

Issues Paper on Proposed Revisions to the Western Power Network Access Arrangement (2017/18 to 2021/22 - AA4)

31 October 2017
(amended 14 November 2017)

Economic Regulation Authority

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Invitation to make submissions

On 2 October 2017, Western Power submitted proposed revisions to its access arrangement for the Western Power Network. The proposed revisions are for the fourth access arrangement period (AA4), the five year period from 1 July 2017 to 30 June 2022.

The proposed revised access arrangement and access arrangement information are available on the ERA's website.

The role of the ERA is to determine whether Western Power's AA4 proposal complies with the requirements of the *Electricity Networks Access Code 2004*. To make its decision, the ERA is guided by specific provisions of the Access Code regarding particular elements of the access arrangement, as well as the Code objective of promoting economically efficient investment in and operation and use of electricity networks and services of networks in Western Australia, in order to promote competition in markets upstream and downstream of the network.

The ERA has prepared this Issues Paper to assist interested parties in understanding Western Power's proposal, the ERA's review process and some of the significant issues to be addressed by the ERA in determining whether to approve or not approve Western Power's proposal.

This Issues paper is not an exhaustive review of the content of the proposed revised access arrangement, or a complete list of the matters that the ERA will address in making its determination. While the ERA invites interested parties to make submissions on particular matters identified in this Issues paper, interested parties are also invited to make submissions on any elements of the proposed revised access arrangement, and on the operation of the access arrangement more generally during the current access arrangement period.

Interested parties are invited to make submissions by **4:00 pm (WST) Monday, 11 December 2017**.

Submissions are preferred as documents uploaded to the ERA's website, in electronic form, via: www.erawa.com.au/consultation

Alternatively, submissions can be lodged via:

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Postal address: PO Box 8469, PERTH BC WA 6849

Office address: Level 4, Albert Facey House, 469 Wellington Street, Perth WA 6000

Fax: 61 8 6557 7999

CONFIDENTIALITY

In general, all submissions from interested parties will be treated as being in the public domain and placed on the ERA's website. Where an interested party wishes to make a submission in confidence, it should clearly indicate the parts of the submission for which confidentiality is claimed, and specify in reasonable detail the basis for the claim. Any claim of confidentiality will be considered in accordance with the provisions of the *Electricity Networks Access Code 2004*, sections 14.12 to 14.15.

The publication of a submission on the ERA's website shall not be taken as indicating that the ERA has knowledge either actual or constructive of the contents of a particular submission and, in particular, whether the submission in whole or part contains information of a confidential nature and no duty of confidence will arise for the ERA.

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1 Introduction

Western Power's transmission and distribution network is a covered network under the *Electricity Networks Access Code 2004* (Access Code) and is required to have an approved access arrangement. The access arrangement sets out the terms and conditions, including prices, for third parties seeking access to the network.

The access arrangement must include:

- the date for submitting the next revisions
- the method used to determine the total revenue Western Power can collect from customers;
- one or more reference services;
- the pricing method for each reference service;
- service standard benchmarks for each reference service;
- any adjustments that will be made to target revenue at the next access arrangement review;
- any trigger events that would require a review to commence earlier than planned;
- a standard access contract for each reference service;
- an applications and queuing policy;
- a contributions policy; and
- a transfer and relocation policy.

Western Power's access arrangement was first approved by the ERA in April 2007 and covered the period 2006/07 to 2008/09 (AA1). Subsequent revisions were approved for 2009/10 to 2011/12 (AA2) and 2012/13 to 2016/17 (AA3). The AA3 arrangements apply until the ERA approves a new proposed access arrangement.

On 2 October 2017, Western Power submitted its proposed revisions to its access arrangement in accordance with the requirements of section 4.79 of the Access Code.¹

The proposed revised access arrangement covers the fourth access arrangement period spanning 1 July 2017 to 30 June 2022 (AA4).

The proposed revised access arrangement and access arrangement information are available on the ERA's website.

The ERA has prepared this Issues Paper to assist interested parties in understanding Western Power's proposal, the ERA's review process and some of the significant issues to be addressed by the ERA in determining whether to approve Western Power's proposed revisions.

¹ Section 4.79 was inserted by WAGG No 231 on 23 December 2016 to extend the deadline for Western Power to submit its proposed revisions from 31 December 2016 (as specified in its approved access arrangement) to 2 October 2017.

As discussed in section 3, the ERA is particularly seeking views from interested parties on:

- Investment in the network – Western Power’s proposed investment during AA4 will result in the regulatory asset base continuing to increase. The ERA’s review will need to consider whether the approach Western Power has taken to develop its network investment plan, particularly its consideration of future uncertainties and possible effects of new technologies, is consistent with the Access Code objectives and capital expenditure tests.
- Operating cost efficiencies and service standards – Western Power’s proposed operating costs for AA4 are \$695 million lower than the expenditure approved for AA3. Offsetting this, Western Power has included \$528 million in its AA4 target revenue for the AA3 gain sharing mechanism and service standard adjustment mechanism. The ERA is seeking views on how effective the AA3 mechanisms have been in encouraging Western Power to become more efficient and meet customer expectations for service standards.
- Connecting to the network – The Access Code requires Western Power to use all reasonable endeavours to accommodate an applicant’s requirements to connect to its network. Western Power offers a number of standard services and, as required under the Access Code, customers can negotiate non-standard services. The ERA is particularly interested in the practical experience customers have had in connecting to the network and obtaining the services they require.
- Network charges and metering – Western Power is proposing to introduce advanced metering infrastructure as part of its standard meter replacement program. It has also proposed some new time of use tariffs and demand tariffs which it hopes will reduce peak demand and the need for investment to increase the capacity of the network. The ERA will need to consider both whether the proposed investment in advanced meters meets the capital expenditure tests under the Access Code and whether the proposed new tariffs are consistent with the pricing principles in the Access Code.

The Issues Paper is structured as follows:

- Section 2 – the process for amending the access arrangement;
- Section 3 – specific issues for consideration;
- Section 4 – an overview of Western Power’s proposal; and
- Section 5- regulatory requirements and details of Western Power’s proposal for each section of the access arrangement.
 - Section 5.1 Introduction to the Access Arrangement
 - Section 5.2 Revenue Requirement
 - Section 5.3 Reference and Non-Reference Services
 - Section 5.4 Pricing Methods, Price List and Price List Information
 - Section 5.5 Service Standard Benchmarks
 - Section 5.6 Adjustments to Target Revenue at next review
 - Section 5.7 Trigger Events
 - Section 5.8 Supplementary Matters
 - Section 5.9 Standard Access Contract
 - Section 5.10 Applications and Queuing Policy
 - Section 5.11 Contributions Policy
 - Section 5.12 Transfer and Relocation Policy

2 Process for amendments to an access arrangement

Normally a service provider of a covered network must submit proposed revisions to the access arrangement and revised access arrangement information to the ERA by the revisions submission date specified in the access arrangement. The revisions submission date approved in the AA3 decision was 31 March 2016. This was later amended to 31 December 2016, the latest date permitted under the Access Code, and subsequently the Access Code was amended to extend the deadline to 2 October 2017. Consequently the review has commenced three months after the AA4 period was intended to commence.

The ERA is required to consider the proposed revised access arrangement and make a decision to either approve or not approve the proposed revisions. The ERA must determine whether Western Power's proposed revisions:

- meet the Access Code objective of promoting economically efficient investment in, and operation and use of, electricity networks and services of networks in Western Australia, in order to promote competition in markets upstream and downstream of the networks; and
- comply with the specific requirements of the Access Code.

If the ERA considers the Code objective and chapter five requirements (covering the content of an access arrangement) are satisfied it must approve the access arrangement.

The ERA may not reject a proposed access arrangement on the grounds that another form of access arrangement might be better or more effectively satisfy the Code objective and chapter five requirements.

The process the ERA must follow for the review is set out in chapter four of the Access Code and includes:

- publishing and inviting submissions on Western Power's proposal;
- publishing an issues paper (optional);
- making and publishing a draft decision for public consultation;
- making and publishing a final decision;
- if the final decision is to "not approve" there are various outcomes that may apply:
 - Western Power may submit a revised access arrangement to comply with the ERA's final decision. In this case, the ERA must determine whether it is compliant and make and publish a further final decision, either "approving" or "not approving":
 - If the ERA's further final decision is to "approve", the document submitted by Western Power becomes the revised access arrangement and takes effect from a date specified by the ERA, which must be at least 20 days after the decision is published.
 - If the ERA's further final decision is to "not approve", the ERA must draft, approve, publish and advertise its own access arrangement.
 - If Western Power does not submit a revised access arrangement following the final decision, the ERA must publish a further final decision to "not approve" and then draft, approve, publish and advertise its own access arrangement.

Specific stages of the review and approvals process must be completed within timescales prescribed in the Access Code. This differs from the National Gas Rules where decisions made outside the timelines set out in the rules are still valid.

Deadlines must initially be set on the prescribed timescales. There are provisions for extensions of time. However, the ERA can only use these if it determines:

- a longer time period of time is essential for due consideration of all the matters under consideration or satisfactory performance of the relevant obligation; and
- the ERA or the service provider, as applicable, has taken all reasonable steps to fully utilise the times and processes provided for in the initial deadline.

If the ERA exercises its powers to obtain information and documents under section 51 of the *Economic Regulation Authority Act 2003*, time ceases to run in respect of the relevant deadline until the information is received.

Before extending any deadline the ERA must publish a notice.

Taking into account the requirements of the Access Code, and subject to extensions of time, the earliest dates for the ERA's decision milestones are set out in Table 1.

Table 1 Assessment process and minimum timeframes²

Assessment stage	Minimum timeframe
Western Power lodged application	2 October 2017
Application published by ERA	6 October 2017
Issues Paper published by ERA	30 October 2017
Public forum	2 November 2017
First round public submissions on the revised access arrangement	Closing date for submissions is 20 November 2017
Draft Decision	22 January 2018
Second round public submissions on the draft decision	Closing date for submissions of 20 February 2018
Final Decision	6 April 2018
If Final Decision is to not approve Submission of amended proposed revisions by the service provider	7 May 2018
Further Final Decision	28 May 2018
Commencement of Western Power's revised access arrangement	1 July 2018 ³

² As prescribed in the Access Code and subject to extensions of time or suspensions of deadlines as permitted under the Access Code.

³ The date based on the minimum prescribed time of 20 days is 26 June.

3 Specific Issues for Consideration

The ERA has identified a number of specific issues which interested parties may wish to provide comment on. These issues are in addition to the issues raised in section 5 of this Issues Paper.

The specific issues identified in this section are:

- Investment in the network;
- Operating cost efficiencies and service standards;
- Ability for customers to connect to the network and obtain the services they require; and
- Network charges and metering.

Each of these is discussed below.

3.1 Investment in the network

There are a number of uncertainties that need to be considered when planning network investment for the AA4 period and beyond. These include:

- changing, and possibly declining, demand patterns;
- adoption of new technologies and business models by consumers that may change their usage of the network in the future; and
- ageing assets that may require treatment in the short term but possibly will not be required in the longer term.

Western Power has identified emerging technology as an important consideration for its AA4 proposal:

“In the future, we expect the electricity grid will play a pivotal role in enabling customers to adopt new technologies such as peer to peer trading, micro grids, distributed generation and grid scale battery storage systems. This has changed our thinking around peak demand and the way customers might use the network in the future.”⁴

In response to these possible effects of emerging technology it notes:

“Rather than assume conventional network management (i.e. more poles and wires) is always the answer, Western Power considers options for non-network solutions, such as managing demand (electricity usage) or structuring tariffs in a way that optimises the use of our network. However, where poles and wires are the most appropriate solution, we look at the best method and the most prudent time to install or replace them. We are always asking ourselves key questions such as: *Is it the right cost? Who will benefit? Do the assets need replacing? What’s the risk of this technology becoming obsolete?*”⁵

It considers:

“Western Power must evolve and keep pace with changes to customer preferences and advancements in technology to ensure the network remains relevant and efficient

⁴ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 15.

⁵ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 11.

well into the future. We want to evolve our physical network and take a more “modular” view, where we offer solutions based on the needs and economics of a local area. This might include changing the physical footprint of our network and providing alternative solutions to customers such as standalone power systems or micro grids. Our aim is to:

- Provide incentive for customers to leverage the grid for their business models
- Understand and shape end user perceptions and behaviour
- Help our customers understand how the grid can benefit them.”⁶

It notes the effect of this on its AA4 proposal:

“The most immediate impact [of emerging technology] is that planned capex on capacity expansion is 72 per cent lower during the AA4 period than what was forecast for the AA3 period. This is predominantly driven from the level of uptake of emerging technology, which has resulted in maximum demand flattening and average consumption per customer declining.

A secondary impact is the need to research, monitor and apply new technology. While it is clear Western Power’s growth expenditure will be more conservative as technology changes customers’ behaviours, it is important that we fully understand how technology will impact network assets and the energy solutions we offer in the future. During the AA3 period, Western Power commenced several technology trials, ranging from battery storage trials in Perenjori to testing standalone power systems in Ravensthorpe.”⁷

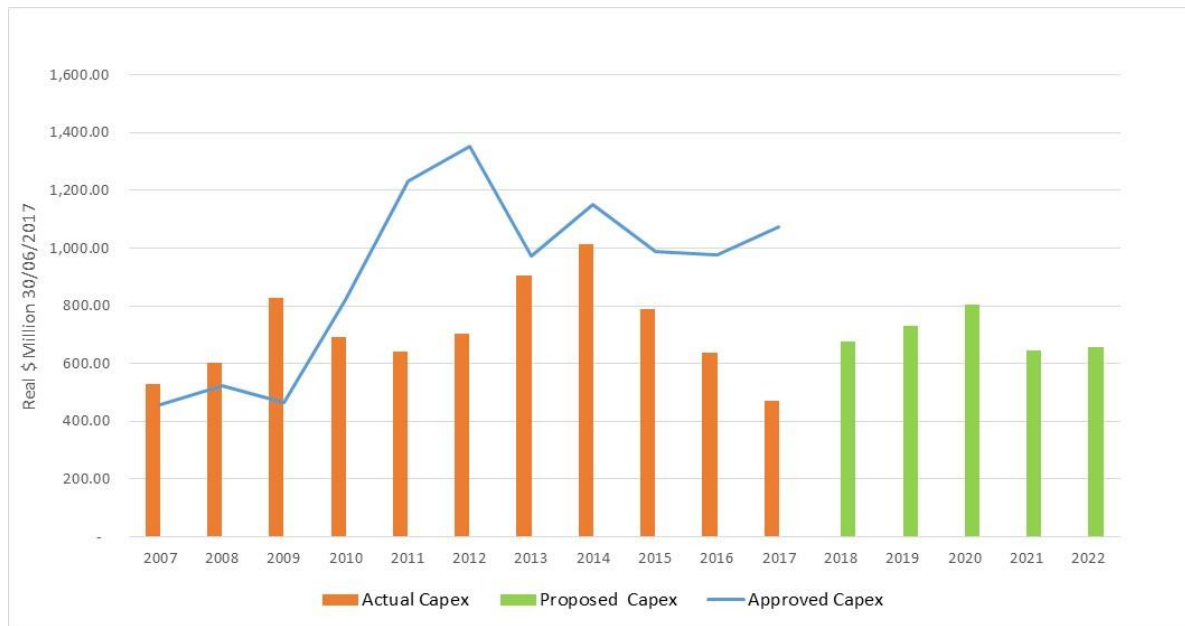
Western Power is proposing net capital expenditure of \$3,514 million⁸ for AA4. The chart below compares the AA4 proposal for each year with approved and actual expenditure since the first access arrangement.

⁶ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 13.

⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 19-20.

⁸ Excluding gifted assets and net of cash contributions.

