of population growth and the high levels of load growth generated primarily by new air conditioning load (including its deleterious effect on load factor) Western Power has a substantial amount of new distribution assets to construct and commission now and over the course of the forthcoming access arrangement period. In addition there is a substantial amount of augmentation work required on existing distribution feeders, as well as zone substation integration to cater for the additional load. This augmentation work includes a substantial amount of backbone feeder conductor replacement to improve both capacity and fault level rating.

The effect of the air conditioning load is felt at the distribution level (and back up through transmission and generation). Western Power has stated that the design paradigm for residential properties has clearly changed and new standards need to apply, calling for the value of After Diversity Maximum Demand (**ADMD**) to be reset to a higher level:[32]

> **Increased ADMD Design Criteria**
>
> Western Power Networks has carried out a detailed investigation into current ADMDs in a range of demographic areas within the SWIS and also reviewed experiences in other Australian States. The recommendations from this report have been adopted, resulting in Western Power Networks using a formula to predict design ADMD based on lot price and lot/dwelling size. For example the formula provides an ADMD of 4.5kVA for a medium sized house on a medium priced lot and 7.2kVA for a high priced lot.
>
> The application of this formula to new URD designs should avoid likely future overloading of distribution transformers and LV circuits which are extremely difficult and hence expensive to retrospectively augment. Western Power Networks has estimated that the impact of this design change will incur additional expenditures of $19.1M / annum.

This issue is significant with considerable costs and potential impacts on reliability.

The Authority invites submissions from interested parties regarding:

15 the network planning approach adopted by Western Power;

16 the transmission and distribution demand forecast methodologies;

17 the peak demand forecasts;

18 the energy forecasts;

19 whether standards applicable to the ADMD design criteria should be

[31] Western Power's access arrangement information, (page 104) 24 August 2005.

[32] Western Power's access arrangement information, Appendix 7 (page 91) 24 August 2005.

reset to a higher level; and

20 any other matters interested parties wish to raise in relation to demand forecasts.

4.5 Rate of Return

[Reference: Access Arrangement section 7.1]

Sections 6.64 to 6.69 of the Access Code prescribe the required considerations for calculating the weighted cost of capital (**WACC**).

4.5.1 Principles for calculating WACC

The rate of return represents the return expected by investors for investments of a given level of risk. The rate of return should be set at a level that provides a stream of income from the investment of funds that would be sufficient to attract and retain that investment.

A rate of return should achieve the following:

- provide for, on a prospective basis, a sustainable commercial revenue stream which includes a fair and reasonable rate of return to transmission/distribution network owners on efficient investment, given efficient operating and maintenance practices of the electricity network owner;
- take account of, and be consistent with, the allocation of risk between the electricity network owner and network users; and
- benchmark returns established by the jurisdictional regulator are to be consistent with the method of valuation of new assets and revaluation, if any, of existing assets and consistent with achievement of a commercial economic return on efficient investment.

The most commonly used model for estimating a regulated entity's cost of capital is the WACC, calculated by adding the cost of equity funds (weighted by the proportion of equity funds to total assets) to the cost of its debt (weighted by the proportion of debt to total assets).

Sections 6.64 to 6.69 of the Access Code are relevant regarding the requirements of, and method of calculating, the WACC for a covered network. Section 6.43(b) of the Access Code then requires this WACC to be applied to the capital base (see section 4.1 of this issues paper) in order to provide the return on capital.

As provided for under section 6.65 of the Access Code, in February 2005 the Authority made and published a determination of the preferred methodology for calculating the WACC (**WACC methodology**) to apply to covered networks.[33] The Access Arrangement

[33] Economic Regulation Authority (2005), Determination of the preferred methodology for calculating the weighted average cost of capital for covered electricity networks, February, Perth (available at http://www.era.wa.gov.au/electricity/library/WACC_Methodology_Determination.pdf), which followed a public consultation period and associated discussion paper (Allen Consulting Group (ACG) 2005, Electricity

submitted by Western Power may use any methodology for calculating the WACC for Western Power's SWIN. However, in determining whether the methodology proposed by Western Power is consistent with objective of the regulatory regime and the requirements of the Access Code, regard must be had to the Authority's WACC methodology determination. Accordingly, under relevant subsections of this chapter the applicable component of the Authority's WACC methodology determination is referenced. Further information regarding the Authority's determination and statement of reasons is available from the Authority's website.

In its proposed Access Arrangement, Western Power proposes a weighted average cost of capital (WACC) for its covered network of 7.30 percent real pre-tax (or 10.07 percent nominal pre-tax). Information supporting this proposed WACC is provided in Part B, chapter 7 (regarding the transmission network) and Part C chapter 6 (regarding the distribution network) of the access arrangement information, along with consultancy reports provided at Appendices 4 and 5 to the access arrangement information.

4.5.2 Method of calculating WACC

In its proposed Access Arrangement Western Power has adopted the Capital Asset Pricing Model (**CAPM**) as the financial model for estimating the WACC.

This is consistent with the Authority's WACC methodology determination, which determined the preferred financial model for determining the return on assets is the CAPM. The Authority's WACC methodology determination noted that appropriate parameters to the WACC calculation will be selected to give the service provider the opportunity to earn a return commensurate with the commercial risk involved.

In its proposed Access Arrangement, Western Power has undertaken financial modelling in real terms and has proposed an estimated real pre-tax WACC for the purposes of determining its target revenue.

Western Power has also applied a forecast consumer price index (**CPI**) of 2.6 percent to the real pre-tax WACC in order to derive a nominal pre-tax WACC of 10.07 percent, which is used in the K factor in the price control (see section 4.6 of this issues paper) and calculating the return on capital for non-network assets which are valued at historical cost (eg easements) and form part of the capital base (see 4.1 of this issues paper).

Western Power has noted there are a number of significant practical considerations arising in the application of the CAPM, particularly because estimating the cost of capital necessarily involves a very significant degree of uncertainty. In its access arrangement information Western Power also provides information regarding some of the possible impacts and incentive effects associated with potential estimation error involved in estimating the WACC.

4.5.3 Estimating WACC and WACC parameters

In its proposed Access Arrangement, Western Power has proposed a point estimate of WACC for its covered network of 7.30 percent real pre-tax for the purpose of determining its target revenue for the first access arrangement period. Western Power indicates the consultancy advice upon which it has developed this proposal (provided at Appendix 4

Networks Access Code 2004: Advance Determination of a WACC Methodology, Report to Economic Regulation Authority, Western Australia, January, Perth).

and 5 to the access arrangement information) collectively provides "a compelling case for an estimated real pre-tax WACC in the range of 7.8 to 8.0 percent."[34]

In proposing such a WACC estimate, Western Power has emphasised that, in its view, this has regard to a number of important considerations, including to moderate any price pressures, policymakers' expectations and previous views of the Authority. Western Power has said that it does not represent an ambit claim (and indeed is less than the range considered reasonable pursuant to the advice of expert consultants), and that it is consistent with the mutual desire to ensure that the approval process is not unduly delayed by time consuming debate over the proper range for WACC.

Accordingly, the Authority is required to assess Western Power's proposed WACC estimate of 7.30 percent with respect to the requirements of the Access Code (i.e. consistency with Chapter 6 of the Access Code and the Code Objective).

The Authority invites submissions from interested parties regarding:

21 Western Power's proposed rate of return of 7.30 percent (real pre-tax) for the purpose of determining its target revenue.