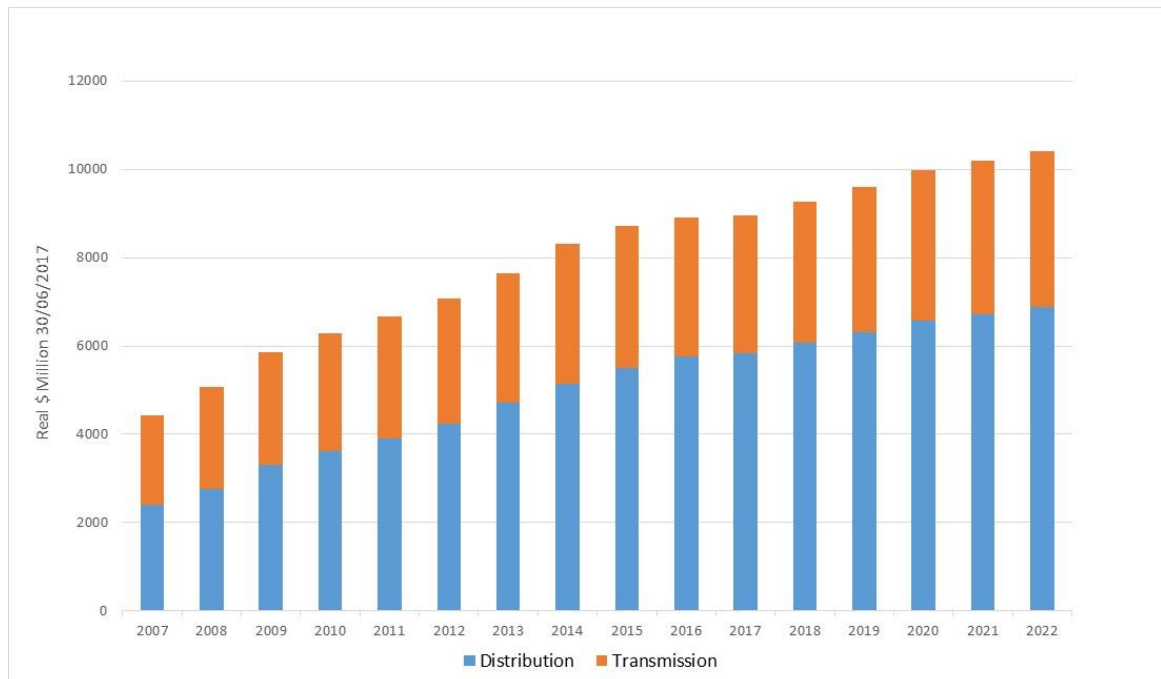
Figure 1 AA4 Proposed Capital Expenditure excluding gifted assets and cash contributions (Real \$ Million at June 2017)



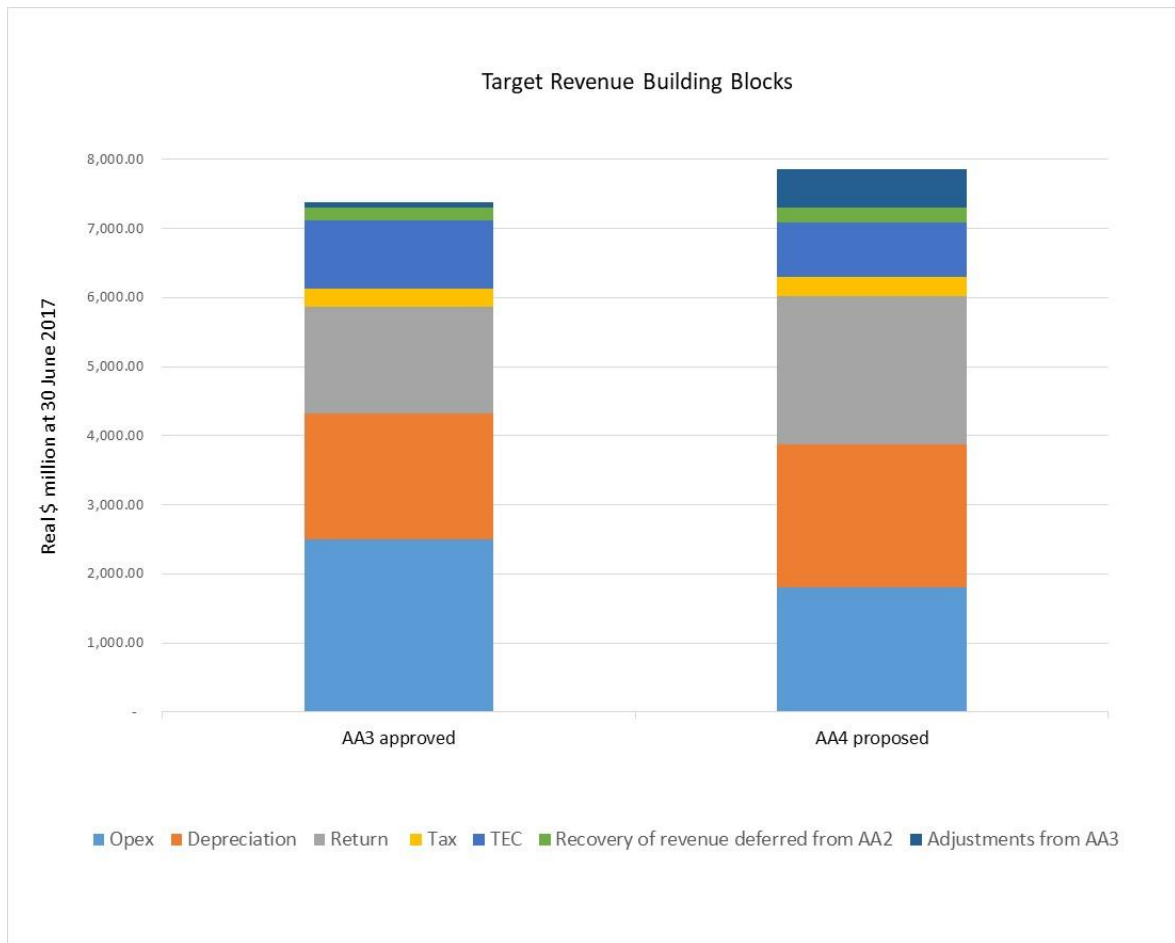
Western Power has explained the basis of its proposed capital expenditure in chapter 8 of the access arrangement information.

Based on its proposed capital expenditure, Western Power forecasts the regulated asset base will continue to increase over the AA4 period as can be seen in Figure 2 below.

Figure 2 Western Power RAB Closing Balance (Real \$ Million at June 2017)



The increasing value of the regulated asset base increases the revenue Western Power requires to cover its depreciation charges and return on assets. As can be seen in Figure 3 below, depreciation and return are the largest costs in Western Power's target revenue, and have increased from the values approved for AA3.

Figure 3 AA4 Target Revenue Building Blocks Compared with AA3

While the regulated asset base continues to increase, unless the customer base increases at the same or a higher rate, customer bills will increase.

The ERA must determine whether the Western Power proposal promotes economically efficient investment in, and operation and use of, its network and services of its network, in order to promote competition in markets upstream and downstream of the network.

There are a number of features in the Access Code and Western Power's access arrangement for ensuring efficient investment.

Before committing to a major network augmentation, the Access Code requires Western Power to demonstrate its proposal maximises the net benefit to consumers after considering alternative options⁹. Western Power is not able to commit to a major augmentation unless it has demonstrated to the ERA that it has met the requirements of the regulatory test.

⁹ A "net benefit after considering alternative options" means a net benefit (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume electricity in the covered network and any interconnected system, having regard to all reasonable alternative options, including the likelihood of each alternative option proceeding.

In addition, all capital expenditure must pass the “new facilities¹⁰ investment test” set out in the Access Code. This means expenditure must not exceed the amount that would be invested by a service provider efficiently minimising costs¹¹ having regard to:

- whether the new facility exhibits economies of scale or scope and the increments in which capacity can be added; and
- whether the lowest sustainable cost of providing the covered services forecast to be sold over a reasonable period may require the installation of a new facility with capacity sufficient to meet the forecast sales.

And one or more of the following conditions must be satisfied:

- the anticipated incremental revenue for the new facility is expected to at least recover the new facilities investment; or
- the new facility provides a net benefit¹² in the covered network over a reasonable period of time that justifies the approval of higher reference tariffs; or
- the new facility is necessary to maintain the safety or reliability of the covered network or its ability to provide contracted covered services.¹³

In its review, the ERA will assess actual expenditure for AA3 and forecast expenditure for AA4 against the new facilities investment test to determine how much expenditure should be added to the regulated asset base.

The ERA will also determine which investment categories should be subject to the investment adjustment mechanism. The investment adjustment mechanism allows for the carryover from one access arrangement period to the next period of costs or benefits arising from differences between forecast and actual capital expenditure. Generally it has been applied to expenditure categories with factors outside Western Power’s control such as demand for energy. For AA3, investment in wood poles was included due to uncertainties of what was required by Energy Safety. For AA4, Western Power is proposing to include metering expenditure.

¹⁰ A new facility is any capital asset developed, constructed or acquired to enable Western Power to provide covered services including assets required for the purpose of facilitating competition in retail markets for electricity.

¹¹ The Access Code defines “efficiently minimising costs” as meaning the service provider incurring no more costs than would be incurred by a prudent service provider, acting efficiently, in accordance with good electricity industry practice, seeking to achieve the lowest sustainable cost of delivering covered services and without reducing service standards below the service standard benchmarks set for each covered service in the access arrangement or contract for services. The expression “contract for services” is broader than “access contract”, because it catches all such contracts and not just those entered into under the Access Code. Hence it includes contracts entered into under the *Electricity Transmission Regulations 1996* and the *Electricity Distribution Regulations 1997*.

¹² The Access Code defines “net benefit” as meaning a net benefit (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume electricity in the Western Power network and any interconnected system.

¹³ Covered services are services provided by means of a covered network including: a connection service; an entry or exit service; a network use of system service, a common service or a service ancillary to any of these. It does not include an “excluded service”. An excluded service is a service provided by the covered network, similar to covered services, but where the supply of the service is subject to effective competition and the cost of the service is able to be excluded from consideration for price control purposes without departing from the Code objective.

The ERA will also consider how effective the D-factor¹⁴ has been in removing any disincentive for Western Power to substitute non-capital costs for capital investment in a network to resolve network constraints.

Issue 1

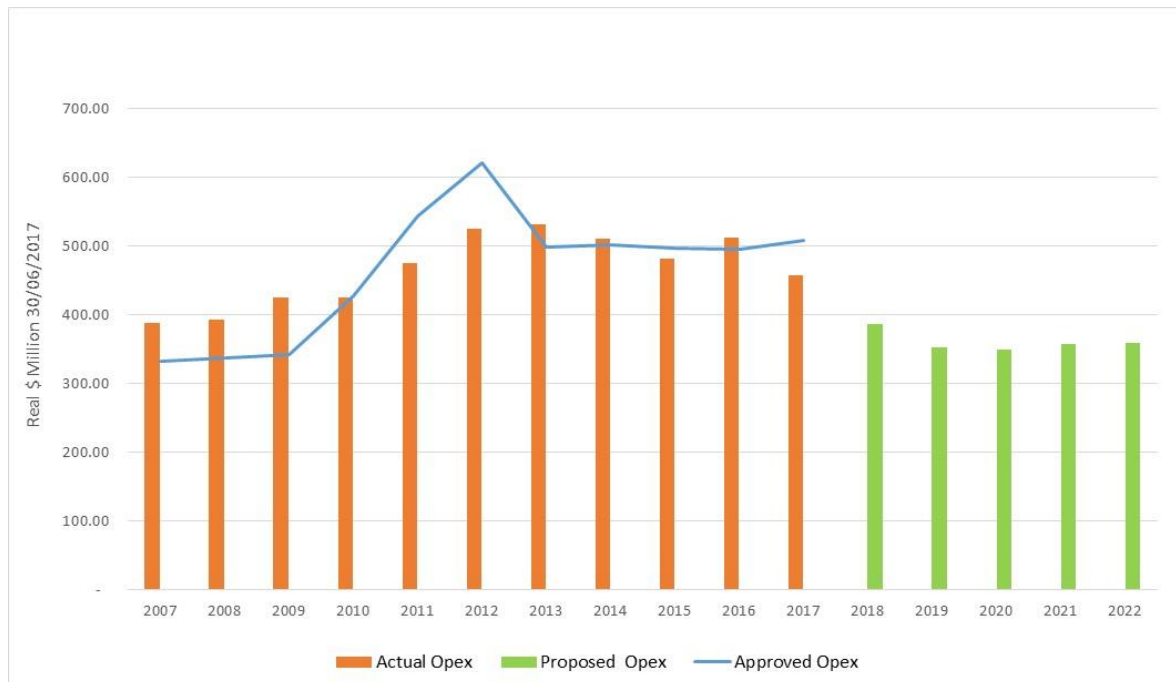
Submissions are invited from interested parties on whether the approach Western Power has taken to developing its network investment plan for AA4, including its consideration of future uncertainties and possible effects of new technologies, and the expenditure it is proposing meet the Access Code objectives and new facility investment test requirements.

3.2 Operating cost efficiencies and service standards

Western Power's proposed target revenue for AA4 includes adjustments for AA3 operating expenditure efficiencies and service standard performance.

Figure 4 below compares the AA4 proposed operating expenditure with actual and approved expenditure since the network became regulated.

Figure 4 Western Power Actual and Proposed Operating Expenditure (Real \$ Million at June 2017)



¹⁴ The D-factor mechanism provides for the recovery in the next access arrangement period of operating expenditure that is incurred by Western Power as a result of deferring a capital expenditure project or for demand-management initiatives.

Western Power's proposed operating costs for AA4 are \$695 million lower than the expenditure approved for AA3. However, this is offset by \$273 million that it forecasts it will receive from the gain sharing mechanism for operating cost efficiencies made during AA3.

The gain sharing mechanism ensures Western Power retains the benefit of operating cost efficiencies achieved during AA3 for five years, regardless of which year the efficiency was made. For example, without this mechanism, efficiency savings made in year 1 would be retained for five years but savings in year 5 would only be retained for one year. Consequently, there would be less incentive to make efficiency savings in the latter years of an access arrangement period.

The gain sharing mechanism also includes provisions to ensure expenditure savings achieved by, or resulting in, failure to meet service standard benchmarks are not rewarded. Western Power notes:

“\$272.6 million is included in AA4 target revenue as a result of performance under the GSM during the AA3 period. The GSM provides Western Power an incentive to make operating cost efficiencies by allowing the business to add a share of efficiency gains achieved during one access arrangement period to target revenue for the next access arrangement period. Efficiency improvements must not be made at the expense of service performance, therefore GSM rewards are only applied if Western Power achieves a defined set of minimum service standards. Customers receive the majority of the benefits as a result of the significantly lower opex in future periods.

The current GSM requires Western Power to achieve all 17 SSBs in any one year in order to receive efficiency rewards. The business met all 17 SSBs in two of the five years of the AA3 period.¹⁵

For AA4 Western Power proposes a similar mechanism but has updated some of the parameters and proposes setting separate benchmarks for transmission and distribution. Its proposal is set out in section 6.9 of the access arrangement information.

The service standard adjustment mechanism is intended to ensure Western Power has an incentive to maintain service standards and improve service standards only where the improvement is of value to customers.

Western Power has calculated the total reward for its service standard performance during AA3 to be \$255 million. It has updated the service standard targets for AA4 to reflect the actual service standard performance during AA3 together with some changes to the methodology and other assumptions. Its proposal for AA4 is set out in section 6.7 of its access arrangement information.

Western Power notes:

“In most cases the targets in the service incentive framework for the AA4 period will be set at higher standards during AA3, and will therefore be harder to achieve. This is because performance against many of the service measures improved over the course of the AA3 period, meaning today's standards are higher than those set in 2012.

We propose the size of the rewards available to the business will be smaller during the AA4 period. This, in combination with harder targets, means Western Power has a

¹⁵ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 226.

strong incentive to maintain performance at current levels, and not specifically invest to raise performance and receive gains for improvements our customers have told us they do not consider necessary.”¹⁶

The ERA will need to determine whether the values Western Power has calculated for the gain sharing mechanism and the service standard adjustment mechanism are consistent with the determination it made for AA3.

It will also determine the service standard adjustment mechanism and gain sharing mechanism methodologies and parameters for AA4 that will be used to calculate any adjustments to target revenue at the next review.

Issue 2

Submissions are invited from interested parties on:

- the effectiveness of the gain sharing mechanism in encouraging Western Power to become more efficient;
- the effectiveness of the service standard adjustment mechanism in ensuring Western Power maintains service standards and only improves them where it is of value to customers; and
- Any amendments needed to the gain sharing mechanism and service standard adjustment mechanism for AA4.

3.3 Ability for customers to connect to the network and obtain the services they require

The Access Code requires Western Power to:

- use all reasonable endeavours to accommodate an applicant’s requirement to connect to the network;
- expeditiously and diligently process access applications; and
- negotiate in good faith with applicants regarding the terms for an access contract.

The access arrangement, particularly the applications and queuing policy, sets out how Western Power ensures these requirements are met. The applications and queuing policy sets out the network connection process for new (or changed) connections. The Technical Rules set out the standards, procedures and planning criteria governing the construction and operation of the electricity network.

¹⁶ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. xxvi and xxvii.

All services provided by the Western Power network are covered (regulated) services. Covered services include both “reference services” and “non-reference services”.

Reference services are standard services specified in the access arrangement with a published tariff, standard access contract and service standards. Most of Western Power’s customers are on reference services.

The access arrangement must specify a reference service for each covered service that is likely to be sought by a significant number of network services customers or a substantial proportion of the network services market. The reference services should be specified in such a manner that a customer is able to acquire by way of one or more reference services, only those elements of a covered service that it wishes to acquire.

For AA4 Western Power proposes to add or modify the following reference services:

- new time of use services for new residential and small business customers;
- new demand-based¹⁷ services for residential and small business customers;
- modifying the peak/off peak time periods for the existing high voltage and low voltage metered demand exit services (A5 and A6) to reflect the time periods in the new time of use services noted above;
- modifying the existing high voltage and low voltage reference services for medium to large business (A5-A8) to allow for bi-directional flows.

The Access Code also enables Western Power and existing customers or new applicants to negotiate an access contract for access to any service (including a service which differs from a reference service) on any terms (including terms which differ from a standard access contract). A negotiated service is termed a “non-reference” service.