To assist with the Authority's assessment of Western Power's proposed point estimate of WACC, the Authority would benefit from stakeholder comment on the parameter estimates underlying Western Power's proposed reasonable range of 7.8-8.0 percent. Specifically, these parameters are:

- the risk-free rate;
- the equity beta;
- the equity or market-risk premium;
- the benchmark financing structure;
- the benchmark debt margin; and
- the value of dividend imputation.

The access arrangement information and Appendices 4 and 5 provide relevant information regarding the approach Western Power has adopted in estimating these WACC input parameters. These parameters are discussed briefly below, upon which stakeholder comment is invited to assist the assessment process.

The risk-free rate

The risk free rate represents a rate of return on an asset with zero default risk. Australian regulators have adopted similar approaches to deriving a proxy measure of the risk-free rate of return by observing the yields on Commonwealth bonds — the generally accepted asset with a default risk nearest to zero.

In its access arrangement information, Western Power has proposed a risk-free rate estimate of 2.69 percent, reflecting the yield on an Indexed Linked Government Bond with a term to maturity corresponding with that on the nominal risk free rate of return (noting

[34] Western Power's access arrangement information (page 92) 24 August 2005

that there is currently no Indexed Linked bond maturing in April 2015 and hence estimated by linearly interpolating between the August 2010 and August 2015 Index Linked Government Bond yields, and averaging over the 20 days to 30 September 2004).[35]

The Authority invites submissions from interested parties regarding:

22 Western Power's proposal that the proxy for the risk-free rate of 2.69 percent.

The equity beta

The equity beta reflects the level of non-diversifiable risk associated with a particular asset, relative to the (non-diversifiable) risk associated with a well-diversified portfolio of assets. It measures the market risk associated with its assets and the financial risk borne by shareholders due to the entity's use of debt financing.

In its proposed Access Arrangement, Western Power has proposed an equity beta of between 0.90 and 1.10, with a uniform probability distribution, for the purposes of estimating WACC based on its financing structure. The consultant's report at Appendix 4 to the access arrangement information notes some of the difficulties in estimating the value of the equity beta based on current market data which could reflect transitory factors rather than a permanent shift in the beta value.

The Authority invites submissions from interested parties regarding:

23 Western Power's proposal that an equity beta of 0.90 to 1.10 be used for the purposes of estimating WACC; and

24 any perspectives or insights into the derivation of a proxy equity beta being used.

The market risk premium

The market risk (or equity) premium is measured as the difference between the expected return on a well-diversified portfolio of stocks and the risk free rate. It represents the reward that investors require to accept the uncertain outcomes associated with equity investments relative to the return provided by the risk free rate. As the riskiness of the average investment increases, so should the market risk premium.

In its proposed Access Arrangement, Western Power has proposed a market risk premium of between 6 percent and 8 percent. The consultant's report contained at Appendix 4 to the access arrangement information provides detailed empirical data and analysis in support of this conclusion.

The Authority invites submissions from interested parties regarding:

[35] Western Power's access arrangement information, Appendix 4 (page 29) 24 August 2005.

25 Western Power's proposal that the value of the market risk premium for the purposes of estimating WACC be estimated at between 6 percent and 8 percent; and

26 any perspectives or insights into the estimation of the market risk premium.

The benchmark financing structure

Capital structure refers to the proportion of debt to total capital (ie debt plus equity) employed by an entity. Often referred to as an entity's level of "gearing", the measurement represents the proportion of regulatory asset value that is assumed to have been financed by debt.

In general, there is potential for companies with predictable cash flow businesses, particularly in a regulated natural monopoly environment, to operate with higher gearing ratios than those with a mix of other business activities. Nevertheless, an industry benchmark is usually adopted for regulatory purposes, to encourage financial efficiency and protect customers from inefficient financing decisions.

Western Power has proposed a capital financing structure of 60 percent, which is consistent with regulatory decisions of other Australian regulators.

The Authority invites submissions from interested parties regarding:

27 Western Power's proposal that a financing structure of 60 percent debt and 40 percent equity be adopted for the purposes of estimating the WACC; and

28 any perspectives that may justify an alternative leveraging figure being used.

The benchmark debt margin

The cost of debt is the return that the entity's debt holders demand on new borrowings. The cost of debt will vary depending on the default risk of the borrower, which in turn will be affected by the gearing of the company (high gearing means a high level of debt relative to cash flows and consequently a higher risk of default), the volatility of its cash flows and long term security of revenue.

Regulators have recently tended to consider the debt margin in terms of two components: an interest rate premium over the risk free rate (debt premium), and an allowance for transaction costs incurred in arranging the debt facilities (debt issuance costs). Regulators have also estimated a benchmark margin on the basis of the weighted average cost of debt for a typical debt portfolio (usually expressed as a margin above the risk free rate) rather than a regulated utility's actual cost of debt, so as to provide an incentive to minimise inefficient debt financing.

In its access arrangement information, Western Power suggests the CBA Spectrum estimates for BBB+ and BBB rated debt be used as the base of the reasonable range for the debt premium estimate, and that 27 basis points be added to define the upper limit of the reasonable range to reflect uncertainty with the accuracy of CBA Spectrum estimates. Western Power also suggests an allowance of between 25 and 35 basis points be added to the debt premium to account for the expanded credit spreads that may be incurred due to the reduced capacity to borrow in the index-linked bond market, based on advice from Westpac regarding supply/demand conditions in the relevant debt markets.[36]

Western Power has proposed an allowance of 12.5 basis points for debt issuance costs be added to the debt premium to derive a debt margin for calculating WACC.

In summary, Western Power has proposed a debt margin of between 1.49 percent and 1.68 percent. Taking into account the proposed risk-free rate of 2.69 percent, this would result in a real pre-tax cost of debt within the range of 4.18 percent and 4.37 percent.

The Authority invites submissions from interested parties regarding:

29 Western Power's proposed debt margin of between 1.49 percent and 1.68 percent;

30 the proposed credit risk margin over the real risk free rate of between 0.98 percent and 1.07 percent;

31 the proposed allowance for understatement of CBA Spectrum data of 0.13 percent;

32 the proposed allowance of between 0.25 and 0.35 percent for expansion of credit spreads due to reduced capacity to borrow in the index-linked bond market; and

33 the proposed allowance for debt establishment costs of 0.125 percent.

The value of dividend imputation

Under the dividend imputation tax system, Australian resident taxpayers who receive dividends from Australian resident companies can claim a credit for tax that has already been paid by those companies in respect of that dividend income. A low gamma value (or γ, representing the value of franking credits) implies that shareholders do not obtain much relief from corporate taxation through imputation and therefore require higher pre-tax income to earn a sufficient return to justify investment. In this case the regulated revenue would therefore need to be higher. On the other hand, other things being equal, a lower pre-tax income (and therefore lower regulated revenue) would be adequate to attract investment if gamma was higher.

Western Power has proposed a gamma value of between 0 percent and 50 percent for the purposes of calculating WACC, on the basis of information provided at Appendix 4 to the access arrangement information.

[36] Western Power's access arrangement information, Appendix 4 (pages 48-49) 24 August 2005.

The Authority invites submissions from interested parties regarding:

34 Western Power's proposed gamma value of between 0 percent and 50 percent for the purposes of calculating WACC.

4.6 Prices and Price Controls

[Reference: Access Arrangement section 5 and Appendices 5 & 7, access arrangement information sections 4 & 5]

Section 5.1 of the Access Code requires an access arrangement to include price control, pricing methods and a current price list including a description of the pricing years for the regulatory period.

4.7 Price Control

The requirements imposed by the Access Code in section 6.2(a) are for price control to set target revenue by reference to the service provider's approved total costs for the first regulatory period.

Western Power has considered three forms of price control in its Access Arrangement, namely:

1) tariff basket (or weighted price cap);

2) pure revenue cap; and

3) revenue yield control.

Western Power has chosen not to include a "rate of return" form of control on the basis that it is unlikely to meet the Access Code objective.[37]

After dismissing the first two options, Western Power has proposed to adopt the revenue yield option. Western Power's adoption of this form of price control is based upon its assessment that there is a "low risk of systematically higher or lower profits"[38] during the first regulatory period, and that the proposed price control offers stability and lower costs for stakeholders. However, Western Power has suggested that further review on the form of price control following the first regulatory period would be beneficial.

The price control objective is to provide a service provider an opportunity to earn revenue (target revenue) from the provision of services sufficient to meet future efficient costs and including a return on investment.[39]

Western Power has proposed to rely on sections 6.6 to 6.8 of the Access Code to "recover any unforeseen costs it incurs as a result of force majeure events."[40] Further,

[37] Western Power's access arrangement information (footnote 50, page 150) 24 August 2005.

[38] Western Power's access arrangement information (page 153) 24 August 2005.

[39] Section 6.4 of the Access Code.

[40] Western Power's access arrangement information (page 155) 24 August 2005.

Western Power has proposed to add or subtract to the forecast revenue entitlement in the next access arrangement period any changes to the technical rules that occur during the first access arrangement period.[41]

Section 6.15 of the Access Code requires an access arrangement to contain an investment adjustment mechanism.[42] An investment adjustment mechanism is not specified in the Access Code but must be consistent with the Access Code objective and satisfy the criteria listed in section 6.17.

Western Power has proposed to apply an investment adjustment mechanism to "expenditure related to transmission network reinforcement and transmission connection of new, as yet uncommitted or unplanned generation and customers connecting to the transmission network."[43] However, it has also proposed that an investment adjustment mechanism will not apply to capex "remunerated through target revenue related to:

- asset replacement and renewals;
- network reinforcement; and
- any capital expenditure directly or indirectly related to the connection to the transmission network of new generation projects and customers which have been announced or committed as at 1 August 2005."[44]

Western Power has also noted that it does not propose to seek adjustments to target revenue in respect of "any investment difference relating to distribution network capital expenditure for the first access arrangement period."[45]

Section 6.20 of the Access Code requires that a gain sharing mechanism[46] be included in an access arrangement, unless the Authority determines that a gain sharing mechanism is not necessary to achieve the price control objectives set out in section 6.4.

Western Power proposes that a gain sharing mechanism is not appropriate at this time, arguing that the inclusion of one would be "counter-productive" and "over-emphasise the importance of under-spending"[47] during the first regulatory period.

Further, Western Power contends that "significant pressure" will promote improved performance but that the "cost uncertainty and change-management challenges"[48] associated with the disaggregation of Western Power does not support a reduction of opex and capex below a benchmark level.

[41] Western Power's access arrangement information, Appendix 7 (page 31) 24 August 2005.

[42] An "investment adjustment mechanism" is a mechanism in an access arrangement detailing how any investment difference for the access arrangement period is to be treated by the Authority at the next access arrangement review.

[43] Western Power's access arrangement information (page 157) 24 August 2005.

[44] Western Power's access arrangement information (page 157) 24 August 2005.

[45] Western Power's access arrangement information (page 158) 24 August 2005.

[46] A "gain sharing mechanism" is a mechanism in an access arrangement which the Authority must apply at the next access arrangement review to determine an amount to be included in the target revenue for one or more of the following access arrangement periods; and which operates as set out in sections 6.20 to 6.28 of the Access Code.

[47] Western Power's access arrangement information (page 159) 24 August 2005.

[48] Western Power's access arrangement information (page 159) 24 August 2005.

The Authority invites submissions from interested parties regarding:

35 the proposed form of price control;

36 the proposed adjustments to target revenue and whether adjustments cater for costs which would have been incurred by a service provider efficiently minimising costs;

37 the investment adjustment mechanism proposed by Western Power;[49]

38 whether a gain sharing mechanism is necessary to achieve the price control objectives;

39 if a gain sharing mechanism is to be included, what "efficiency and innovation benchmarks" should be included (as required under section 5.25 of the Access Code); and

40 any other matters interested parties wish to raise in relation to the proposed price control.

4.8 Pricing methods

[*Reference: Access arrangement information section 5.3]*

Section 7.2 of the Access Code states that an access arrangement may contain any pricing methods, provided they comply with chapter 7.

Pricing methods are required to comply with the objectives of sections 7.3 to 7.7 of the Access Code, inclusive. Western Power has proposed the following to meet its pricing objectives.

- "Bundling" the transmission and distribution network related tariff components for the reference tariffs applicable to RT1 to RT11 reference services, whilst limiting those reference tariffs applicable to TRT1 and TRT2 reference services to only contain a transmission network related tariff component. Further, non-reference services are proposed to be received from customers on a "fee for service basis."[50]

- Reference tariffs applicable to reference services exceed the incremental cost of service but are less than the stand-alone cost of service.[51]

- As only a limited number of distribution services have additional costs associated with geographical sections of the network, these are reflected in different tariffs. However, for transmission it is proposed to differentiate between nodal prices using the "T-Price computer model".[52]

[49] In particular, having regard to section 6.17 of the Access Code.

[50] Western Power's access arrangement information (page 175) 24 August 2005.

[51] Western Power's access arrangement information (page 176) 24 August 2005.

[52] Western Power's access arrangement information (page 176) 24 August 2005.

- Following consultation with stakeholders, the structure of tariffs is "accepted by the electricity industry as being appropriate for the provision of network access." [53]

- Avoidance of price shocks by subjecting tariffs to "side constraints" which allow for an increase or decrease in any individual tariff or tariff component being limited to CPI + 2%.

The Authority invites submissions from interested parties regarding:

41 whether the proposed pricing method complies with requirements of the Access Code.

Section 7.11 of the Access Code allows for discounts to be offered for services where these are necessary to aid economic efficiency. In particular, section 7.9 allows for discounts to be offered where they are "prudent" and section 7.10 allows for discounts where generators are connected to the distribution network. The Access Code allows for those discounts to be recovered from other users through reference tariffs.

The Access Code provides for a service provider offering discounts if a user seeks to connect distributed generating plant to the network. This discount should reflect in a user's tariff any share in reduction of capital or non-capital related costs which arise as a result of the entry point for distributed generating plant being located in a particular part of the covered network.

Western Power has proposed to offer a discount in particular situations, advising that the discount will be set to reflect the higher of the cost of the alternative option of meeting the potential user's energy requirements or the incremental cost of service provision. A number of qualifying factors must be met before Western Power will offer a discount.

Western Power has proposed to submit discount information to the Authority. It will then make the offer and acceptance of a discount conditional on the Authority's approval of that discount.[54]

The Authority invites submissions from interested parties regarding:

42 whether there is sufficient detail provided to underpin the method for applying discounts;

43 the methodology employed by Western Power in calculating discounts under sections 7.9 and 7.10 of the Access Code;

44 whether it is appropriate for the Authority to have a role in the approval of discounts to be offered by Western Power; and

45 any other matters interested parties wish to raise in relation to discounts.

[53] Western Power's access arrangement information (page 177) 24 August 2005.