Most customers are on reference services but the ERA is aware that Western Power has negotiated non-reference services with some customers, including constrained network connections.¹⁸

In some parts of the network, augmentations are required to provide unconstrained access to new connections. Connecting new customers on a constrained basis reduces the need for network investment and improves the utilisation of the existing network.

However, as the Wholesale Electricity Market design is based on an assumption that all generators have unconstrained connections¹⁹ and, therefore, will be able to generate whenever called upon in normal operating conditions, System Management does not have the necessary tools to physically manage significant numbers of constrained generators.

There is also a risk the economic dispatch of energy in the wholesale market will be affected as network constraints are not taken into account when developing the merit order.²⁰

¹⁷ Based on a customer’s maximum usage in any one 30 minute period.

¹⁸ Currently Western Power’s reference services are all based on “firm” or “unconstrained” connections, i.e. under normal operating conditions the customer is able to generate or consume its maximum contracted demand regardless of other generators or loads. A constrained connection means the customer agrees to curtail its load or generation if required.

¹⁹ That is they will always be able to generate if they are selected in the merit order to be dispatched.

²⁰ Merit order is the ranking of generators pricing offers from lowest to highest with the cheapest generators being selected to generate.

The Minister for Energy has announced several electricity reform initiatives including the adoption of a constrained network access market design. The Public Utilities Office is currently developing a detailed work program, including a timeline of deliverables.²¹

The restrictions of the current Wholesale Electricity Market design has limited the number of constrained connections Western Power has been able to offer. Consequently, Western Power has developed an interim arrangement²² which will enable generators in some long standing groups of competing applicants to connect on a constrained basis over the next year or so.

Issue 3

Submissions are invited from interested parties on:

- practical experience in seeking access to the network;
- any changes necessary to facilitate easier access to network connections;
- any additional reference services needed; and
- any views on the ability for customers to connect to the network and obtain the services they require.

3.4 Network charges and metering

Western Power has proposed investment of \$209 million to introduce advanced metering infrastructure as part of the standard meter replacement program:

“During the AA4 period we will install around 355,000 advanced meters, as the default replacement for meters that are forecast for replacement over the next five years as well as new connections to the network and retailer requested replacements (e.g. where a customer installs a solar PV system and requires a bi-directional service). Customers whose meters are not scheduled for replacement during the AA4 period will have the option of requesting an advanced meter if they wish, with a fee applicable.”²³

Western Power considers:

“Having remote visibility of data and alarms at the connection point means Western Power can reduce network and metering costs over time. At the most basic level,

²¹ The announcement was made at the 2017 Energy in WA Conference on 23 August 2017. See Public Utilities Office <https://www.treasury.wa.gov.au/Public-Utilities-Office/Industry-reform/Electricity-Sector-Reform-Initiatives/> (accessed 31 October 2017).

²² Western Power is developing software (the Generator Interim Access tool) that will model constraints in the network to identify when it is necessary to curtail any of the generators connected under the interim access solution. This information will be provided in real time to AEMO to use in its dispatch planning.

²³ Western Power has also proposed updates to the Metering Model Service Level Agreement, which defines charges to Code Participants for metering services, including meter exchanges. The proposed updates can be found here <https://www.erawa.com.au/electricity/electricity-access/metering-services/model-service-level-agreement>

advanced metering infrastructure reduces the cost of meter reading, and other metering services such as re-energisation, as these functions can be conducted remotely, at lower cost and in a timelier manner.

The greatest benefits result from use of the data advanced metering can provide, particularly data on asset condition and performance. For example, advanced metering infrastructure allows us to monitor the condition and performance of customer service connections, and identify the most prudent and efficient time to replace and/or repair these assets. This valuable asset data allows us to forecast works much more accurately, potentially saving millions of dollars each year, whilst continuing to minimise safety risks.”

The proposed installation of advanced meters has enabled Western Power to propose introducing four new reference tariffs for residential and small business customers, including a time of use²⁴ and demand based²⁵ tariff for each.

Western Power considers time of use tariffs could reduce peak demand and the need for investment to increase the capacity of the network.

“Time of use tariffs are a potential alternative to the costly option of increasing network capacity. By encouraging customers to use electricity outside of peak times, the tariffs can help reduce the need for network capacity expansion, which saves customers money over the long term. Time of use tariffs can also help customers save money directly, as it provides greater opportunity to control costs by making just a few moderate changes to when and how they use electricity.”

Western Power recognises that customers receive their bill from retailers, not directly from Western Power. It states:

“Western Power proposes to work with Synergy (and other residential retailers in the future²⁶) to help ensure network and retail tariffs are aligned, and customers are fully informed of the benefits of moving to time of use tariffs.”

The only other changes Western Power has proposed to its existing network tariffs are:

- modifying the peak/off peak time for the high voltage and low voltage metered demand exit services (A5 and A6) to reflect the time periods in the new time of use tariffs
- increasing the fixed component of all network tariffs, offset by reductions in variable components to bring the fixed charges more in line with the fixed costs of running the network.

The ERA will need to determine whether Western Power’s advanced metering proposal meets the capital expenditure requirements discussed in section 3.1 above.

It will also need to determine whether Western Power’s proposed tariffs are consistent with the Access Code. These requirements are set out in section 5.4 of the Issues Paper.

The requirements include:

²⁴ A time of use network tariff is where customers pay a different price for using electricity at different times of the day.

²⁵ Demand tariffs are similar to time of use tariffs, however a demand tariff considers a customer’s maximum usage in any one 30 minute period rather than the total consumption over a time period.

²⁶ “Synergy is currently the principal retailer for residential customers. Should the retail market become fully contestable, Western Power is committed to working equitably with all retailers that enter the WA market.”

- reference tariffs should recover the forward-looking efficient costs of providing reference services;
- the reference tariff applying to a user should recover an amount of revenue that is greater than the incremental cost²⁷ of service provision and less than the stand-alone cost²⁸ of service provision; and
- incremental costs should be recovered by tariff components that vary with usage or demand and any other costs should be recovered by tariff components that do not vary with usage or demand.²⁹

Issue 4

Submissions are invited from interested parties on:

- Western Power's proposal to install advanced meters, including whether the expenditure meets the Access Code objectives and new facilities investment test;
- the proposed new time of use and demand tariffs;
- the balance between fixed and variable charges; and
- any other tariff developments considered necessary to meet the Code requirements.

²⁷ The Access Code defines Incremental cost as that part of approved total costs that would be avoided by the service provider if it were not to provide the covered service to the user or group of users.

²⁸ The Access Code defines stand-alone cost as that part of approved total costs that the service provider would incur in providing the covered service to the user or group of users if the covered service was the sole covered service provided by the service provider and the user or group of users was the sole user or group of users supplied by the service provider.

²⁹ Unless an alternative pricing method would better achieve the Code objective.

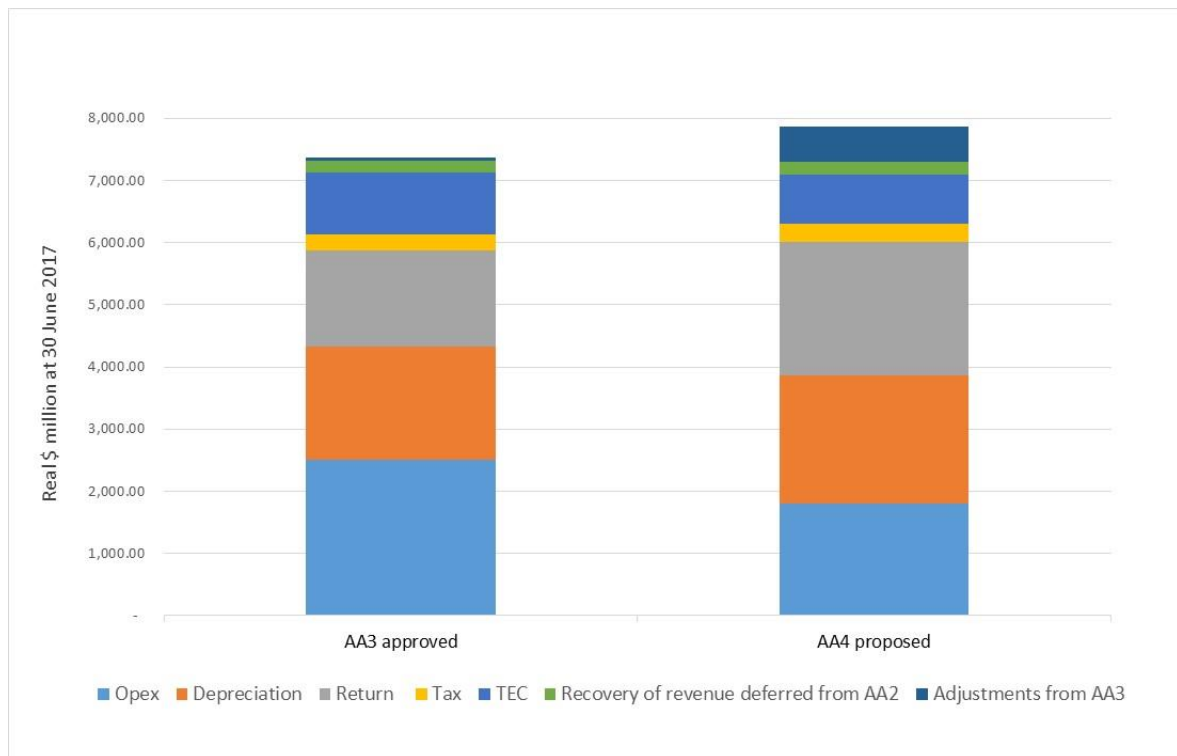
4 Overview of Western Power's proposal

This section provides an overview of Western Power's proposed amendments. More detail is provided in section 5.

4.1 Proposed Target Revenue

Western Power is seeking \$7,888 million³⁰ in revenue over the five years of AA4. Figure 5 below provides a breakdown of the revenue building blocks proposed for AA3 compared with the approved target revenue for AA3.

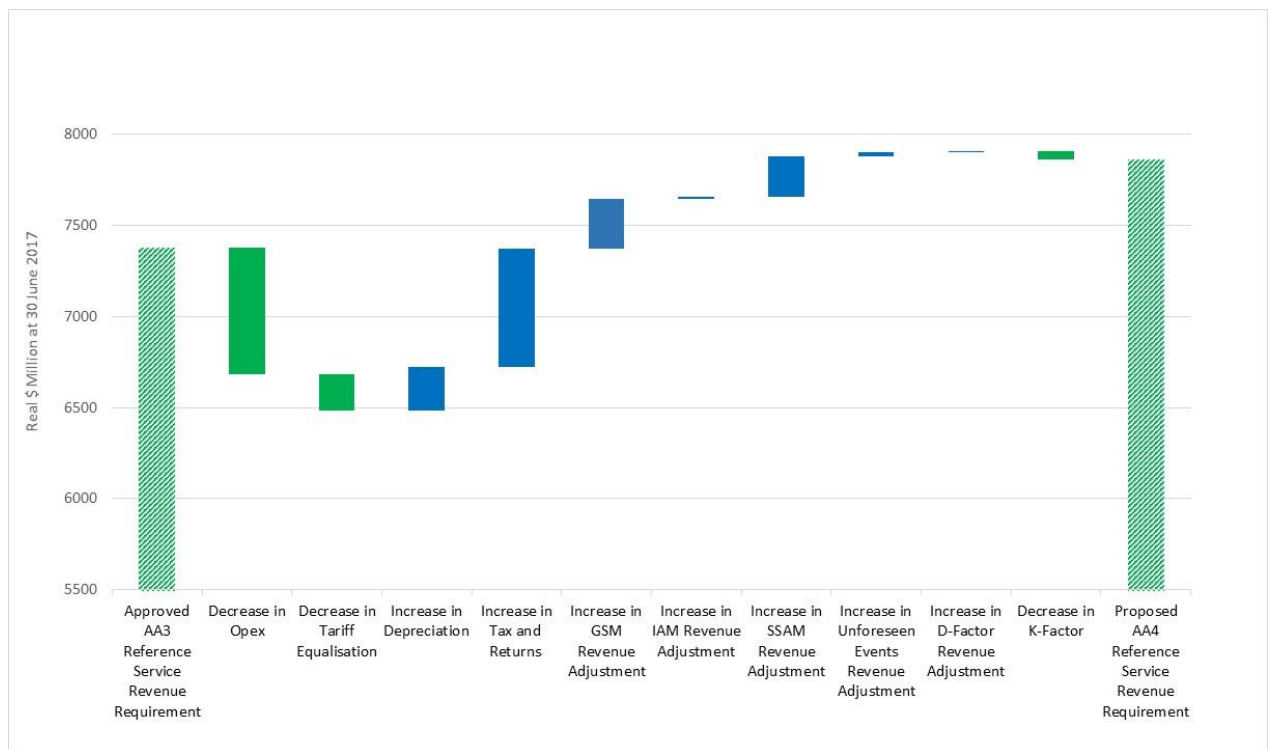
Figure 5 AA3 Approved and AA4 Proposed Target Revenue Building Blocks (Real \$ Million at June 2017)



Western Power's proposed revenue for AA4 is \$510 million (6.9 per cent) higher than the revenue approved for AA3 of \$7,378 million. Figure 6 below shows the differences between the proposed AA4 revenue and approved AA3 revenue.

³⁰ All monetary values in this issues paper are in real dollars at 30 June 2017, unless otherwise stated.

Figure 6 Breakdown of Difference between Approved AA3 and Proposed AA4 Reference Revenue Requirement (Real \$ Million at June 2017)



As can be seen in Figure 6 above, the largest changes from AA3 are the reduction in operating costs and the TEC,³¹ offset by an almost equal increase in depreciation, taxation and return on the regulated asset base.

Based on Western Power's estimates the adjustment mechanisms approved for AA3 (in particular the gain share mechanism and service standard adjustment mechanism) will add approximately \$500 million to its proposed target revenue for AA4.

The largest component of target revenue is the return on the regulated asset base. Western Power states it has based its proposed weighted average cost of capital (WACC) on the methodology used by the ERA in its 2016 decision on the access arrangement for the Dampier to Bunbury Natural Gas Pipeline:

"Our estimate adopts broadly the same method for determining the cost of equity and debt that the ERA applied to the DBNGP, updating individual debt and equity parameters to reflect contemporary data. We will, however, continue to monitor ongoing limited merits and judicial reviews, and modify our proposal to reflect appeal outcomes where appropriate.

Western Power's estimate WACC is 6.09 per cent, comprising a nominal post tax cost of equity of 7.24 per cent and a nominal cost of debt of 5.32 per cent."³²

³¹ Western Power pays the TEC to the State Government to contribute towards maintaining the financial viability of Horizon Power under Part 9A of the *Electricity Industry Act 2004*. The TEC amount is gazetted by State Government each year and is included in target revenue under sections 6.4(a)(vii) and 6.37A of the Access Code. At the time of Western Power's submission, the Government has not gazetted the TEC requirement for the AA4 period.

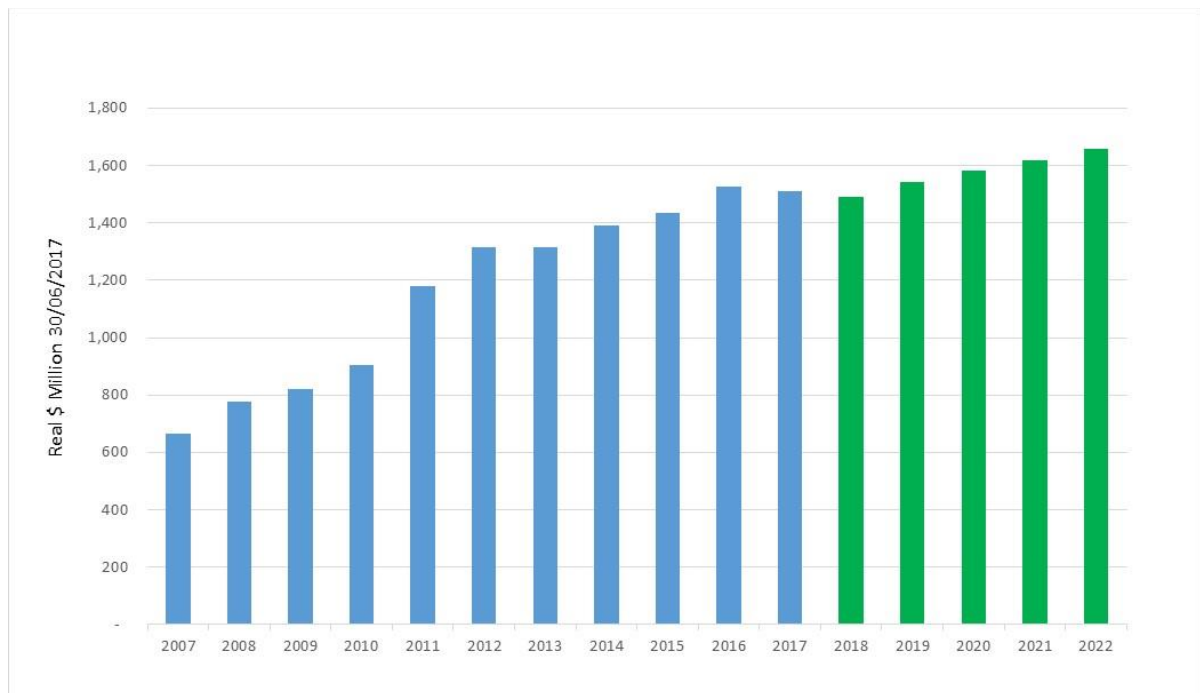
³² Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. xxvii.