[54] Western Power's access arrangement information (pages 179 & 180) 24 August 2005.

4.9 Price lists

Section 5.1(f) and chapter 8 of the Access Code prescribe the requirements for price lists. Where a service provider's proposed price list complies with the price control and pricing methods in its access arrangement, the Authority is obliged to approve and publish that price list and price list information.[55]

Western Power has listed its proposed prices in Appendix 5 of the Access Arrangement. In its access arrangement information, Western Power states that existing tariffs "reflect the services that a significant proportion of the company's customers want."[56]

While Western Power argues that the Access Code does not appear to require it to submit price list information,[57] it believes that the detail contained within its pricing methods should provide sufficient information relevant to its price list. Price list information requirements are detailed at section 8.1(b) of the Access Code.

The Authority invites submissions from interested parties regarding:

46 whether the price list proposed by Western Power complies with its proposed price control and pricing methods; and

47 whether the information provided by Western Power under its pricing methods is sufficient for the purposes of providing price list information.

4.10 Service Standards and Service Standard Adjustment Mechanism

[Reference: Access Arrangement sections 3.11 to 3.16 and 5.10 to 5.13]

Section 5.1 of the Access Code requires an access arrangement to contain service standard benchmarks for each reference service. Section 5.6 requires that the service standard benchmarks must be reasonable and sufficiently detailed and complete to enable a user or applicant to determine the value represented by the reference service at the reference tariff.

Additionally, sections 6.29 to 6.32 of the Access Code require the inclusion of a "service standard adjustment mechanism" (**SSAM**) to apply from the commencement of the next access arrangement period.

[55] Section 8.2 of the Access Code.

[56] Western Power's access arrangement information (page 17) 24 August 2005.

[57] Western Power's access arrangement information (page 170) 24 August 2005.

Western Power has proposed service standards for each of its transmission and distribution networks and a SSAM to apply in relation to performance against those service standard benchmarks.[58]

Western Power's access arrangement information, Part D section 3 provides additional detail underpinning the proposed service standards and section 4.8 provides additional detail underpinning the proposed service standard adjustment mechanism.

4.10.1 Transmission Network Service Standards

For transmission network related service standards Western Power has proposed:

- circuit availability - to measure network availability; and
- system minutes interrupted - to record the effect on customers.

For the transmission related tariffs the proposed service standard benchmarks are:[59]

	First access arrangement period		
	Year ending June 2007	Year ending June 2008	Year ending June 2009
Circuit Availability (% of total time)	98.67	98.67	98.67
System Minutes Interrupted (meshed network)	8.3	8.3	8.3

Western Power's proposed SSAM for transmission reference services would apply outside a "deadband" around the annual targets with a financial incentive (penalty) for over (under) achievement against those targets. The transmission SSAM is summarised in the table below:[60]

	Low Limit	Deadband			High Limit	Incentive Rate (Portion of transmission revenue)
		Lower bound	Target	Upper bound		
Circuit Availability (%)	97.6	98.1	98.6	99.1	99.6	$269,000 per 0.1% circuit availability
System Minutes Interrupted (meshed network)	4.8	5.8	8.3	10.8	11.8	$134,000 per 0.1 System Minute Interrupted

[58] Western Power's Access Arrangement (pages 3 to 9) 24 August 2005.
Western Power's access arrangement information, Part D (page 135) 24 August 2005.

[59] Western Power's proposed Access Arrangement (page 6) 24 August 2005.

[60] Western Power's proposed Access Arrangement (page 8) 24 August 2005.

4.10.2 Distribution Network Service Standards

For distribution network related service standards Western Power has proposed SAIDI[61] measures against "urban" and "rural" sub-network classifications.[62]

For the distribution related tariffs the proposed service standard benchmarks are:[63]

	SAIDI *service standard benchmarks* (expressed as system minutes per annum)		
	Year ending June 2007	Year ending June 2008	Year ending June 2009
SWIS total	277	259	224
Urban sub-network	242	226	195
Rural sub-network	509	476	410

Western Power's proposed SSAM for distribution reference services would similarly apply outside a "deadband" around the annual targets with a financial incentive (penalty) for over (under) achievement against those targets. The distribution SSAM is summarised in the table below[64]:

		Low Limit	Deadband			High Limit	Incentive Rate (Portion of distribution revenue per SAIDI minute)
			Lower bound	Target	Upper bound		
SAIDI - Urban (Minutes)	2006/07	194	218	242	266	290	$161,000
	2007/08	181	203	226	249	271	$186,000
	2008/09	156	176	195	215	234	$225,000
SAIDI - Rural (Minutes)	2006/07	407	458	509	5609	611	$12,300
	2007/08	381	428	476	524	571	$14,200
	2008/09	328	369	410	451	492	$17,000

Western Power has asserted that it has determined the dollar values for the incentive rates for the urban and rural categories on the basis of the proportion of customers served.

To assist the Authority in its analysis of appropriate performance measures for electricity networks the Authority engaged Network Advisory Services (**NAS**) to provide a report which summarised the types of performance measures adopted for other electricity networks in Australia.

[61] SAIDI is defined as System Average Interruption Duration Index. This concept is explained further in the NAS report.

[62] "Urban" and "rural" network is defined in page of Western Power's proposed Access Arrangement.

[63] Western Power's proposed Access Arrangement (page 4) 24 August 2005.

[64] Western Power's proposed Access Arrangement (page 9) 24 August 2005.

The NAS report "Service Standards for Western Power Corporation's South West Interconnected System" is available on the Authority's website: http://www.era.wa.gov.au/electricity/consultationPapers.cfm

4.10.3 SSAM Assessment

The service standard benchmarks establish the baseline around which the service standard adjustment mechanism operates.

In assessing a service standard adjustment mechanism, the Access Code requires that the mechanism must be sufficiently detailed and complete to enable the Authority to apply the SSAM at the next access arrangement review; and consistent with the Access Code objective.

Western Power's proposed service standards differ from those adopted by its network peers in the National Electricity Market (**NEM**).

Interested parties are encouraged to also refer to the NAS report.[65]

The Authority invites submissions from interested parties regarding:

48 the proposed treatment of design planning criteria and their linkages to service standard benchmarks including how the proposed service standard benchmarks might be expected to change over the regulatory period as a result of proposed transmission and distribution expenditure;

49 whether it is necessary to include service standard benchmarks for minimum average reliability performance standards, including the reporting of SAIFI and/or CAIDI measures;[66]

50 the appropriate quantification of input parameters for SAIDI, SAIFI and CAIDI to ensure comparability over time, and reasonable exclusions;

51 whether the service standard adjustment mechanism financial penalty incentives creates an adverse incentive to target urban improvements at the expense of rural customers;

52 whether the Access Arrangement should include worst performing feeder standards and explicitly link any approved capex to agreed minimum service standard improvements;

53 the application of a service standard adjustment mechanism, including considerations for assigning value and determining the appropriate baseline around which it might apply; and

54 any other matters interested parties wish to raise in relation to the proposed service standard benchmarks and service standard adjustment mechanism.

[65] Available from: http://www.era.wa.gov.au/electricity/consultationPapers.cfm.

5 REGULATORY TEST

Chapter 9 of the Access Code requires that the Authority assess a service provider's proposal for the construction of a "major augmentation" prior to a commitment by the service provider to undertake that investment. The Authority must be satisfied that the investment maximises net benefit after considering reasonable alternative options.

The regulatory test only applies to "major augmentations", which are defined in the Access Code as:

> Major augmentation means an augmentation for which the new facilities investment for the shared assets:
>
> (a) exceeds $5 million (CPI adjusted), where the network assets comprising augmentation are, or are to be, part of a distribution system; and
>
> (b) exceeds $15 million (CPI adjusted), where the network assets comprising the augmentation are, or are to be, part of;
>
> (ii) a transmission system; or
>
> (iii) both a distribution system and a transmission system.

The Service Provider must provide information on the networks augmentation proposal for consideration by the Authority. This may take place during an access arrangement approval process, or within a regulatory period.

Under the Access Code, if the application of the regulatory test is to be part of the access arrangement approval process and relates to forecast capex, the service provider must submit the proposal as part of its proposed access arrangement.

In its proposed forecasts of transmission capital expenditure, Western Power has indicated that major transmission augmentations will occur.[67] Further, it has been stated that the network argumentation will be a significant proportion of capex forecasts for transmission.[68]

However, Western Power has also noted that "the regulatory test does not need to have been applied for major argumentations proposed"[69] within the Access Arrangement. Western Power makes this statement on the basis of the "robust planning processes" applied by the company, and its available knowledge of the most likely market developments. It should be noted that Western Power later states that there are 10 major transmission projects which would be subject to the regulatory test.[70] It is noted that these projects do not correlate to those listed in Appendix 8 of the Access Arrangement.[71]

For its distribution network, Western Power plans to undertake considerable augmentation, stating that "there is a substantial amount of augmentation work required on existing distribution feeds, as well as zone substation integration to cater for the

[66] SAIFI refers to System Average Interruption Frequency Index and CAIDI refers to Customer Average Interruption Duration Index. Both measures are discussed further in the NAS report.

[67] Western Power's access arrangement information (page 32) 24 August 2005.

[68] Western Power's access arrangement information, Appendix 7 (page 139) 24 August 2005.

[69] Western Power's access arrangement information, Appendix 7 (page 28) 24 August 2005.

[70] Western Power's access arrangement information, Appendix 7, Figure 44, 24 August 2005.

[71] It is noted that the only committed projects for transmission include generation development for Kemerton, Alinta 1, Walkaway Windfarm and Alinta 2.

additional load."[72] There are also a number of capex projects associated with distribution and they are covered in detail in chapter 8 of Appendix 7 to the access arrangement information.

The Authority invites submissions from interested parties regarding:

55 Western Power's proposed augmentations and any matters that may be relevant to the Authority's consideration of the proposal and whether it meets the requirements of chapter 9 of the Access Code, in particular, whether these augmentations are "major augmentations".

[72] Western Power's access arrangement information (page 104) 24 August 2005.

PART B – NON-TARIFF MATTERS

6 REQUIREMENTS OF A PROPOSED ACCESS ARRANGEMENT – NON-TARIFF

As outlined in chapter 4 of this issues paper, the Access Code (chapter 5) identifies the required content of an Access Arrangement:

- specify one or more reference services;
- include a standard access contract for each reference service;
- include service standard benchmarks for each reference service;
- include price control;
- include pricing methods;
- include a current price list and a description of the pricing years for the access arrangement;
- include an applications and queuing policy;
- include a capital contributions policy;
- include a transfer and relocation policy;
- if required, include efficiency and innovation benchmarks;
- include provisions dealing with supplementary matters; and
- include provisions dealing with:
  - the submission of proposed revisions; and
  - trigger events.

This chapter discusses the requirements of an access arrangement that are categorised as non-tariff-related, ie all those matters which don't directly relate to the development of tariffs. These issues are discussed in relation to the provisions contained within chapter 5 of the Access Code.

The remaining chapters of this issues paper deal with other non-tariff related issues such as access arrangement information and technical rules.

6.1 Reference Services

[Reference: Access Arrangement sections 3.1-3.5 and access arrangement information Part D (Chapter 2)]

Section 5.2 of the Access Code requires an access arrangement to specify at least one reference service, and specify a reference service for each covered service likely to be sought by a significant number of users or prospective users, or a substantial proportion of the market for services. To the extent reasonably practicable, the access arrangement is required to specify reference services in such a manner that a user or prospective user is able to acquire only those elements of a covered service that they wish to acquire. Finally, the Access Code requires reference services to be defined in a manner that enables a user of the network to acquire entry (or exit) services without having to acquire exit (or entry) services.

In its proposed Access Arrangement Western Power has proposed retaining its existing distribution and transmission tariff services, on the basis these services "reflect that which a significant proportion of the company's customers want without 'bundling' services together in a manner that requires customers to acquire services that they do not want."[73]

The 13 proposed reference services are:

- "Bundled" tariffs for customers with loads connected to the distribution network, inclusive of both transmission and distribution charges which are separately calculated for financial and regulatory purposes but published as combined single tariffs for convenience:

  RT1 Anytime Energy (Residential)

  RT2 Anytime Energy (Business)

  RT3 Time of Use Energy (Small)

  RT4 Time of Use Energy (Large)

  RT5 High Voltage Metered Demand

  RT6 Low Voltage Metered Demand

  RT7 High Voltage Contract Maximum Demand

  RT8 Low Voltage Contract Maximum Demand

  RT9 Street lighting

  RT10 Unmetered Supplies

- A distribution service for generators directly connected to the distribution network

  RT11 Distribution Entry Service

- Transmission services for customers directly connected to the transmission network

  TRT1 Transmission Exit Service

  TRT2 Transmission Entry Service

The access arrangement information indicates these services are provided under the terms and conditions set out in the standard access contract (see section 6.2 of this issues paper), with service standard benchmarks defined for each reference service (see section 4.10 of this issues paper).

The Authority invites submissions from interested parties regarding:

56 whether the proposed reference services meet the requirements of the Access Code;

57 any other type or types of service that should be offered as reference services, and hence included in the Access Arrangement; and

58 any other matters interested parties wish to raise in relation to reference services.

[73] Western Power's access arrangement information (page 132) 24 August 2005.

In its access arrangement information[74] Western Power has identified a number of non-tariff services presently provided by the company which have been categorised as a covered service. These include:

- Non-standard meter reading services;
- Relocation of assets for customer (poles, pillars);
- Service disconnects/reconnects at customer request;
- Quotations and construction of new assets;
- High load escorts;
- Inspection services;
- Connection services, transfer fees; and
- Other miscellaneous network services as notified to customers from time to time.

Western Power has proposed that these non-tariff services (to the extent that they constitute a covered service at all) be treated as non-reference services.

The Authority invites submissions from interested parties regarding:

59 services that should be included in the Access Arrangement as non reference services;

60 any other matters interested parties wish to raise in relation to non-reference services.

6.2 Standard Access Contract

The Access Code includes a model standard access contract in Appendix 3 (**Model Policy**). The service provider can be assured of approval where it proposes a standard access contract which is materially the same as the Model Policy. Where there is a difference between the service provider's proposal and the Model Policy, the Authority is required to use the model as a "benchmark" in assessing the reasonableness of the proposal.

Western Power has proposed to separate the Model Policy into three policies to allow for greater "contractual clarity"[75] around the matters being addressed. The proposed policies have been provided as Appendix 1 of the Access Arrangement (**Proposed Policies**).

- An electricity transfer contract (**ETAC**) for entry and exit reference services, incorporating technical compliance requirements contained as Appendix 4A of the Access Arrangement.