The proposed real WACC for AA4 is 4.38% compared with 3.60% approved for AA3.

More detailed information on Western Power’s target revenue proposal, including the WACC, is set out in section 5.2.

The total proposed target revenue for each year of AA4 compared with previous periods is shown in Figure 7 below.

Figure 7 Western Power Actual and Proposed Revenue Cap (Real \$ Million at June 2017)



Western Power has calculated its proposed target revenue will result in an average real price increase of 2.5 per cent per year.³³ The effect on customer bills depends on the type of tariff and customer usage.

Western Power highlights the effect on an average residential customer stating:

“Western Power’s costs account for approximately one third of the electricity bill paid by customers. Based on an average residential customers’ annual usage (currently around 5,200 kWh of electricity per year) the network component of the average residential electricity bill will increase by approximately \$37 over the five years of the AA4 period.”³⁴

Western Power notes it has capped the increase for transmission customers to keep the price increase below ten per cent nominal per year. It notes:

“Our transmission pricing solution involves deferring collection of more than \$230 million of transmission revenue for collection in future access arrangement periods, and bringing forward collection of distribution revenue. This treatment of deferred revenue helps manage the potential for price shock to transmission

³³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 243.

³⁴ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. xxix.

customers, which otherwise could be as high as 18 per cent per year if we recover forecast transmission revenue in full.”

4.2 Reference services and tariffs

Western Power’s current reference services³⁵ are listed in section 5.3. Western Power’s proposed changes include:

- new time of use tariffs for residential and small business customers,;
- new demand-based tariffs for residential and small business customers;
- modifying the peak/off peak time periods for the existing high voltage and low voltage metered demand exit services (A5 and A6) to reflect the time periods in the new time of use tariffs noted above;
- modifying the existing high voltage and low voltage reference services for medium to large business (A5-A8) to allow for bi-directional flows; and
- recovering the Tariff Equalisation Contribution (**TEC**) from the fixed component of tariffs, rather than the variable component.

Further details on reference services and tariffs are included in section 5.3 and section 5.4 respectively.

4.3 Service Standard Benchmarks

Service standard benchmarks are the benchmarks for the reference services specified in the access arrangement. Western Power is required to provide reference services at a standard at least equivalent to these benchmarks.

During AA3 Western Power achieved or exceeded all service standard benchmarks except SAIFI Rural Long³⁶ in 2012/13 and 2013/14 and the Average Outage Duration³⁷ in 2015/16.

For AA4 it proposes to:

- Remove the system minutes interrupted measure
- Set the benchmarks using a five-year average of actual performance
- Set the benchmarks using the average of the 99th (or 1st) percentile of the distributions of best fit, rather than the 97.5th (or 2.5th) percentile that was used for AA3.
- Amend the application of the major event day definition.

Further details on service standard benchmarks are included in section 5.5.

³⁵ Reference services are standard services specified in the access arrangement with published prices and terms and conditions.

³⁶ SAIFI Rural Long is the number of sustained (greater than 1 minute) frequency interruptions over a 12 month period experienced by distribution customer interruptions attributable to the distribution system (after exclusions) divided by the number of distribution customers served. A Rural Long feeder is a feeder which is not a CBD or urban feeder with a total high voltage feeder route length greater than 200 km.

³⁷ Average Outage Duration is the cumulative actual duration (in minutes) of unplanned outages divided by the total number of events on regulated transmission circuits (after exclusions).

4.4 Adjustments at next access arrangement

The access arrangement includes a number of adjustment mechanisms that set the method and parameters for calculating adjustments to target revenue at the next access arrangement review.

A summary of the proposed amendments is included below.

4.4.1 Service Standard Adjustment Mechanism

The service standard adjustment mechanism provides a financial reward or penalty depending on Western Power's actual performance compared to its service standard targets.

Western Power has proposed a number of amendments to the service standard adjustment mechanism for AA4 including:

- Set the service standard targets using the average of the 50th percentile of the distributions of best fit
- Adjust rural long service standard targets to account for the improvement in service expected from the Kalbarri micro-grid project
- Use the value of customer reliability estimates from AEMO's 2014 study, adjusted to apply to WA, to set distribution reliability incentive rates
- Use updated revenue at risk, weighted to account for the removal of system minutes interrupted and forecast AA4 revenue, to set the transmission and call centre incentive rates

4.4.2 Investment Adjustment Mechanism

The investment adjustment mechanism allows for the carryover from one access arrangement to the next period of costs or benefits arising from differences between forecast and actual capital expenditure. It only applies to certain classes of expenditure, primarily demand or customer driven. AA3 included distribution wood poles.

Western Power proposes amending the categories of investment subject to the investment adjustment mechanism as follows:

- remove distribution wood pole management;
- remove the Rural Power Improvement Program; and
- include metering.

4.4.3 Gain Sharing Mechanism

The gain sharing mechanism provides an additional incentive to Western Power to achieve operating cost efficiencies during an access arrangement period as it ensures Western Power retains the efficiency saving for five years from when the efficiency is achieved.

Western Power proposes amending and updating the gain sharing mechanism including:

- separating the calculation of transmission and distribution service standard performance; and
- updating the network growth escalation and uncontrollable cost input values.

4.4.4 *D- Factor*

The D-factor provides for the recovery of operating expenditure incurred by Western Power as a result of deferring a capital expenditure project or for demand-management initiatives.

Western Power proposes amending the D-factor to allow in-period applications and approval of expenditure.

4.4.5 *Technical Rules*

Western Power has proposed amendments to require it to only report on Technical Rule changes that result in a material increase or decrease in cost, rather than reporting every single change.

4.5 **Trigger events**

Trigger events determine when an access arrangement review must be undertaken earlier than planned.

Western Power proposes amending the events that would trigger a review as follows:

- Remove the mandated roll-out of advanced interval meters as a trigger event
- Remove reference to the carbon pricing mechanism announced in 2011
- Include a new trigger event relating to “Government-led reforms”

Further details are included in section 5.7.

4.6 **Supplementary matters**

This includes provisions needed to support the operation of the wholesale electricity market.

Western Power has proposed amendments that it considers clarify that Western Power does not have any direct requirements to perform balancing, ancillary services, stand-by, trading or settlement functions but will continue to fulfil its obligations as a network operator and meter data agent under the WEM Rules and Technical Rules to support AEMO in performing its functions, including by providing network and metering information.

Further details are included in section 5.8.

4.7 **Policies and Contracts**

A summary of Western Power’s proposed changes to its policies and contracts is set out below.

4.7.1 *Electricity Transfer Access Contract*

Western Power has a standard access contract for all reference services. It is proposing to make the following amendments:

- Strengthening the provisions requiring users to keep within their contracted capacity and requiring generators (other than small customers operating small

scale generators) to give advance notice to Western Power of material changes to their plant.

- Allowing Western Power to nominate new services which will be applicable to small customers (for example to reflect a meter upgrade).
- Ensuring the liability provisions operate as intended and are not circumvented by large commercial users utilising the services but electing not to be party to contractual arrangements with Western Power.
- Making it clear that, where a user provides Western Power with a cash deposit, any excess cash which accrues to Western Power (for example due to interest earned) will be refunded to the user on a monthly basis and within a reasonable time.
- Inserting CPI escalation for resetting of liability caps.

Further details are included in section 5.9.

4.7.2 Applications and Queuing Policy

The Applications and Queuing Policy sets out the processes Western Power and applicants must follow to connect customers and how Western Power will prioritise applications. It is proposing the following amendments:

- Making spare capacity more readily available to non-competing applications group members.
- Withdrawing dormant applications from access queues.
- Providing customers with more options for their connection applications when their circumstances change.
- Providing more clarity around the preliminary access offer process.
- Providing Western Power with the ability to terminate competing application groups when a network access solution is not viable, rather than the group existing in perpetuity.
- Ensuring consistency with the *Electricity Corporations (Prescribed Customers) Order 2007*. Western Power notes the following:

“Currently the applications and queuing policy considers contestability on an exit point by exit point basis. Where the customer consumes (or is reasonably expected to consume) 50 MWh or more at an exit point, the customer is considered contestable. Where consumption is below 50 MWh, the customer is not contestable.

Western Power has identified this is inconsistent with the Prescribed Customers Order, which considers the customer’s portfolio of exit points.

The Order provides that a customer is contestable where it has a portfolio of exit points (a hospital or university for example), and one or more of the exit points exceeds the 50 MWh threshold. Under the current AQP, the customer would only be considered contestable (and, therefore, able to purchase electricity from retailers other than Synergy) at the exit point that exceeds 50 MWh, but not at the other sub-50 MWh exit points.

We propose to amend the AQP to align it with the Prescribed Customers Order.”³⁸

³⁸ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, pp. 264-265.

- Clarifying that the policy only applies to covered services.
- Clarifying what information provided by customers is confidential and what can be shared with third parties.
- Allowing provisions for both electricity transfer applicants and connection applicants to depart from the policy in progressing an application.

Further details are included in section 5.10.

4.7.3 Contributions Policy

The contributions policy sets out the principles and processes for determining when a contribution will be required from a user, including for a network augmentation, and for determining the amount of the contribution. The proposed amendments include:

- Introduction of a 15 year revenue offset for residential customers wishing to connect to the network.
- Removing the distribution headworks scheme.
- Expanding the low voltage connection headworks scheme to new connections (currently only applies to connection upgrades).

Further details are included in section 5.11.

4.7.4 Transfer and Relocation Policy

This policy sets out how customers with existing contracts can transfer or relocate their connections. Western Power's proposed amendments include:

- Ensure closer alignment with the provision of the Access Code.
- Ensure defined terms are consistent with other regulatory policies and documents (such as the Applications and Queuing Policy).
- Boundaries with other regulatory policies and contracts are distinct.
- Make the relationship between the Applications and Queuing Policy and relocations under the Transfer and Relocation Policy clearer, particularly the fact that relocations of services require an application under both instruments.
- Better define the criteria relevant to whether Western Power give consent to a requested transfer or relocation.
- Enhance the transparency of the obligations and rights of involved parties.

Further details are included in section 5.12.

5 Components of the access arrangement

The required content of an access arrangement is specified in Chapter 5 of the Access Code. The regulatory requirements and Western Power's proposal for each component of the access arrangement are set out below in the following order:

- Introduction to the Access Arrangement
- Revenue requirement
 - Form of price control
 - Target revenue
- Reference and non-reference services
- Pricing methods, price list and price list information
- Service standard benchmarks
- Adjustments to target revenue at next review
- Trigger events
- Supplementary matters
- Electricity transfer access contract
- Applications and queuing Policy
- Contributions policy
- Transfer and Relocation Policy

5.1 Introduction to the Access Arrangement

5.1.1 *Regulatory Requirements and Current Access Arrangement*

The introduction to the current access arrangement includes dates for revision of the access arrangement. Under sections 5.29 and 5.31 of the Access Code, an access arrangement must specify:

- a revisions submission date that is at least six months before the target revisions commencement date; and
- a target revisions commencement date that must be five years after the start of the access arrangement period, unless a different date is proposed by the service provider and the different date is consistent with the Code objective.

The access arrangement once (first) approved continues in effect until the network ceases to be covered and must be reviewed periodically.

Western Power's access arrangement initially required Western Power to submit its proposed revisions for AA4 by 1 March 2016 and the revisions were targeted to commence on 1 July 2017.

On 6 March 2014, the Minister for Energy launched a review of the electricity market and announced preferred options for development in March 2015. These options included transferring regulation of the Western Power network from the Western Australian regime to the National Electricity Law and relevant National Electricity Rules and also applying the relevant National Electricity Rules to regulate Western Power's metering services.

Western Power considered this created uncertainties around the regulatory framework and made it difficult to effectively plan its submission for AA4. It therefore applied to the ERA to defer its revisions submission date. In June 2015, the ERA approved a deferral of the revisions submission date from 1 March 2016 to 31 December 2016.

A package of Bills to transfer the regulation of Western Power's network to the national framework was introduced to Parliament in June 2016. It was intended that the Bills would be passed by late November 2016 to allow Western Power to commence the regulatory process under the national regulatory framework in December 2016, and for the Australian Energy Regulator's determination to apply from 1 July 2018.

However, in November 2016 it became clear the Bills would not pass in time. Consequently, Western Power continues to be subject to the current State based regulatory scheme. To provide Western Power with sufficient time to prepare its submission, the Minister amended the Access Code to extend Western Power's submission deadline to 2 October 2017. This is three months after AA4 was initially targeted to commence (i.e. 1 July 2017).

Network tariffs were last adjusted on 1 July 2016. Normally, Western Power updates its price list every year, with new tariffs commencing on 1 July. However, as the price control set out in the access arrangement only includes target revenues for the five years ending 30 June 2017, this effectively means Western Power will not be able to adjust the 2016/17 network tariffs until the ERA approves a revised access arrangement.

The AA4 determination will include revenues for the five years commencing 1 July 2017. Target revenues for AA4 will be adjusted, when the decision is finalised, for the AA4 interval of delay. This will reflect any differences between the approved revenue for the full AA4

period and the revenue Western Power recovered from the old 2016/17 tariffs during the interval of delay, i.e. between 1 July 2017 and the date the revisions take effect.

5.1.2 AA4 Proposal

Western Power has proposed a five year period for AA4. It proposes the revised access arrangement will commence on 1 July 2018.

It has proposed revisions for the next access arrangement period should be submitted to the ERA by 1 March 2021 with a commencement date of 1 July 2022. It notes this will allow a 15-month period to conduct the access arrangement review process.

Issue 5

Submissions are invited from interested parties on the dates Western Power has proposed for the next review of the access arrangement.

5.2 Revenue Requirement

The revenue requirement includes both the form of the price control and the amount of revenue Western Power can earn (target revenue).

5.2.1 Form of Price Control

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

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

- 6.1 Subject to section 6.3, an access arrangement may contain any form of price control provided it meets the objectives set out in section 6.4 and otherwise complies with this Chapter 6.
- 6.2 Without limiting the forms of price control that may be adopted, price control may set target revenue:
 - (a) by reference to the service provider’s approved total costs; or
 - (b) by setting tariffs with reference to:
 - (i) tariffs in previous access arrangement periods; and
 - (ii) changes to costs and productivity growth in the electricity industry;
 or
 - (c) using a combination of the methods described in sections 6.2(a) and 6.2(b).

Section 6.3 of the Access Code constrains the choice of price control for the first access arrangement period, which is not relevant to the proposed access arrangement revisions.

Section 6.4(a) of the Access Code sets out objectives for the price control in relation to the setting of an amount of target revenue for the access arrangement period, which are:

- (a) giving the service provider an opportunity to earn revenue (“target revenue”) for the access arrangement period from the provision of covered services as follows:
 - (i) an amount that meets the forward-looking and efficient costs of providing covered services, including a return on investment commensurate with the commercial risks involved;

plus
 - (ii) for access arrangements other than the first access arrangement, an amount in excess of the revenue referred to in section 6.4(a)(i), to the extent necessary to reward the service provider for efficiency gains and innovation beyond the efficiency and innovation benchmarks in a previous access arrangement;

plus

- (iiA) an amount (if any) determined under sections 6.5A to 6.5E;³⁹
 - plus
- (iii) an amount (if any) determined under section 6.6;⁴⁰
 - plus
- (iv) an amount (if any) determined under section 6.9;⁴¹
 - plus
- (v) an amount (if any) determined under an investment adjustment mechanism (see sections 6.13 to 6.18);
 - plus
- (vi) an amount (if any) determined under section 6.37A.⁴²

Sections 6.4(b) and 6.4(c) set out further objectives for the price control of:

- (b) enabling a user to predict the likely annual changes in target revenue during the access arrangement period (section 6.4(b)); and
- (c) avoiding price shocks (that is, sudden material tariff adjustments between succeeding years (section 6.4(c)).

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

The price control also includes provision for adjustments to revenues from one access arrangement period to the next,

The price control under the current access arrangement is applied subject to a side constraint on year-to-year changes to reference tariff charges. The side constraint limits annual changes to individual reference tariffs during the access arrangement period to mitigate the effects of price shocks during an access arrangement period.

AA4 Proposal

For AA4, Western Power proposes to:

- retain the revenue cap form of price control and building block methodology to calculate target revenue;
- adopt a post-tax nominal modelling approach, rather than the real post tax modelling approach used for AA3, to be consistent with the approach taken by

³⁹ Section 6.5A to 6.5E – Recovery of deferred revenue added to the target revenue.

⁴⁰ Section 6.6 – Target revenue may be adjusted for unforeseen events, being costs as a result of a force majeure event where some or all of the costs will not be covered by insurance.

⁴¹ Section 6.9 – Target revenue may be adjusted for technical rule changes where the technical rules were amended in the previous access arrangement to which costs were incurred by the service provider and no allowance was made in the access arrangement and the costs were not reasonably foreseen or costs were not incurred for which an allowance was made in the access arrangement.

⁴² Section 6.37A – The tariff equalization contributions that may be added to target revenue.

the ERA in its recent gas decisions and the AER in all recent gas and electricity decisions;

- expand the revenue cap formula for the annual price list to include an adjustment for the annual update to the weighted average cost of capital discussed later on page 55; and
- retain the AA3 side constraint formula.

Although Western Power proposes retaining a revenue cap and the ability to correct for under or over recovery of revenue each year, it notes:

“Under the proposed access arrangement, Western Power has the ability to recover less than the revenue cap amounts determined under the formulae ... Western Power will be mindful of any material increases in revenue that may occur due to the operation of the formulae and may intentionally under-recover the revenue cap to reduce price shocks that may occur. The revenue correction mechanism can be used to ensure all revenue is recovered.”⁴³

The ERA’s final decision for AA3 anticipated average charges over the AA3 period would increase broadly in line with CPI.⁴⁴ However, due to energy volumes being lower than forecast in Western Power’s AA3 submission and the TEC being higher than forecast, average charges have increased by more than CPI.

Table 2 below shows the average change in prices each year during AA3 compared with CPI.

Table 2 AA3 annual average increase in charges including CPI (nominal)⁴⁵

	Total	Transmission	Distribution	CPI
2012/13	3.7%	-8.7%	7.2%	2.25%
2013/14	4.0%	-12.0%	5.3%	2.0%
2014/15	4.8%	-0.8%	6.9%	2.75%
2015/16	5.1%	-10.2%	10.3%	2.5%
2016/17	1.7% ⁴⁶	-9.4%	4.8%	2.5%

⁴³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 256.

⁴⁴ See final decision notice published on 5 September 2012
<https://www.erawa.com.au/cproot/10738/2/20120905%20-%20D94273%20-%20Western%20Power%20final%20decision%20AA3%20Notice.pdf>

⁴⁵ Extracted from annual price lists approved and published on the ERA website.

⁴⁶ Western Power did not take up its full target revenue.

Issue 6

Submissions are invited from interested parties on the proposed price control and side constraint formula. In particular, any views on how variations in demand during the access arrangement period should be managed to avoid price shocks to customers.

5.2.2 Target Revenue

The Access Code requires target revenue to be set for transmission and distribution services separately. Western Power has determined the level of target revenue using a 'building-block' approach since the first access arrangement. Target revenue is comprised of:

- operating costs (non-capital costs);
- depreciation;
- return on the regulated capital base;
- return on working capital;
- taxation;
- adjustments from AA3; and
- tariff equalisation contributions (TEC).⁴⁷

The regulated capital base is derived as follows:

$$\text{Opening capital base} + \text{forecast capital expenditure} - \text{depreciation} - \text{redundant assets} = \text{Closing capital base}$$

Western Power's proposed target revenue for AA4 is set out in the tables below.

Table 3 AA4 Proposed target revenue for the transmission network (\$ million real at June 2017)

	2017/18	2018/19	2019/20	2020/21	2021/22	Proposed AA4 Total	Approved AA3 Total
Operating costs	93.84	84.17	83.15	84.56	84.55	430.28	578.57
Depreciation	113.68	117.21	126.85	138.25	144.29	640.28	562.15
Accelerated depreciation	-	-	-	-	-	-	-
Return on regulated asset base	137.09	139.37	143.46	148.66	152.06	720.65	592.44
Return on working capital	1.10	1.50	1.64	1.77	2.00	8.00	4.85
Taxation	-	-	-	-	8.28	8.28	57.7
Forward looking efficient cost	345.71	342.25	355.10	373.23	391.19	1,807.49	1,795.71
Investment Adjustment Mechanism	-33.58	-	-	-	-	-33.58	-52.50
Service standard adjustment mechanism	13.40	-	-	-	-	13.40	6.76
Unforeseen events	5.52	-	-	-	-	5.52	-
D-factor	-	-	-	-	-	-	-
Gain sharing mechanism	18.22	19.34	21.58	22.50	22.05	103.69	-
Deferred revenue recovery	-4.75	4.75	4.75	4.75	4.75	23.77	20.99
K Factor	1.23	-	-	-	-	1.23	29.20
Total Revenue Building Blocks (unsmoothed)	355.26	366.35	381.44	400.48	417.99	1,921.52	1,800.16

⁴⁷ The TEC is an amount that Western Power is required to pay the Western Australian Government to finance a subsidy provided to Horizon Power customers.

Table 4 AA4 Proposed target revenue for the distribution network (\$ million real at June 2017)

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA3 Total
Operating costs	292.51	268.33	266.53	272.63	274.78	1,374.78	1,922.38
Depreciation	263.62	280.83	295.17	298.27	289.11	1,427.01	1,260.28
Accelerated depreciation	-	-	-	-	-	-	4.31
Return on regulated asset base	255.42	266.18	276.65	288.13	293.95	1,380.34	929.24
Return on working capital	7.12	6.91	7.19	7.25	7.51	35.98	15.05
Taxation	48.14	56.33	60.84	58.04	56.02	279.36	209.7
Forward looking efficient cost	866.82	878.58	906.38	924.31	921.38	4,497.46	4,340.96
Investment Adjustment Mechanism	-5.89	-	-	-	-	-5.89	2.12
Service standard adjustment mechanism	241.70	-	-	-	-	241.70	27.03
Unforeseen Events	14.19	-	-	-	-	14.19	-
D-factor	8.78	-	-	-	-	8.78	-
Gain sharing mechanism	36.39	37.51	34.83	13.32	46.89	168.93	-
Deferred revenue recovery	37.72	37.72	37.72	37.72	37.72	188.58	169.06
K factor	36.56	-	-	-	-	36.56	54.15
Tariff Equalisation Contribution	164.31	169.40	154.28	147.11	148.42	783.52	984.88
Total Revenue Building Blocks (unsmoothed)	1,400.57	1,123.20	1,133.20	1,122.45	1,154.41	5,933.83	5,578.2

Western Power describes the process it has followed to develop a smooth price profile in section 11 of the access arrangement information. It notes:

“We have translated the target revenue for revenue cap services into an average price path over the five years of the AA4 period.⁴⁸ The price path is determined by smoothing the revenue over the AA4 period in present value terms. This smoothed revenue profile may be affected by the following:

- forecast energy consumption over the AA4 period
- the average price path over the AA3 period
- predictable changes in average price during the AA4 period.”⁴⁹

Western Power notes it has deferred some revenue for transmission (and taken up more revenue in distribution) to limit its forecast increase in transmission prices to 10 per cent.

⁴⁸ Noting that prices in 2017/18 are unchanged from 2016/17.

⁴⁹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 243.

The values in Table 5 and Table 6 below, which show the movement between unsmoothed and smoothed revenue targets including the transmission revenue adjustment, have been extracted from Western Power’s revenue model.

Table 5 AA4 Smoothed target revenue for the transmission network (\$ million real at June 2017)

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA4 Total at Present Value
Unsmoothed Revenue	355.26	366.35	381.44	400.48	417.99	1,921.52	1,686.86
Revenue deferred ⁵⁰	-66.42	-54.37	-44.47	-38.40	-30.44	-234.10	-209.56
Adjusted revenue	288.84	311.98	336.97	362.08	387.54	1,687.42	1,477.30

Table 6 AA4 Smoothed target revenue for the distribution network (\$ million real at June 2017)

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA4 Total at Present Value
Unsmoothed Revenue	1,400.57	1,123.20	1,133.20	1,122.45	1,154.41	5,933.83	5,246.80
Revenue brought forward	66.42	54.37	44.47	38.40	30.44	234.10	209.56
Adjusted unsmoothed revenue	1,466.98	1,177.57	1,177.67	1,160.86	1,184.85	6,167.93	5,456.37
Smoothed revenue	1,201.54	1,228.73	1,245.82	1,255.61	1,268.59	6,200.28	5,456.37

Western Power has calculated its proposed smooth target revenue profile will increase overall charges⁵¹ by 2.5 per cent per annum above CPI commencing from 1 July 2018. This includes a forecast reduction in energy volumes of 0.7 per cent per annum.

Forecast Operating Expenditure

Section 6.40 of the Access Code provides for the approved total costs and target revenue to include an amount for forecast non-capital costs (operating costs) for the access arrangement period.

- 6.40 Subject to section 6.41, the non-capital costs component of approved total costs for a covered network must include only those non-capital costs which would be incurred by a service provider efficiently minimising costs.

Sections 6.41 and 6.42 of the Access Code provide for the non-capital costs component of approved total costs to include non-capital costs incurred for an “alternative option” for providing covered services, subject to certain conditions being met. An alternative option is an activity undertaken by Western Power for the purposes of providing a covered service as an alternative to investing in a major augmentation of the network, and may include such

⁵⁰ The revenue deferred was calculated to result in a smoothed revenue profile.

⁵¹ The average charge is calculated by dividing target revenue by forecast energy volumes.

activities as demand-side management or generation either instead of, or in addition to, network augmentation.

- 6.41 Where, in order to maximise the net benefit after considering alternative options, a service provider pursues an alternative option in order to provide covered services, the non-capital costs component of approved total costs for a covered network may include non-capital costs incurred in relation to the alternative option (“alternative option non-capital costs”) if:
- (a) the alternative option non-capital costs do not exceed the amount of alternative option non-capital costs that would be incurred by a service provider efficiently minimising costs; and
 - (b) at least one of the following conditions is satisfied:
 - (i) the additional revenue for the alternative option is expected to at least recover the alternative option non-capital costs; or
 - (ii) the alternative option provides a net benefit in the covered network over a reasonable period of time that justifies higher reference tariffs; or
 - (iii) the alternative option is necessary to maintain the safety or reliability of the covered network or its ability to provide contracted covered services.
- 6.42 For the purposes of section 6.41(b)(i) “additional revenue” for an alternative option means:
- (a) the present value (calculated at the rate of return over a reasonable period) of the increased tariff income reasonably anticipated to arise from the increased sale of covered services on the network to one or more users (where “increased sale of covered services” means sale of covered services which would not have occurred had the alternative option not been undertaken); minus
 - (b) the present value (calculated at the rate of return over the same period) of the best reasonable forecast of the increase in non-capital costs (other than alternative option non-capital costs) directly attributable to the increased sale of the covered services (being the covered services referred to in the expression “increased sale of covered services” in section 6.42(a)),

where the “rate of return” is a rate of return determined by the [ERA] in accordance with the Code objective and in a manner consistent with this Chapter 6, which may be the rate of return most recently approved by the [ERA] for use in the price control for the covered network under this Chapter 6.

Western Power is proposing \$1,805.1 million operating expenditure for AA4, which is \$695 million less than the costs approved for AA3.

Western Power’s proposed operating expenditure for AA4 is set out in the table below.

Table 7 AA4 Proposed Operating Expenditure (real \$ million at June 2017)

Expenditure	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA3 Total
Recurrent network base	317.6	317.6	317.6	317.6	317.6	1,588.0	1,969.9
Step changes	-5.0	-5.0	-5.0	-5.0	-5.0	-25.0	77.3
Total recurrent network costs	312.6	312.6	312.6	312.6	312.6	1,563.0	2,047.2
Network Growth escalation	2.9	5.9	9.4	12.6	15.7	46.6	110.4
Efficiency dividend	-3.2	-6.3	-9.6	-12.8	-16.1	-48.0	-100.9
Non-recurrent network costs	32.5	1.2	0.2	0.0	0.5	34.4	95.3
Expensed indirect network costs	40.0	36.8	33.3	39.4	39.5	189.0	233
Labour cost escalation	1.4	2.4	3.7	5.4	7.1	20.0	109.5
Total	386.4	352.5	349.7	357.2	359.3	1,805.1	2,494.4

Western Power explains the basis of its proposed operating expenditure in chapter 7 of its access arrangement information.

As part of its review the ERA will consider benchmarking information, including the methodology used by the Australian Energy Regulator. The ERA has also engaged a technical consultant to provide advice on Western Power's proposal.

Issue 7

Submissions are invited from interested parties on whether Western Power's proposed operating expenditure meets the requirement of section 6.40 to 6.42 of the Access Code.

Opening Regulated Capital Base for AA4

The capital base is the value ascribed to the network assets that are used to provide covered services. Where the target revenue for the price control is set by reference to the service provider's approved total costs, section 6.43 of the Access Code provides for the value of capital related costs to be calculated by determining a capital base and calculating a return on the capital base and an amount of depreciation.

Under the first access arrangement, an initial capital base was established under section 6.46 of the Access Code at an "optimised deprival value" (ODV) of the network assets.

Section 6.48 of the Access Code requires that the capital base at the start of any access arrangement period, other than the first access arrangement period, be determined in a manner that is consistent with the Code objective. A note to section 6.48 indicates that:

{A number of options are available in relation to the determination of the capital base at the start of an access arrangement period, including:

- rolling forward the capital base from the previous access arrangement period applying benchmark indexation such as the consumer price index or an asset specific index, plus new facilities investment incurred during the previous access arrangement period, less depreciation and redundant capital etc; and
- valuation or revaluation of the capital base using an appropriate methodology such as the Depreciated Optimised Replacement Cost or Optimised Deprival Value methodology.}

Although section 6.48 of the Access Code does not mandate a specific method for determining the capital base, sections 6.51A to 6.63 of the Access Code contemplate new facilities investment being added to the capital base and the value of any redundant assets being subtracted from the capital base, consistent with use of the "roll forward" method for determination of the capital base.

Section 6.51A of the Access Code provides that new facilities investment may be added to the capital base if it passes certain tests:

6.51A New facilities investment may be added to the capital base if:

- (a) it satisfies the new facilities investment test; or
- (b) the [ERA] otherwise approves it being added to the capital base if:
 - (i) it has been, or is expected to be, the subject of a contribution; and
 - (ii) it meets the requirements of section 6.52(a); and
 - (iii) the access arrangement contains a mechanism designed to ensure that there is no double recovery of costs as a result of the addition.

The new facilities investment test is set out in section 6.52 of the Access Code:

6.52 New facilities investment satisfies the new facilities investment test if:

- (a) the new facilities investment does not exceed the amount that would be invested by a service provider efficiently minimising costs, having regard, without limitation, to:
 - (i) whether the new facility exhibits economies of scale or scope and the increments in which capacity can be added; and
 - (ii) whether the lowest sustainable cost of providing the covered services forecast to be sold over a reasonable period may require the installation of a new facility with capacity sufficient to meet the forecast sales;

and

- (b) one or more of the following conditions is satisfied:
 - (i) either:
 - A. the anticipated incremental revenue for the new facility is expected to at least recover the new facilities investment; or
 - B. if a modified test⁵² has been approved under section 6.53 and the new facilities investment is below the test application threshold – the modified test is satisfied;
 - or
 - (ii) the new facility provides a net benefit in the covered network over a reasonable period of time that justifies the approval of higher reference tariffs; or
 - (iii) the new facility is necessary to maintain the safety or reliability of the covered network or its ability to provide contracted covered services.

Section 6.54 of the Access Code requires that the ERA, in determining whether new facilities investment satisfies the new facilities investment test, must have regard to whether the new facilities investment was required by a written law or a statutory instrument.

Sections 6.61 to 6.63 of the Access Code provide for an amount to be subtracted from the capital base in respect of redundant network assets.

Redundant capital

- 6.61 Subject to section 6.62, the [ERA] may in relation to a determination under section 6.44(a) require an amount (“redundant capital”) to be removed from the capital base to the extent (if any) necessary to ensure that the network assets which have ceased to contribute in any material way to the provision of covered services are not included in the capital base.
- 6.62 Before requiring a removal under section 6.61, the [ERA] must have regard to:
 - (a) whether the service provider was efficiently minimising costs when it developed, constructed or acquired the network assets; and
 - (b) the uncertainty such a removal may cause and the effect which any such uncertainty may have on the service provider, users and applicants; and
 - (c) whether the cause of the network assets ceasing to contribute in any material way to the provision of covered services was the application of a written law or a statutory instrument; and
 - (d) whether the service provider was compelled to develop, construct or acquire the network assets:
 - (i) by an award by the arbitrator; or
 - (ii) Because of the application of a written law or a statutory instrument; and

⁵² Under the “modified test” referred to in section 6.52(b)(i)B of the Access Code, and set out in section 6.53, the ERA may approve new facilities investment below the threshold value where the ERA determines that approving the access arrangement with the modified test would be efficient and would promote the Code objective.

- (e) whether the depreciation of the network assets should be accelerated instead of or in addition to a redundant capital amount being removed from the capital base under section 6.61.

6.63 If the [ERA] requires a removal under section 6.61, then when making other determinations under this Chapter 6 the [ERA] may have regard to the removal.

{Examples of such other determinations include approving a weighted average cost of capital and assessing the economic life of assets.}

In making its determination on the opening capital base, the ERA will need to consider whether Western Power's proposal is consistent with the requirements of the Access Code. These considerations will include:

- the general method applied in calculating the capital base;
- verification that stated new facilities investment during AA3 actually occurred (this is usually done by reconciling with audited regulatory accounts);
- an assessment of actual capital expenditure in AA3 against the test in section 6.51A of the Access Code (advice from the Technical Consultant will underpin this assessment);
- depreciation calculations and asset lives;
- identification and treatment of any redundant assets.