- A separate connection access contract (**CAC**) for connection services where the party to that contract (usually a controller) is not party to an electricity transfer contract contained as Appendix 4B of the Access Arrangement.

[74] Western Power's access arrangement information (page 133) 24 August 2005.

[75] Western Power's access arrangement information, Appendix 10 (page 3) 24 August 2005.

- An Interconnection Works Agreement (**IWA**) concerning the construction of, and payment for, work required to provide the services contained as Appendix 4C of the Access Arrangement.

The Authority engaged Talbot Olivier to prepare a table drawing comparisons between the Proposed Policies submitted by Western Power and that contained within Appendix 3 of the Access Code. The features that have been identified by Talbot Olivier are included in a document published by the Authority and available on its website: http://www.era.wa.gov.au/electricity/consultationPapers.cfm.

The Authority invites submissions from interested parties regarding:

61 whether the standard access contract proposed by Western Power is materially different to the model contract included in Appendix 3 to the Access Code;

62 the reasonableness of the obligations placed on the contracted parties;

63 the need for connection services in the access arrangement;

64 whether the allocation of risk between the service provider and users implied by the proposed standard access contract's terms is consistent with economic efficiency; and

65 whether the standard access contracts clearly identify the relevant terms and conditions, and thereby enable a prospective user to be sufficiently well informed before making an access request.

6.2.1 Interconnection Works Agreement

Appendix 4C of the proposed Access Arrangement includes an "Interconnection Works Agreement" as part of the standard access contract. This agreement is essentially a construction contract, providing for those matters contained in Schedule 5 – Capital Contribution (Provision in Kind or Payment Contract) to the Model Policy.

The Authority notes that this contract is not a requirement under section 5.1 of the Access Code, but, under section 4.29(b) of the Access Code, the Authority has the discretion to approve an inclusion which is not otherwise required.

The Authority invites submissions from interested parties regarding:

66 whether a contract for interconnection works should be included in the Access Arrangement and if so, are the terms and conditions proposed in the proposed IWA suitable for inclusion in the Access Arrangement.

6.3 Applications and Queuing Policy

[Reference: Access Arrangement Appendix 1]

Section 5.1(g) of the Access Code requires that an access arrangement contain an "applications and queuing policy", which sets out the process which the service provider will adopt to deal with applications for access, including the priority which will be accorded to access applications competing for capacity which is limited.

Sections 5.7 to 5.11 provide the legislative framework for what must be included in the applications and queuing policy.

The Access Code includes a model applications and queuing policy in Appendix 2 (**Model Policy**). The service provider can be assured of approval where it proposes an applications and queuing policy which is materially the same as the Model Policy. Where there is a difference between the service provider's proposal and the Model Policy, the Authority is required to use the model as a "benchmark" in assessing the reasonableness of the proposal.

Western Power has proposed an applications and queuing policy based on the model policy contained within the Access Code. This policy has been provided as Appendix 1 of the Access Arrangement (**Proposed Policy**).

Western Power has also provided justification for the differences between the Model Policy and its Proposed Policy. These reasons are contained within Appendix 8 of the access arrangement information.

The Authority engaged Talbot Olivier to prepare a table drawing comparisons between the Proposed Policy submitted by Western Power and the Model Policy contained within Appendix 2 of the Access Code. The features that have been identified by Talbot Olivier are included in a document published by the Authority and available on its website: http://www.era.wa.gov.au/electricity/consultationPapers.cfm.

The Authority invites submissions from interested parties regarding:

67 whether the applications and queuing policy proposed by Western Power is materially different to the model policy included in Appendix 2 to the Access Code;

68 whether the proposed applications and queuing policy provides sufficient detail for users and prospective users to understand how priorities to access will be determined;

69 whether the proposed applications and queuing policy accommodates interests of the service provider, users and prospective users; and

70 whether the proposed applications and queuing policy sets out a reasonable timeline for the completion of access contract negotiations.

6.4 Capital Contributions Policy

[Reference: Access Arrangement Appendix 3]

Section 5.1(h) of the Access Code requires that an access arrangement contain a "capital contributions policy", which is to set out the process which the service provider is to adopt in levying capital contributions from users for new augmentations. Sections 5.12 to 5.17 provide the framework for the Capital Contributions Policy.

The Access Code includes a model capital contributions policy in Appendix 4 (**Model Policy**). The service provider can be assured of approval where it proposes a capital contributions policy which is materially the same as the model policy. Where there is a difference between the service provider's proposal and the Model Policy, the Authority is required to use the model as a "benchmark" in assessing the reasonableness of the proposal.

Western Power has proposed a capital contributions policy "broadly consistent" with the model policy contained within the Access Code.[76] This policy has been provided as Appendix 3 of the Access Arrangement (**Proposed Policy**). Western Power has also provided justification for the differences between the Model Policy and its Proposed Policy. These reasons are contained within Appendix 9 of the access arrangement information.

The Authority engaged Talbot Olivier to prepare a table drawing comparisons between the Proposed Policy submitted by Western Power and that contained within Appendix 4 of the Access Code. The features that have been identified by Talbot Olivier are included in a document published by the Authority and available on its website: http://www.era.wa.gov.au/electricity/consultationPapers.cfm.

The Authority invites submissions from interested parties regarding:

71 whether the capital contributions policy proposed by Western Power is materially different to the policy included in Appendix 4 to the Access Code;

72 whether the proposed policy adequately explains the method by which it will be determined whether any capital contributions will be necessary;

73 whether the proposed capital contributions policy adequately specifies how capital contributions will affect reference tariffs; and

74 whether the proposed capital contributions policy is balanced between the service provider and users, including whether specified amounts and percentages are reasonable.

[76] Western Power's access arrangement information, Appendix 9 (page 3) 24 August 2005.

6.5 Transfer and Relocation Policy

Sections 5.1(i) and 5.18 to 5.24 of the Access Code set out the necessary requirements for the transfer and relocation policy that must be included in Western Power's proposed Access Arrangement. The Access Code does not provide a model transfer and relocation policy.

A transfer and relocation policy must allow for a bare transfer. For a transfer other than a bare transfer, or relocation, Western Power is required to provide details in its transfer and relocation policy of the nature of any conditions to be observed based on reasonable technical and commercial grounds.[77]

Western Power has proposed a transfer and relocation policy in Appendix 2 of the Access Arrangement, and explanatory information.[78]

6.5.1 Bare Transfer

In Western Power's policy, "bare transfer" is defined to mean an assignment under which the assignor assigns the whole or a part of its access rights under an access contract to an assignee, but under which there is no novation, with the result that the assignor's obligations under the access contract for services, and all other terms of the access contract for services, remain in full force and effect after the assignment, whether or not the assignee becomes bound to the assignor or any other party to fulfil those obligations.

The proposed policy makes it clear that the obligations cannot be assigned, so that a user is not released from any obligations under the access contract and remains wholly liable to Western Power for any default.

6.5.2 Transfer other than a bare transfer

The proposed policy allows for assignments other than bare transfers to be effected subject to the user providing satisfactory evidence of the financial and technical capability of the proposed assignee to perform the user's obligations in respect of the assigned access rights.

6.5.3 Relocation

Western Power's proposed policy permits a user to effect relocation under certain conditions and subject to being in accordance with the electricity transfer contract and application and queuing policy, where applicable.

6.5.4 Western Power's costs

Western Power's proposed policy allows for Western Power to recover any reasonable costs from the user in relation to processing any application under the transfer and relocation policy.