A comparison of Western Power's actual capital expenditure with approved expenditure during AA3 for transmission and distribution are set out in Table 8 and Table 9 below.

Table 8 AA3 Actual and Approved Transmission Capital Expenditure (real \$ million at June 2017)

Expenditure	Actual	Approved	Difference
Capital Expenditure subject to the Investment Adjustment Mechanism			
Capacity Expansion	487.7	1,053.6	(565.9)
Customer Driven	29.5	100.6	(71.1)
Sub-Total	517.2	1,154.2	(637)
Capital Expenditure not subject to the Investment Adjustment Mechanism			
Asset Replacement	186.3	184.1	2.2
Reliability Driven	1.8	0.0	1.8
SCADA and Communications	58.5	84.3	(25.8)
Safety, Environmental & Statutory	111.9	135.6	(23.6)
IT	44.0	63.5	(19.5)
Business Support	28.4	53.1	(24.7)
Equity Raising Costs	9.2	9.2	0.0
Sub-Total	440.0	529.6	(89.6)
Total added to the RAB	957.2	1,683.8	(726.6)

Table 9 AA3 Actual and Approved Distribution Capital Expenditure (real \$ million at June 2017)

Expenditure	actual	approved	difference
Capital Expenditure subject to the Investment Adjustment Mechanism			
Capacity Expansion	181.7	365.1	(183.4)
Customer Driven	410.4	718.8	(308.4)
State Underground Power Program	41.6	14.9	26.8
Wood Pole Management	1,041.8	1,085.1	(43.3)
Sub-Total	1,675.5	2,183.8	(508.3)
Capital Expenditure not subject to the Investment Adjustment Mechanism			
Asset Replacement	451.1	207.1	244.0
Metering	78.4	174.7	(96.3)
Smartgrid	0.1	98.0	(97.9)
Reliability	6.6	3.4	3.2
SCADA and Communications	18.0	32.4	(14.4)
Safety, Environmental & Statutory	460.5	567.9	(107.4)
IT	98.5	105.2	(6.7)
Business Support	56.0	88.0	(32.0)
Equity Raising Costs	15.7	15.7	0.0
Sub-Total	1,184.8	1,292.3	(107.5)
Total added to the RAB	2,860.3	3,476.1	(615.8)

Forecast Regulated Capital Base for AA4

For the purposes of estimating the forward-looking and efficient costs of providing covered services to be included in target revenue for AA4, section 6.51 of the Access Code provides for the inclusion of forecast capital expenditure in the capital base, providing it meets the requirements of section 6.51A of the Access Code.

Similar to the determination of the opening capital base, the ERA will need to consider whether Western Power's proposed forecast capital base is consistent with the requirements of the Access Code. These considerations will include:

- the general method applied in calculating the capital base;
- an assessment of forecast capital expenditure for AA4 against the test in section 6.51A of the Access Code (advice from the Technical Consultant will underpin this assessment); and
- depreciation calculations and asset lives.

Forecast capital expenditure for the AA4 period is lower than that incurred during the AA3 period. Western Power states this reflects:

“... the efficiencies achieved during the AA3 period, and the customer-focussed approach we have taken to developing the AA4 revenue requirement.”⁵³

The tables below set out Western Power’s proposed capital expenditure for AA4 compared with actual expenditure in AA3.

Table 10 AA4 Proposed transmission network capital expenditure (real \$ million at June 2017) excluding Gifted Assets and Cash Contributions

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA3 Actual Total
Capital Expenditure subject to the Investment Adjustment Mechanism							
Capacity Expansion	30.7	31.1	45.7	72.4	62.0	241.9	487.7
Customer Driven	9.9	9.8	9.7	10.0	10.1	49.5	29.5
Sub-Total	40.6	40.9	55.4	82.4	72.1	291.4	517.2
Capital Expenditure not subject to the Investment Adjustment Mechanism							
Asset Replacement	42.5	70.5	56.9	57.9	68.5	296.2	186.3
Reliability Driven	0.0	0.0	0.0	0.0	0.0	0.0	1.8
SCADA and Communications	14.0	23.6	27.0	24.7	19.1	108.4	58.5
Safety, Environmental & Statutory	39.4	40.4	40.5	33.2	33.3	186.9	111.9
IT	16.7	17.5	15.7	11.6	8.8	70.2	44.0
Business Support	12.3	17.7	50.1	6.2	10.9	97.2	28.4
Equity Raising Costs	0.2	0.0	0.0	0.0	0.0	0.2	9.2
Sub-Total	125.2	169.7	190.2	133.6	140.6	759.2	440.0
Total added to the RAB	165.8	210.7	245.6	216.0	212.7	1,050.6	957.2

⁵³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 213.

Table 11 AA4 Proposed distribution network capital expenditure (real \$ million at June 2017) excluding Gifted Assets and Cash Contributions

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA3 Actual Total
Capital Expenditure subject to the Investment Adjustment Mechanism							
Capacity Expansion	43.8	41.5	33.5	32.5	37.7	189.0	181.6
Customer Driven	60.4	59.7	59.0	60.9	61.2	301.3	410.4
State Underground Power Program	18.1	23.3	15.1	3.8	8.4	68.8	41.6
Metering ⁵⁴	20.7	27.4	32.0	33.9	34.5	148.6	78.4
Sub-Total	143.0	152.0	139.7	131.2	141.8	707.6	712.0
Capital Expenditure not subject to the Investment Adjustment Mechanism							
Asset Replacement	74.3	77.6	83.5	89.9	101.1	426.4	451.1
Wood Pole Management ⁵⁵	166.1	127.6	118.1	115.7	106.2	633.8	1,041.8
Reliability	5.1	10.6	3.2	2.1	2.1	23.1	6.6
Smartgrid	0.0	0.0	0.0	0.0	0.0	0.0	0.1
SCADA and Communications	22.8	24.1	15.7	14.7	12.9	90.2	18.0
Safety, Environmental & Statutory	27.7	43.2	41.7	34.2	34.4	181.3	460.4
IT	41.9	44.0	39.4	29.0	22.0	176.3	98.5
Business Support	28.6	41.0	115.9	14.4	25.1	225.1	56.0
Equity Raising Costs	0.1	0.0	0.0	0.0	0.0	0.1	15.7
Sub-Total	366.5	368.0	417.6	300.2	303.9	1,756.3	2,148.0
Total	509.5	520.0	557.4	431.3	445.7	2,463.9	2,860.2

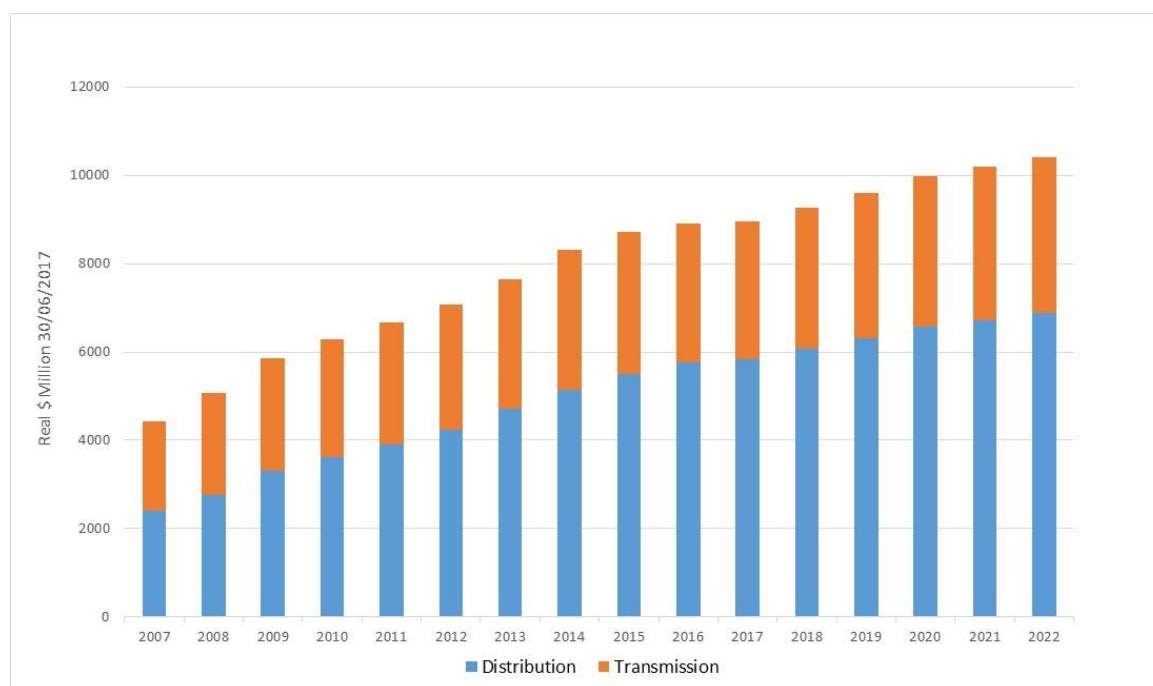
⁵⁴ Metering was not subject the IAM in AA3 but has been proposed to be included as part of the IAM in AA4.

⁵⁵ Wood pole management was subject to the IAM in AA3 but has been proposed to not be included as part of the IAM in AA4.

Western Power explains the basis of its proposed capital expenditure for AA4 in chapter 8 of the access arrangement information. Actual expenditure for AA3 is discussed in section 5.2.2 of the access arrangement information.

Figure 8 below shows the change in the regulated asset base since the first access arrangement period. As can be seen, Western Power is proposing it will continue to grow over the AA4 period.

Figure 8 Western Power RAB Closing Balance (Real \$ Million at June 2017)



Western Power's forecast regulatory asset base is shown in Table 12 and Table 13 below.

Table 12 Transmission regulated asset base (real \$ million at June 2017)

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA3 Total
Opening RAB	3,131.8	3,183.9	3,277.4	3,396.1	3,473.8	3,131.8	2,816.7
Net capex	165.8	210.7	245.6	216.0	212.7	1,050.8	1,683.8
Depreciation	(113.7)	(117.2)	(126.8)	(138.2)	(144.3)	(640.2)	(562.2)
Accelerated Depreciation							-
Closing RAB	3,183.9	3,277.4	3,396.1	3,473.8	3,542.2	3,542.2	3,938.3

Table 13 Distribution regulated asset base (real \$ million at June 2017)

	2017/18	2018/19	2019/20	2020/21	2021/22	AA4 Total	AA3 Total
Opening RAB	5,834.9	6,080.8	6,320.0	6,582.2	6,715.3	5,834.9	4,248.7
Net capex	509.5	520.0	557.4	431.3	445.7	2,463.9	3,476.1
Depreciation	(263.6)	(280.8)	(295.2)	(298.3)	(289.1)	(1,427)	(1260.1)
Accelerated Depreciation							(4.31)
Closing RAB	6,080.8	6,320.0	6,582.2	6,715.3	6,871.8	6,871.8	6,460.39

As can be seen in the tables above, the opening regulatory asset base for AA4 is lower than the values forecast for AA3 due to the lower than forecast capital expenditure during AA3.

Issue 8

Submissions are invited from interested parties on:

- whether actual capital expenditure during AA3 meets the requirements of the Access Code including sections 6.51A to 6.54; and
- whether Western Power's proposed capital expenditure for AA4 meets the requirements of the Access Code including sections 6.51A to 6.54.

Return on Regulated Capital Base

The rate of return, based on a weighted average cost of capital (WACC), provides a service provider with a return on the amount of capital it has invested in its business. It is calculated as a return on the regulatory asset base.

Section 6.64 of the Access Code requires that an access arrangement set out the WACC for a covered network. Under section 6.65 of the Access Code, the ERA may from time to time publish a determination of its preferred methodology for calculating the WACC in access arrangements. If such a determination is in effect at the time of an access arrangement review, the WACC must be determined using that methodology unless the service provider can demonstrate that an alternative methodology would better achieve the objectives set out in section 6.4 and the Code objective. Otherwise the WACC must be calculated in a manner consistent with section 6.66 of the Access Code.

As no determination is in effect the WACC must be estimated in a manner consistent with section 6.66 of the Access Code.

Section 6.66 of the Access Code requires that a WACC calculation:

- must represent an effective means of achieving the Code objective and the objectives in section 6.4; and
- must be based on an accepted financial model such as the Capital Asset Pricing Model.

Section 6.4 of the Access Code requires that the price control in an access arrangement must (among other things) provide the service provider with an opportunity to earn revenue sufficient to cover its forward-looking and efficient costs of providing covered services, including a return on investment commensurate with the commercial risks involved.

Western Power states it has based its proposed weighted average cost of capital (WACC) on the method used by the ERA in its 2016 decision on the access arrangement for the Dampier to Bunbury Natural Gas Pipeline:⁵⁶

Our estimate adopts broadly the same method for determining the cost of equity and debt that the ERA applied to the DBNGP, updating individual debt and equity parameters to reflect contemporary data. We will, however, continue to monitor ongoing limited merits and judicial reviews, and modify our proposal to reflect appeal outcomes where appropriate.

Western Power's estimate WACC is 6.09 per cent, comprising a nominal post tax cost of equity of 7.24 per cent and a nominal cost of debt of 5.32 per cent.

Western Power's proposed WACC parameters are set out in the following table, and compared to the approved WACC parameters in the recent Dampier to Bunbury Natural Gas Pipeline decision.

⁵⁶ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. xxvii.

Table 14 Approved AA3 WACC parameters, recent DBP approved WACC parameters, and proposed AA4 WACC parameters

Parameter	Western Power's Approved WACC for AA3 ⁵⁷	DBP Approved WACC ⁵⁸	Western Power's Proposed WACC for AA4 ⁵⁹
Nominal risk free rate	2.52%	1.80%	1.99%
Inflation rate	2.10%	1.43%	1.64%
Debt proportion	60%	60%	60%
Debt risk premium	2.708%	2.716%	2.79%
Five-year interest rate swap (effective yield)	n/a	2.100%	2.29%
Debt issuing costs	0.125%	0.24% (including debt issuing cost of 0.125% and hedging cost of 0.114%)	0.24% (including debt issuing cost of 0.125% and hedging cost of 0.114%)
Nominal cost of debt (return on debt)	5.35%	5.06%	5.32%
Market risk premium	6.0%	7.40%	7.5%
Equity beta	0.65	0.70	0.70
Corporate tax rate	30%	30%	30%
Franking credits (gamma)	0.25	0.4	0.4
Nominal after tax return on equity	6.42%	6.98%	7.24%
Nominal after tax WACC	5.78%	5.83%	6.09%
Real after tax WACC	3.60%	4.33%	4.38%

Approach to estimating the WACC

Western Power has used 2017-18 data to calculate the proposed WACC. It has used placeholder values as at 30 June 2017 where necessary, with the intent that these be replaced with the most current values at the time of the ERA's final decision.⁶⁰

Cost of equity

The cost of equity is equal to the return that investors require from a firm to compensate them for the risk they take by investing their capital. Western Power proposes use of the

⁵⁷ Economic Regulation Authority, *Further final decision on proposed revisions to the access arrangement for the Western Power network*, 29 November 2012, p. 21.

⁵⁸ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020*, 30 June 2016, p. 221.

⁵⁹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, pp. 188-189.

⁶⁰ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 191.

Capital Asset Pricing Model as the principal means of determining the return on equity. The main parameters used to calculate the cost of equity in the Capital Asset Pricing Model are the risk free rate, the equity beta, and the market risk premium.

- **Risk free rate (for the cost of equity estimate):** The risk free rate represents the return an investor would expect when investing in an asset with no risk. Western Power proposes adopting the yield of five-year Commonwealth Government Securities (CGSs) as a proxy for the nominal risk free rate.⁶¹ This is consistent with the ERA's approach in its recent Dampier to Bunbury Natural Gas Pipeline (DBNGP) decision,⁶² and its approach in the third Western Power access arrangement decision.⁶³ Using the 20-day averaging period to 30 June 2017 as a placeholder, this approach gives a risk free rate of 1.99 per cent.
- **Equity beta:** The equity beta represents how sensitive a firm's returns are compared to overall movements in the market. Western Power notes that recent regulatory determinations in Australia have converged on an equity beta of 0.7, and proposes this value be used for this access arrangement.⁶⁴ The ERA adopted an equity beta of 0.7 for its latest DBNGP decision.⁶⁵
- **Market risk premium:** The market risk premium is the difference between the return investors expect from a diversified market portfolio, and the risk free rate. It represents the premium investors expect to receive in return for taking on systematic risk. Western Power has proposed several changes to the ERA's approach to estimating the market risk premium. These are detailed below.

Western Power's proposed approach to the market risk premium

Western Power's proposal is largely based on the ERA's recent approach to estimating the market risk premium. The ERA uses an estimate of the long-run average market risk premium computed from historical data (the 'lower bound') and an estimate derived from the Dividend Growth Model (the 'upper bound') to establish a range of possible outcomes for the market risk premium. Having established this range, the ERA then selects a point

⁶¹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 193.

⁶² Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 50.

⁶³ Economic Regulation Authority, *Final decision on proposed revisions to the access arrangement for the Western Power network*, 5 September 2012, p. 327.

⁶⁴ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 202.

⁶⁵ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, pp. 102-103.

estimate by applying forward-looking indicators of market conditions, and its own judgment.⁶⁶

Western Power has proposed several changes to the ERA's method for setting the lower bound:

- using Australian Taxation Office data on credit yields from 1998 onwards, and assuming that dividends were 75 per cent franked prior to 1998 (in its DBNGP decision, the ERA assumed that dividends were 75 per cent franked in all years, and did not use Australian Taxation Office data on credit yields);⁶⁷
- placing greater weight on the NERA Economic Consulting (NERA) market risk premium study,⁶⁸ than on the Brailsford, Handley and Maheswaran market risk premium study,⁶⁹ by using only the NERA adjustments, and so not using Brailsford *et al* data prior to 1958;⁷⁰
- using only the arithmetic mean of a sample of returns to the market portfolio in excess of the risk free rate, rather than an average of the arithmetic and geometric means, to estimate the market risk premium;⁷¹ and
- using the longest available time series of market data (1883 to 2016) to inform the estimate.⁷²

Western Power's proposal results in a lower bound estimate of the market risk premium of 6.8 per cent.⁷³

Western Power has also proposed several changes to the ERA's method for setting the upper bound:

- updating the Dividend Growth Model to use market data up to 23 May 2017;⁷⁴
- recalculating market risk premium estimates to apply the gamma and theta values determined in the decision (that is, a proposed gamma of 0.4, and a theta of 0.53), and to use five-year risk free rate;⁷⁵ and

⁶⁶ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, pp. 108-127.

⁶⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 196.

⁶⁸ NERA Economic Consulting, *The market risk premium: Analysis in response to the AER's Draft Rate of Return Guidelines: A report for the Energy Networks Association*, October 2013.

⁶⁹ T. J. Brailsford, J. C. Handley and K. Maheswaran, 'The historical equity risk premium in Australia: Post-GFC and 128 years of data', *Accounting and Finance*, 2012, pp. 237-247.

⁷⁰ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 197.

⁷¹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 198.

⁷² Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 198.

⁷³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 198.

⁷⁴ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 198.

⁷⁵ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 200.

- including the AER's most recent Dividend Growth Model estimate, from its April 2017 final decision for TasNetworks.⁷⁶

Western Power's proposal results in an upper bound estimate of the market risk premium of 8.2 per cent.⁷⁷

Finally, Western Power has proposed a change to the way in which the ERA has previously set the market risk premium point estimate. It proposes retaining three of the ERA's four forward-looking indicators, being the default spreads on AA bonds, dividend yields on the All Ordinaries, and the interest rate swap spreads on five-year bonds. However, it considers that the fourth indicator – the Australian Stock Exchange 200 volatility index – is unreliable.⁷⁸ Western Power also proposes that the ERA adopt three additional forward-looking indicators, being the prevailing bill rate, the Wright market risk premium, and independent expert reports.⁷⁹

Western Power proposes that, based on a market risk premium range of 6.8 to 8.2 per cent and consideration of its six forward-looking indicators, the ERA should adopt a midpoint market risk premium of 7.5 per cent.⁸⁰

Cost of debt

The cost of debt is the return investors require on issued debt. The main parameters used to determine the cost of debt are the risk free rate, the debt risk premium, and debt raising and hedging costs.

- **Risk free rate (for the cost of debt estimate):** The risk free rate represents the return an issuer would expect when providing finance to a firm with no risk. Western Power proposes using the five-year bank bill swap rate as a proxy for the risk free rate, when calculating the cost of debt.⁸¹ This is consistent with the ERA's approach in the recent DBNGP decision.^{82,83} Using the 20-day averaging period to 30 June 2017 as a placeholder, this approach gives a risk free rate of 2.29 per cent.
- **Debt risk premium:** The debt risk premium is the margin above the risk free rate that debt issuers require to compensate them for the risk inherent in providing debt finance.

⁷⁶ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, pp. 201-202.

⁷⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 201.

⁷⁸ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 201.

⁷⁹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 202.

⁸⁰ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 202.

⁸¹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 204.

⁸² Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 144.

⁸³ At the time of Western Power's third access arrangement, the ERA used the same risk free rate for calculating both the cost of debt and cost of equity. In more recent decisions, the ERA has used the bank bill swap rate to calculate the cost of debt, as it gives a more appropriate, market-based measure of the rate at which banks lend to one another.

In recent decisions, the ERA has calculated the debt risk premium as the difference between the yield on an appropriate sample of corporate bonds, and the bank bill swap rate over an appropriate term.⁸⁴ The debt risk premium relies on two additional inputs, being the benchmark credit rating and the term of debt:

- **Benchmark credit rating:** The benchmark credit rating determines the sample of bonds used to calculate the debt risk premium, and should reflect a benchmark efficient entity in the electricity and gas industry in Australia. Western Power considers that a credit rating within the BBB band is appropriate, and notes that the ERA has used a credit rating within this band for Australian electricity and gas businesses in the past.⁸⁵ The ERA used a credit rating within the BBB band in its recent DBNGP decision,⁸⁶ but had previously used an average of A-/BBB+/BBB corporate bonds in its benchmark sample for the last Western Power access arrangement decision.⁸⁷
- **Term of debt:** The term of debt used to calculate the debt risk premium represents the average term of debt of a benchmark efficient entity, and its staggered debt portfolio. The ERA has used a 10-year term of debt in its recent regulatory decisions.⁸⁸ Western Power also proposes a 10-year term of debt for this access arrangement.⁸⁹

In its last DBNGP decision, the ERA calculated the debt risk premium as a ‘hybrid trailing average’, averaging the most recent 10 years of DRP estimates, consistent with debt with a 10 year term in the BBB credit rating band.⁹⁰ Debt risk premium estimates for specific years were determined using the ERA’s revised bond yield approach (for the 2016 year),⁹¹ and Reserve Bank of Australia credit spreads for 10 year non-financial bonds (for 2015 and earlier periods).⁹² Western Power proposes using the same approach for this access arrangement.⁹³

- **Debt raising and hedging costs:** These are the costs incurred when raising or refinancing debt – for example, legal fees and company rating fees. There

⁸⁴ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 159.

⁸⁵ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 204.

⁸⁶ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 205.

⁸⁷ Economic Regulation Authority, *Final decision on proposed revisions to the access arrangement for the Western Power network*, 5 September 2012, p. 344.

⁸⁸ For instance: Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 159.

⁸⁹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 205.

⁹⁰ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 202.

⁹¹ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 204.

⁹² Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 233.

⁹³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 203.

are also costs involved in hedging a firm's exposure to movements in the risk free rate. Western Power has proposed debt raising costs of 0.125 per cent and a hedging allowance of 0.114 per cent.⁹⁴ The ERA has used the same figures in its recent decisions.⁹⁵

Other parameters

Three further parameters are used to calculate the WACC. These are gearing, forecast inflation, and gamma. Western Power has proposed the following approach to determining these parameters:

- **Gearing:** Firms are generally financed by a combination of debt and equity. The ratio of debt to equity capital is referred to as 'gearing', and is used to weight the debt and equity portions of the WACC. The ERA has adopted a gearing ratio of 60 per cent debt and 40 per cent equity in recent decisions,⁹⁶ and Western Power proposes the same ratio be used for this access arrangement.⁹⁷
- **Forecast inflation:** Forecast inflation is used to translate the nominal post-tax WACC to a real post-tax WACC (thereby adjusting for the expected time value of money). To calculate forecast inflation, ERA has historically used the Fisher equation and the observed yields of five-year Commonwealth Government Securities (which reflect a market-based estimate of the nominal risk free rate) and five-year indexed Treasury bonds (which incorporate a market-based estimate of a real risk free rate).⁹⁸ Western Power proposes using the same approach for this access arrangement, and notes that it results in "a forecast inflation rate of 1.64 per cent for the 20 days to the end of June 2017".⁹⁹
- **Gamma:** Gamma represents the reduction in effective corporate taxation that is generated by the distribution of franking credits to investors, under Australia's imputation tax system. In its recent DBNGP decision, the ERA adopted a gamma of 0.4.¹⁰⁰ This decision is currently before the Australian Competition Tribunal. Western Power proposes a gamma value of 0.4, but notes that "we consider this a preliminary estimate, and reserve the right to update and/or revise our gamma estimate pending the outcome of the ongoing judicial and limited merits review of this issue".¹⁰¹

⁹⁴ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 206.

⁹⁵ For instance: Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 187.

⁹⁶ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 33.

⁹⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 207.

⁹⁸ For instance: Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 4 Rate of Return*, 30 June 2016, p. 33.

⁹⁹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 207.

¹⁰⁰ Economic Regulation Authority, *Final decision on the proposed revisions to the access arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020 – Appendix 5 Gamma*, 30 June 2016, p. 48.

¹⁰¹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 208.

Annual update

Regulators that use a trailing average approach to determine the cost of debt may apply an annual update to this parameter. This means that the WACC will reflect the most efficient debt structure for a regulated business in any given year, and that the benefits of an efficient debt structure can be passed through to consumers.

Western Power proposes updating its hybrid trailing average debt risk premium in each year of the access arrangement period. Western Power notes that this is consistent with the ERA's approach in its 2016 decision on the access arrangement for the Dampier to Bunbury Natural Gas Pipeline.¹⁰²

For each annual update, Western Power proposes that the averaging period be "as close as is reasonably practical to the beginning of the forthcoming financial year", with Western Power nominating the actual averaging period for each annual update in advance, and the dates remaining confidential.¹⁰³

Issue 9

Submissions are invited from interested parties on the following:

- the approach to the rate of return, and the estimation of its various parameters, as proposed by Western Power;
- Western Power's proposed amendments to the ERA's approach to estimating the market risk premium; and
- the process for, and timing of, the annual update of the debt risk premium proposed by Western Power.

¹⁰² Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 203.

¹⁰³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 205.

Return on Working Capital

Western Power has proposed to include a return on working capital using the same methods and assumptions as those approved for AA3. Western Power's proposal is outlined in section 10.10 of the access arrangement information.

Taxation

The Access Code does not include any specific requirements for including tax liabilities in target revenue. At the last review, Western Power accepted the adoption of a post-tax real WACC and the inclusion of tax in the target revenue building blocks.

For AA4, Western Power has proposed a similar methodology to AA3 to estimate tax liabilities. It has used a value for imputation credits (γ) of 0.40.

Details of Western Power's calculation are set out on pages 237 to 238 of its access arrangement information.

Investment Adjustment Mechanism

The investment adjustment mechanism is set out in clauses 7.3.1 to 7.3.7 of the current access arrangement.

- 7.3.2 An amount will be added to, or deducted from, the target revenue for the next access arrangement period in accordance with the investment adjustment mechanism set out below.
- 7.3.3 The investment adjustment mechanism will apply separately to each of:
 - a) new facilities investment for the transmission system; and
 - b) new facilities investment for the distribution system.
- 7.3.4 The purpose of the investment adjustment mechanism is to adjust Western Power's target revenue in the next access arrangement period in a manner that exactly corrects for the economic loss or gain to Western Power as a result of any investment difference in this access arrangement period in relation to the categories of new facilities investment specified in section 7.3.7 of this access arrangement. In order to give effect to this purpose, the investment adjustment mechanism must take account of:
 - (a) The effects of inflation;
 - (b) The time value of money as reflected by Western Power's weighted average cost of capital for the Western Power Network; and
 - (c) The capital-related costs due to any investment difference in this access arrangement period.
- 7.3.5 Given the requirements of the investment adjustment mechanism as described in section 7.3.4 of this access arrangement, Western Power's approach to calculating the capital-related costs due to any investment difference is to calculate the difference in present value terms between:
 - (a) The target revenue that would have been calculated for this access arrangement period if the investment difference had been zero (i.e. there was no forecasting error in relation to the capital expenditure categories that are subject to the investment adjustment mechanism); and
 - (b) The target revenue that actually applied in this access arrangement period.

The amount under section 7.3.2 of this access arrangement is equal to the present value of the difference calculated under section 7.3.5 of this access arrangement.

- 7.3.7 The categories that are used in calculating the investment difference are new facilities investment:
- (a) arising from the connection of new generation capacity to the transmission system or distribution system from 1 July 2012;
 - (b) arising from the connection of new load to the transmission system or distribution system from 1 July 2012;
 - (c) in relation to all augmentations to provide additional capacity to the transmission system or distribution system for the provision of covered services from 1 July 2012;
 - (d) Undertaken for augmentation of the distribution system under the rural power improvement program
 - (e) undertaken for augmentation of the distribution system under the state underground power program; and
 - (f) in relation to distribution system wood pole management for the provision of covered services from 1 July 2012.

Prior to AA3, the investment categories subject to the investment adjustment only included capacity expansion and customer driven categories, on the basis that the drivers for this expenditure are outside Western Power's control.

Distribution wood pole management expenditure was added to the mechanism for AA3. Western Power's performance and strategy for managing wood poles was a major issue for AA3. Western Power had been issued with an Order by EnergySafety and also subject to an inquiry by the Legislative Council's Standing Committee on Public Administration.

In its final decision, the ERA recognised that the investment needs for wood pole management may change as Western Power further developed its understanding of what is required. The final decision noted:

To ensure that Western Power is incentivised to do this in an efficient manner, the [ERA] decided that, for the third access arrangement period, expenditure relating to wood pole management should be subject to the investment adjustment mechanism. This will then enable expenditure higher than forecast to be recovered, to the extent that it is demonstrated to be efficient expenditure, and will provide Western Power with a return on that investment from the date it is incurred. Alternatively, the provisions of the Access Code enable Western Power to apply to the [ERA] at any time for pre-approval of capital expenditure forecasts. All of these provisions ensure Western Power is not constrained to only spend what is allowed in the current forecast.

Western Power has calculated adjustments of \$33.6 million for transmission and \$5.9 million for distribution that will be returned to customers due to actual expenditure being lower than approved.

Details of Western Power's calculation of the investment adjustment mechanism are set out on pages 225 to 226 of its access arrangement information.

Service Standard Adjustment Mechanism

The service standard adjustment mechanism underwent major revisions at the last access arrangement review. The changes were initiated by Western Power to more closely align the methodology with the comparable NEM incentive mechanism (Service Standard Performance Incentive Scheme).

The service standard adjustment mechanism is intended to ensure Western Power has an incentive to maintain service standards and improve service standards only where the improvement is of value to customers.

Western Power is forecasting a cumulative net reward of \$13.4 million for transmission and \$241.7 million for the distribution service.

The present value of the adjustment has been calculated as if the rewards or penalties in each year immediately follow the relevant performance year.

Details of Western Power's calculation of the service standard adjustment mechanism are included on pages 227-230 of Western Power's access arrangement information.

Unforeseen Events Adjustment

The unforeseen events adjustment is set out in clauses 7.1.1 to 7.1.4 of the current access arrangement as follows:

- 7.1.1 If a *force majeure event*¹⁰⁴ occurs which results in Western Power incurring *unrecovered costs* during the *access arrangement period* then Western Power will, as part of its proposed revisions for the next *access arrangement period*, provide a report to the [ERA] setting out:
- (a) a description of the *force majeure event*;
 - (b) a description of the insurance cover that Western Power had in place at the time of the *force majeure event*; and
 - (c) the *unrecovered costs* borne, or an estimate of the unrecovered costs likely to be borne, by Western Power during this *access arrangement period* as a result of the occurrence of the *force majeure event*.
- 7.1.2 Pursuant to sections 6.6 to 6.8 of the Code, an amount will be added to the *target revenue* for the *covered network* for the next *access arrangement period* in respect of the *unrecovered costs* relating to a *force majeure event* which occurred in the *access arrangement period*.
- 7.1.3 The addition to target revenue in the next access arrangement period must leave Western Power financially neutral given the timing of when Western Power incurred any unrecovered costs by taking account of:
- a) the effects of inflation; and
 - b) the time value of money as reflected by Western Power's weighted average cost of capital for the Western Power Network.
- 7.1.4 A *force majeure event* includes but is not limited to any costs arising from the introduction of any scheme or mechanism with respect to any activity including pricing, reduction, cessation, offset and sequestration (including the Carbon Pricing Mechanism announced by the Commonwealth in February 2011), full retail contestability, and the mandated roll-out of Advanced Interval Meters to the extent that such costs were not included in the calculation of target revenue for this access arrangement period or otherwise addressed through the trigger event provisions in section 8 of this access arrangement.

In its proposal, Western Power submits that the Electricity Market Review meets the Access Code requirements for a force majeure event:

¹⁰⁴ The Access Code defines "force majeure" as a fact or circumstance beyond the person's control and which a reasonable and prudent person would not be able to prevent or overcome.

... the EMR was a State Government-led initiative that proposed a series of reforms to the Western Australian energy sector. The EMR had two phases, the first of which was largely investigatory and resulted in Western Power incurring some discretionary costs. The second phase laid out specific market reform, which imposed significant mandatory costs on Western Power.

The need to incur EMR costs was outside Western Power's control. The EMR was not foreseen at the beginning of the AA3 period, therefore no forecast costs were included in the AA3 access arrangement decision. These costs are not recoverable under Western Power's insurance policies.