[77] Access Code sections 5.18 to 5.26

[78] Western Power's access arrangement information, Part D (page 189) 24 August 2005.

The Authority invites submissions from interested parties regarding:

75 whether the proposed transfer and relocations policy provides sufficient detail for users and prospective users to understand how the policy will be effected;

76 whether the proposed transfer and relocations policy accommodates interests of the service provider, users and prospective users;

77 whether the proposed transfer and relocations policy is consistent with achieving a reasonable commercial balance between the service provider and users, including prospective users;

78 whether the transfer and relocations policy provisions regarding costs are transparent and appropriate; and

79 any other matters considered relevant to the Authority's assessment of Western Power's proposed transfer and relocations policy.

6.6 Efficiency and Innovation benchmarks

Section 5.1 of the Access Code states that an access arrangement must include efficiency and innovation benchmarks if required under section 5.25 of the Access Code. Section 5.25 states that an access arrangement which contains a gain sharing mechanism must, and an access arrangement which does not contain a gain sharing mechanism may, contain efficiency and innovation benchmarks.

An access arrangement must contain a gain sharing mechanism unless the Authority determines that a gain sharing mechanism is not necessary to achieve the objective in section 6.4(a)(ii) of the Access Code.[79] The objective in section 6.4(a)(ii) is that the service provider is rewarded for efficiency gains and innovation beyond the efficiency and innovation benchmarks in a previous access arrangement period.

Section 5.26 of the Code sets out what efficiency and innovation benchmarks must contain.

Section 5.8 of Western Power's Access Arrangement proposes that, under section 6.20 of the Access Code, a gain sharing mechanism will not apply during the forthcoming regulatory period. Consequently, Western Power proposes in section 5.9 of the Access Arrangement not to include efficiency and innovation benchmarks.

The Authority invites submissions from interested parties regarding:

80 the inclusion of efficiency and innovation benchmarks in a proposed access arrangement;

81 the inclusion of a gain sharing mechanism in Western Power's

[79] Access Code section 6.20

Access Arrangement; and

82 any other matters interested parties wish to raise in relation to efficiency and innovation benchmarks.

6.7 Supplementary Matters

Section 5.1 of the Access Code states that an access arrangement must include provisions dealing with supplementary matters. Section 5.27 of the Access Code defines supplementary matters as:

- balancing; and
- line losses; and
- metering; and
- ancillary services; and
- stand-by; and
- trading; and
- settlement; and
- any other matter in respect of which arrangements must exist between a user and a service provider to enable the efficient operation of the covered network and to facilitate access to services, in accordance with the Code objective.

The inclusion of supplementary matters in an access arrangement ensures that all matters that enable the efficient operation of the network are clearly addressed. This achieves clarity for both the user and the service provider in respect of access to the covered network.

Western Power has proposed to include balancing, line losses, ancillary services, trading and settlement requirements in accordance with the *Wholesale Electricity Market Rules*. Further, Western Power has proposed to include metering requirements in accordance with the *Electricity Industry Metering Code 2005* (which is not yet promulgated).

However, Western Power has stated that interim arrangements may be required if the *Wholesale Electricity Market Rules* or the *Electricity Industry Metering Code 2005* are not operational at the commencement of the Access Arrangement. The types of interim arrangements contemplated by Western Power are set out in section 10.9 of the Access Arrangement which states:

> The interim arrangements referred to in section 10.8 of this Access Arrangement will reflect working practices immediately prior to the commencement of this Access Arrangement or as otherwise reasonably directed by the Authority.

Western Power has chosen not to include stand-by in its supplementary matters, stating that there is no requirement in the *Wholesale Electricity Market Rules* for stand-by generation. In this respect, Western Power appear to be "dealing with" stand-by generation by omission. That is, Western Power will not be offering stand-by under the Access Arrangement.

The Authority invites submissions from interested parties regarding:

83 whether the proposed supplementary matters are consistent with, and facilitate treatment of, corresponding supplementary matters (if any) in the *Wholesale Electricity Market Rules*, a written law, the technical rules or the Access Code objective;

84 the possible interim arrangements proposed by Western Power in sections 10.8 and 10.9 of the Access Arrangement;

85 the provision of stand-by generation in the Access Arrangement. If so, how should this be done; and

86 any additional supplementary matters that the Authority should require Western Power to include pursuant to section 5.27(h) of the Access Code.

6.8 Revisions Submission Date

[Reference: Access Arrangement clauses 1.4-1.6]

Section 5.1 of the Access Code states that an access arrangement must include provisions dealing with the submission of proposed revisions to an access arrangement.

Section 5.29 of the Access Code requires an access arrangement to include a date by which the service provider must submit revisions to the access arrangement (the **revisions submission date**), and a date upon which the revisions to the access arrangement are intended to commence (the **revisions commencement date**).

For the first regulatory period, section 5.30 of the Access Code requires the target revisions commencement date to be no more than three years after the access arrangement start date, and that the revisions submission date be at least six months before the target revisions commencement date.

The Access Arrangement proposed by Western Power includes provision for a revisions submission date of 31 December 2006, and a revisions commencement date of 1 July 2007. Provided the proposed Access Arrangement is approved by the commencement date proposed by Western Power (ie 1 July 2006), these dates imply an Access Arrangement period of three years — the maximum initial regulatory period allowable under subsection 5.30(b) of the Access Code.

The Authority invites submissions from interested parties regarding:

87 the proposed revisions submission date and proposed revisions commencement date.

6.9 Trigger Events

Section 5.1 of the Access Code states that an access arrangement must include provisions dealing with trigger events. A trigger event is a set of one or more circumstances in an access arrangement the occurrence of which requires the service provider to submit proposed revisions to the Authority.

This is in contrast to section 4.38 of the Access Code, which provides for the Authority to vary price control or pricing methods in an access arrangement before the revisions commencement date. While this provision specifically covers those sections of the access arrangement relevant to pricing, section 5.34 of the Access Code relates to the access arrangement in its entirety.

A trigger event must be consistent with the Access Code objective. In determining whether a trigger event is consistent with the objectives of the Access Code, section 5.36 of the Access Code requires the Authority to consider whether the advantages of including the trigger event outweigh the disadvantages of doing so (in particular the disadvantages associated with decreased regulatory certainty), and whether the trigger event should be balanced by one or more other trigger events.

The Authority is conscious of the need for both service providers and users to efficiently allocate resources to the assessment process and to provide for regulatory certainty through the access arrangement period. In this regard, the Authority is focused on ensuring that any trigger events are not easily breached and are limited to those necessary to meet the Access Code objective.[80] For this purpose, trigger events should be clear, focused and specific, identifying only those potential events the occurrence of which is necessary to trigger the reassessment of an access arrangement in its entirety.

Section 8 of the proposed Access Arrangement lists the trigger events proposed by Western Power:

> (a) A decision by the Authority; or Government; or an appointed agent or industry body that imposes costs on Western Power in order to facilitate the development of market rules or the introduction of contestability;
>
> (b) A decision by the Authority; or Government; or an appointed agent or industry body that requires Western Power to reorganise or restructure its operations; and
>
> (c) Any significant unforeseen development which has a materially adverse impact on the service provider and which is:
>
> (i) outside the control of the service provider; and
>
> (ii) not something that the service provider, acting in accordance with good electricity industry practice, should have been able to prevent or overcome; and
>
> (iii) an event the impact of which is so substantial that the Authority considers that the advantages of making the variation before the end of the access arrangement period outweigh the disadvantages, having regard to the impact of the variation on regulatory certainty.

Western Power has not identified any additional specific events that would trigger the reassessment of the Access Arrangement.

Further, Western Power broadly contends that trigger events should:

[80] This is consistent with the treatment of trigger events in other jurisdictions. For example, see QCA 2005, *Regulation of Electricity Distribution: Final Determination*, page 47.

- reduce the financial exposure to events beyond its control that would have material impact on the financial performance of the company;
- allow for network prices to reflect the higher risks should those proposed not be included or alternatively indicate that investment would be lower than otherwise would be the case; and
- be consistent with the Access Code objective.

The Authority invites submissions from interested parties regarding:

88 whether the advantages of including the proposed trigger events outweigh the disadvantages of doing so, in particular the disadvantages from decreased regulatory certainty;

89 whether the proposed trigger events should be balanced by one or more other trigger events; and

90 whether the proposed trigger events comply with the objectives of the Access Code. In particular, are the proposed trigger events sufficiently clear, focused and specific.

7 ACCESS ARRANGEMENT INFORMATION

Western Power has submitted access arrangement information as required by section 4.1 of the Access Code.

Section 4.2 of the Access Code requires that the access arrangement information must enable the Authority, users and applicants to understand how Western Power derived the elements of its proposed Access Arrangement and to form an opinion as to whether the Access Arrangement complies with the Code. Section 4.3 of the Access Code states that access arrangement information must include:

- information detailing and supporting the price control in the access arrangement; and
- information detailing and supporting the pricing methods in the access arrangement; and
- if applicable, information detailing and supporting the measurement of the components of approved total costs in the access arrangement; and
- information detailing and supporting the service provider's system capacity and volume assumptions.

Western Power has provided access arrangement information with supporting reports included as appendices.

The Authority invites submissions from interested parties regarding:

91 whether Western Power's proposed access arrangement information provides sufficient information to comply with sections 4.2 and 4.3 of the Access Code.

8 TECHNICAL RULES

Chapter 12 of the Access Code requires Western Power to submit technical rules to the Authority for its Transmission and Distribution networks in the SWIS. The Technical rules consist of the standards, procedures and planning criteria governing the construction and operation of an electricity network, and are to deal with all the matters listed in Appendix 6 of the Access Code.

The Technical Rules potentially have implications for the capital expenditure and operations and maintenance expenditure forecasts in Western Power's proposed Access Arrangement, for example in relation to reliability, design planning and service standards.

The proposed technical rules are available on the Authority's website: http://www.era.wa.gov.au/electricity/proposedAccessArrangement.cfm.

The proposed technical rules are required to be processed, as far as possible, in parallel with the proposed Access Arrangement. It is important to note, however, that chapter 12 of the Access Code, rather than chapter 4, sets out the process to be followed in the assessment. The principal difference between the two assessments is that a Technical Rules Committee (Committee) is required to be established to assist the Authority in undertaking the technical rules assessment. The Committee was established in January 2005, and consists of representatives of the Coordinator of Energy, Western Power, other interconnected networks and users. The full membership of the Committee can be viewed at www.era.wa.gov.au/electricity/trc.cfm.

The Authority – with the advice of the Committee – is required to assess the technical rules proposed by Western Power and determine whether to:

- approve the technical rules proposed by the service provider; or
- amend the service provider's proposals by drafting its own.

The Authority may amend rules proposed by a service provider only to the extent that those amendments are necessary to ensure the rules comply with the requirements of chapter 12 of the Access Code.

The Committee has been provided with the technical rules proposed by Western Power on 24 August 2005. The Committee will review these and prepare a "preliminary report" for the Authority, which is to be received by 20 business days before a draft decision is made. The preliminary report will be the basis of the Authority's draft technical rules, which must be published by the Authority 15 business days after the making of the draft decision.

After the publication of draft technical rules, the Authority will invite submissions from interested parties on the draft rules, before preparing final technical rules.

A number of restrictive timeframes apply to the assessment process of proposed technical rules. These are outlined in the table below.

Timeframes for assessment of technical rules

Assessment Stage	Section of Code	Deadlines (Business Days)
Service provider to submit proposed technical rules	12.10	At the same time as the submission of its first access arrangement
Technical Rules Committee - preliminary report to the Authority	12.11(b)(i)	20 days before the last day by which the Authority must make its draft decision
Authority to publish draft technical rules	12.11(c)	12 days after it makes a draft decision
Authority to invite public submissions on draft technical rules	12.11(d)	15 days after the invitation is published
Technical Rules Committee - final report to the Authority	12.11(b)(ii)	30 days before the last day by which the Authority must make its final decision
Authority to approve and publish final technical rules and specify start date	12.11(e) & 12.15	At least 30 days after the approval of technical rules is published

APPENDICES

Appendix 1 – References

Allen Consulting Group (ACG) 2005, Electricity Networks Access Code 2004: Advance Determination of a WACC Methodology, Report to Economic Regulation Authority, Western Australia, January, Perth

Economic Regulation Authority (ERA) 2005, Determination of the preferred methodology for calculating the weighted average cost of capital for covered electricity networks, February, Perth

Network Advisory Services (NAS) 2005, Service Standards in the Western Australian SWIS, Brisbane, August

Queensland Competition Authority (QCA) 2005, Regulation of Electricity Distribution: Final Determination, April, Brisbane

Western Power Networks Business Unit 2005, 2005 Transmission and Distribution Planning Report, April, Perth

Western Power Corporation 2004. Physical Assets Valuation as at 30 June 2004 - Report to the Valuation Committee, June 2004, Perth.

Appendix 2 – Map of Western Australian Electricity Supply Network

Appendix 3 – Glossary

Abbreviation	Description
Access Code	Electricity Networks Access Code 2004
Access Code objective	Section 2.1 of the Access Code
ACG	The Allen Consulting Group
ADMD	After Diversity Maximum Demand
Authority	Economic Regulation Authority
CAC	Connection access contract
CAIDI	Customer Average Interruption Duration Index
Capex	Capital expenditure
CAPM	Capital Asset Pricing Model
CPI	Consumer price index
DORC	Depreciated optimised replacement cost
ERIU	Electricity Reform Implementation Unit
ETAC	Electricity transfer contract
GSR	Western Power's Generation Status Review
IMO	Independent Market Operator
IWA	Interconnection works agreement
Model Policy	Those model policies for applications and queuing and capital contributions, as well as the standard access contract contained as appendices to the Access Code
NAS	Network Advisory Services
NEM	National Electricity Market
NIEIR	National Institute of Economics & Industry Research
ODV	Optimised deprival value
Opex	Operating and maintenance expenditure
Proposed Policy	Those proposed policies proposed by Western Power for applications and queuing, capital contributions and standard access contract
PwC	PricewaterhouseCoopers
QCA	Queensland Competition Authority
Revisions commencement date	A date upon which the revisions to the access arrangement are intended to commence
Revisions submission date	A date by which the service provider must submit revisions to the access arrangement
RPIP	Rural Power Improvement Program
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SBU	Strengthened Business Units
SKM	Sinclair Knight Merz
SSAM	Service standard adjustment mechanism
SUPP	State Underground Power Program
SWIN	South West Interconnected System
SWIS	South West Interconnected Network
Talbot Olivier	Talbot & Olivier Barristers and Solicitors
WACC	Weighted average cost of capital

WACC methodology	A determination of the preferred methodology for calculating the WACC, published by the Authority in February 2005
Western Power	Western Power Corporation Networks Business Unit