Western Power states it has reviewed the costs and identified those incurred in Phase 2 directly related to the introduction of the review. It has adopted the following accounting treatment:

- costs that were incurred of a capital nature were capitalised (e.g. IT costs)
- costs that had potential to provide a benefit to Western Power should it transition to the National Electricity Rules in the future were capitalised
- All remaining costs were expensed (i.e. operating expenditure).

Details of Western Power's claim are set out on pages 230 to 232 of its access arrangement information.

D-Factor

The D-factor mechanism provides for the recovery in the next access arrangement period of operating expenditure that is incurred by Western Power as a result of deferring a capital expenditure project or in relation to demand-management initiatives.

Many non-network options (including demand management programs) involve substituting non-capital costs for capital investment in a network to resolve network constraints. However, the Access Code does not include a mechanism for the retrospective recovery of non-capital costs. The inability to recover these costs could result in Western Power not choosing the overall least cost option.

The D-factor scheme was approved in AA2 to remove the apparent disincentive for Western Power to seek efficiency in capital costs where an increase in non-capital costs was necessary to achieve the efficiency on the basis that, otherwise, such non-capital costs could not be recovered.

The types of expenditure and the evidence Western Power must provide to support a claim under the D factor are set out in clauses 7.6.3 to 7.6.5.

7.6.3 In the next access arrangement period, the [ERA] will add to Western Power's target revenue an amount so that Western Power is financially neutral as a result of:

- a) any additional non-capital costs incurred by Western Power as a result of deferring a new facilities investment project during this access arrangement period, net of any amounts previously included in target revenue in relation to the deferred new facilities investment (other than such amounts included in the calculation of the capital-related costs due to any investment difference under clause 7.3.5); and
- b) any additional non-capital costs incurred by Western Power in relation to demand management initiatives or network control services.

7.6.4 In relation to 7.6.3a), the new facilities investment project that has been deferred must have been included in the forecast new facilities investment in

its revised access arrangement information or supporting documentation, and in the [ERA]'s allowed new facilities investment for this access arrangement period.

- 7.6.5 In relation to 7.6.3a) and 7.6.3b), an amount will only be added to target revenue for the next access arrangement period if there is an approved business case for the relevant expenditure, and this business case is made available to the [ERA]. The business case must demonstrate to the [ERA]'s satisfaction that the proposed non-capital costs satisfy the requirements of sections 6.40 and 6.41 of the Code, as relevant.
- 7.6.6 In relation to 7.6.3a) and 7.6.3b), the adjustment to the target revenue for the next access arrangement period must leave Western Power financially neutral by taking account of:
- a) the effects of inflation; and
 - b) the time value of money as reflected by Western Power's weighted average cost of capital for the Western Power network.

Western Power is seeking an adjustment of \$8.8 million to recover the costs associated with the Ravensthorpe and Bremer Bay network control services.

Details of Western Power's claim are set out on page 230 of its access arrangement information.

Gain Sharing Mechanism

The gain sharing mechanism provides an additional incentive to Western Power to achieve operating cost efficiencies during an access arrangement period as it ensures Western Power retains the efficiency saving for five years from when the efficiency is achieved. For example, without this mechanism, efficiency savings made in year 1 would be retained for five years but savings in year 5 would only be retained for one year. Consequently, there would be less incentive to make efficiency savings in the latter years of an access arrangement period.

The gain sharing mechanism is set out in clause 7.4.1 to 7.4.9 of the current access arrangement. Clause 7.4.2 specifies the annual "efficiency and innovation benchmarks" against which Western Power's actual performance will be assessed and the formula for calculating the costs for comparison purposes.

The forecast scale factors used to derive the efficiency and innovation benchmark for AA3 will be replaced with the actual scale factors when calculating the above-benchmark surplus at the end of AA3. This ensures Western Power will not be rewarded or penalised for variations from forecast operating expenditure that are attributable to differences in the scale factors driving expenditure and that, conversely, customers do not pay more under the gain sharing mechanism because of slower growth. The scale factors are:

- customer numbers;
- line length;
- distribution transformers;
- zone substation capacity; and
- network growth factor.

The forecast scale escalation assumptions and formula for updating the efficiency and innovation benchmarks are set out in clause 7.4.8 of the Access Arrangement. Clause 7.4.9 includes requirements for the actual scale escalation factors to be independently audited.

The \$695 million reduction in proposed operating costs for AA4 compared with AA3 is offset by \$273 million that Western Power forecasts it will receive from the gain sharing mechanism approved for AA3. The gain sharing mechanism ensures Western Power retains the benefit of operating cost efficiencies achieved during AA3 for five years, regardless of which year the efficiency is made.

The gain sharing mechanism also includes provisions to ensure expenditure savings achieved by, or resulting in, failure to meet service standard benchmarks are not rewarded.

“\$272.6 million is included in AA4 target revenue as a result of performance under the GSM during the AA3 period. The GSM provides Western Power an incentive to make operating cost efficiencies by allowing the business to add a share of efficiency gains achieved during one access arrangement period to target revenue for the next access arrangement period. Efficiency improvements must not be made at the expense of service performance, therefore GSM rewards are only applied if Western Power achieves a defined set of minimum service standards. Customers receive the majority of the benefits as a result of the significantly lower opex in future periods.

... The current GSM requires Western Power to achieve all 17 SSBs in any one year in order to receive efficiency rewards. The business met all 17 SSBs in two of the five years of the AA3 period.¹⁰⁵

Details of Western Power’s calculation of the gain share mechanism are set out on page 226-227 of its access arrangement information.

Deferred Revenue

In its proposed revisions for AA2, Western Power proposed an alternative treatment of capital contributions from its approach in AA1, which had the effect of significantly increasing the revenue requirement. To avoid price shocks (as required by section 6.4(c) of the Access Code) and considering that the change in treatment of capital contributions policy should have a neutral commercial effect on Western Power’s business in present value terms, an amount of revenue was deferred from the current access arrangement period to subsequent access arrangement periods. The ERA determined the deferred revenue should be recovered over the life of the assets to which it related.

An amendment to the Access Code was gazetted on 30 September 2011 to insert the following new clauses as set out below:

Recovery of deferred revenue

- 6.5A In this Chapter, “**deferred revenue**” means the amounts referred to in paragraphs 5.37A and 5.48A of the Amended Proposed Revisions dated 24 December 2009 to the *Western Power Network access arrangement*, as approved by the [ERA]’s *further final decision* dated 19 January 2010, expressed in present value terms as at 30 June 2009 and in real dollar values as at 30 June 2009, being respectively:
- (a) \$64.5 million; and
 - (b) \$484.2 million.
- 6.5B An amount in respect of *deferred revenue* must be added to the *target revenue* for the *Western Power Network* for one or more *access arrangement periods* until the aggregate amount referred to in section 6.5E has been added.

¹⁰⁵ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 226.

- 6.5C An amount added to the *target revenue* under section 6.5B must include an adjustment so that the deferral of the *deferred revenue* is financially neutral for the Electricity Networks Corporation, taking into account:
- (a) the time value of money; and
 - (b) inflation.
- 6.5D The [ERA] must determine the amount to be added under section 6.5B in a given *access arrangement period*.
- 6.5E The total of all amounts added under section 6.5B (aggregated over all *access arrangement periods* for which such amounts are added) must equal:
- (a) the total amount of the *deferred revenue*;
 - plus:
 - (b) the sum of all adjustments under section 6.5C.

The Access Code does not prescribe over what period the revenue should be recovered, with the ERA being required to determine the amount to be added to target revenue for each access arrangement period.

The values of deferred revenue to be recovered in AA4 and future access arrangements are set out in the Access Arrangement in clauses 7.7.1 to 7.7.3.

Western Power has included these values in its proposed target revenue for AA4.

Tariff Equalisation Contributions

Section 6.37A of the Access Code provides for target revenue to include an amount of tariff equalisation contributions, which comprises an amount levied on users of the Western Power Network to finance amounts paid to Horizon Power for the provision of electricity services in areas not serviced by the Western Power Network.

The TEC is included as a separate item in the pricing formula, so the value does not need to be included in the ERA's determination. However, in the past the pricing profile has usually taken account of any variations in the annual TEC values.

The 2016/17 network tariffs included \$150 million for the TEC. The Government gazetted a value of \$167 million for the 2017/2018 year on 13 June 2017. Values for future years have not yet been gazetted.

Western Power has based its proposal on the values included in the latest State Budget.

K-factor adjustment

The maximum reference service revenue formula included in the current access arrangement includes a correction factor that takes account of any difference between forecast maximum reference service revenue and the actual revenue earned in that year. Clauses 5.6.8 and 5.7.8 of the current access arrangement state that the correction factor will also apply in the first year of the next access arrangement period to adjust for any difference between the forecast and actual revenue in relation to the financial years ending on 30 June 2017 and 30 June 2016, and in the second year of AA4 in relation to the financial year ending on 30 June 2017.

Western Power's proposal states:¹⁰⁶

"Due to the one year delay in commencement of the AA4 revenue recovery, the revenue caps for 2017/18 are treated slightly differently. In the normal course of events, there would be a revised Price List and Price List Information produced for 2017/18, and these documents would outline the calculation of the revenue target for the year (using the formulae in the next section),¹⁰⁷ including a calculation of the revenue adjustment factor (known as the k-factor). The versions of these documents (Appendix F.1 and F.2 to the proposed access arrangement) are the 2016/17 Price List reproduced, without any adjustments made for the k-factor. The 2016/17 Price List is adopted as the 2017/18 Price List absent a different Price List produced in April 2017 and approved by the ERA in May 2017 due to the delay to the AA4 process.

The k-factor adjustment takes into account the actual and forecast revenues recovered in previous financial years and adjusts the revenue target to ensure Western Power is recovering the required revenue amounts exactly. That is, if previous year's prices had over-recovered revenue then that over-recovery would be given back to customers through a lower revenue requirement in the next year, vice versa for under-recoveries.

To ensure the addition of this revenue adjustment doesn't result in lumpy price outcomes, the revenue model has been run with the k-factor for 2017/18 included as a building block. The revenue model also specifies revenue amounts for 2017/18 that reflect the most recently available revenue forecasts for the year, given that the 2016/17 [prices] will likely apply for the whole year. As the AA4 decision process continues, these numbers will be updated with more up-to-date forecasts."

Issue 10

Submissions are invited from interested parties on the following building blocks:

- Return on working capital
- Taxation
- Investment adjustment mechanism
- Service standard adjustment mechanism
- Unforeseen events
- D-factor
- Gain sharing mechanism
- Deferred revenue
- Tariff equalisation contribution
- K-factor adjustment

¹⁰⁶ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 238.

¹⁰⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 243.

5.3 Reference and Non-Reference Services

5.3.1 *Regulatory Requirements and Current Access Arrangement*

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

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

5.2 An access arrangement must:

- (a) specify at least one reference service; and
- (b) specify a reference service for each covered service that is likely to be sought by either or both of:
 - (i) a significant number of users and applicants; or
 - (ii) a substantial proportion of the market for services in the covered network; and
- (c) to the extent reasonably practicable, specify reference services in such a manner that a user or applicant is able to acquire by way of one or more reference services only those elements of a covered service that the user or applicant wishes to acquire; and
- (d) for the covered network that is covered under section 3.1 – specify one or more reference services such that there is both:
 - (i) a reference service which enables a user or applicant to acquire an entry service at a connection point without a need to acquire a corresponding exit service at another connection point; and
 - (ii) a reference service which enables a user or applicant to acquire an exit service at a connection point without a need to acquire a corresponding entry service at another connection point.

The Access Code includes definitions of a number of terms that are relevant to understanding the reference services in the access arrangement.

“Covered service” means a service provided by means of a covered network, including:

- (a) a connection service; or
- (b) an entry service or exit service; or
- (c) a network use of system service; or
- (d) a common service; or
- (e) a service ancillary to a service listed in paragraphs (a) to (d) above, but does not include an excluded service.

“Entry service” means a covered service provided by a service provider at an entry point under which the user may transfer electricity into the network at the entry point.

“Exit service” means a covered service provided by a service provider at an exit point under which the user may transfer electricity out of the network at the exit point.

“Excluded service” means a service provided by means of a covered network, including:

- (a) a connection service; or
- (b) an entry service or exit service; or
- (c) a network use of system service; or
- (d) a common service; or
- (e) a service ancillary to a service listed in paragraphs (a) to (d) above,

which meets the following criteria:

- (f) the supply of the service is subject to effective competition, and
- (g) the cost of the service is able to be excluded from consideration for price control purposes without departing from the Code objective.

“Reference service” means a covered service designated as a reference service in an access arrangement under section 5.1(a) for which there is a reference tariff, a standard access contract and service standard benchmarks.

“Non-reference service” means a covered service that is not a reference service.

“Reference tariff” means the tariff specified in a price list for a reference service.

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

The current access arrangement includes the following reference services:

- Anytime Energy (Residential) Exit Service, A1
- Anytime Energy (Business) Exit Service, A2
- Time of Use Energy (Residential) Exit Service, A3
- Time of Use Energy (Business) Exit Service, A4
- High Voltage Metered Demand Exit Service, A5
- Low Voltage Metered Demand Exit Service, A6
- High Voltage Contract Maximum Demand Exit Service, A7
- Low Voltage Contract Maximum Demand Exit Service, A8
- Street lighting Exit Service (including streetlight maintenance), A9
- Un-Metered Supplies Exit Service, A10
- Transmission Exit Service, A11
- Distribution Entry Service, B1
- Transmission Entry Service, B2
- Anytime energy (residential) bi-direction service, C1
- Anytime energy (business) bi-direction service, C2
- Time of Use (Residential) – bi-direction service, C3

- Time of use (business) bi-directional service, C4

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

5.3.2 AA4 Proposal

Western Power proposes to retain all of the reference services included in the current access arrangement.

It proposes to introduce four new reference services that are enabled by its plan to install advanced meters:

- Time of use energy (residential) service, D1
- Time of use energy (business) service, D2
- Time of use demand (residential) service, D3
- Time of use demand (business) service, D4.

Western Power states:

“These services will be provided to all residential and small business customers requesting¹⁰⁸ a new meter as advanced meters will now be installed as standard. The new tariffs that correspond to these new services better reflect the costs incurred by Western Power in providing reference services and will provide price signals to customers regarding the most efficient times to use the network.

Western Power has consulted with customers, retailers and the State Government to develop these services. These new time of use reference services will provide customers with the best opportunity to manage their own consumption in an efficient and cost effective manner. Our aim is to encourage customers to change their consumption patterns (where practicable) by shifting their electricity use to off peak times. This would potentially decrease their electricity bills and also allow Western Power to reduce investment in the network to accommodate peak demand.”¹⁰⁹

It also proposes to modify some existing reference services:

- Modifying peak/off peak time for the high voltage and low voltage metered demand exit services (A5 and A6) to reflect the time periods in the new time of use reference services (D1-D4)
- Modifying the existing high voltage and low voltage reference services for medium to large businesses (A5-A8) to allow for bi-directional flows, facilitating a move to solar.

Western Power has proposed that where a customer requests a non-standard service it can develop a customised product as a non-reference service. Examples of non-reference services currently provided by Western Power include:¹¹⁰

- processing and administration fees associated with an application for network access as detailed in the AQP;

¹⁰⁸ Where Western Power installs an advanced meter for compliance reasons, the customer may choose to opt-in to these new services.

¹⁰⁹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 81.

¹¹⁰ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 83.

- network access services with conditions that vary from reference services;
- all other services that are not core to the transport of electricity from the supplier to the end-use customer, including, for example the elevation of overhead lines to allow the transport of high loads and the provision of pre-payment metering services.

Western Power proposes that non-standard services provided under non-reference service contracts are not listed or priced other than in the contract and do not have minimum service standards provided.¹¹¹

Issue 11

Submissions are invited from interested parties on the following:

- have the reference services included in the current access arrangement met the requirements of users, and the requirements of section 5.2 of the Access Code;
- are additional reference services, or modifications to existing reference services, needed to meet the requirements of users;
- do the proposed amendments to current reference services meet the requirements of users, and the requirements of section 5.2 of the Access Code;
- do the proposed new reference services (D1, D2, D3 and D4) meet the requirements of users, and the requirements of section 5.2 of the Access Code ; and
- does the proposed approach to requests for non-standard services (i.e. to provide non-reference service contracts that are not listed or priced other than in the contract and do not have minimum service standards prescribed) meet the requirements of users.

¹¹¹ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 83.

5.4 Pricing Methods, Price List and Price List Information

5.4.1 Regulatory Requirements and Current Access Arrangement

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

Section 7.1 of the Access Code defines “pricing methods” to mean the structure of reference tariffs included in an access arrangement, which determines how target revenue is allocated across and within reference services.

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

Sections 7.3 and 7.4 of the Access Code set out the objectives for pricing methods, as follows:

- 7.3 Subject to sections 7.5, 7.7 and 7.12, the pricing methods in an access arrangement must have the objectives that:
- (a) reference tariffs recover the forward-looking efficient costs of providing reference services; and
 - (b) the reference tariff applying to a user:
 - (i) at the lower bound, is equal to, or exceeds, the incremental cost of service provision; and
 - (ii) at the upper bound, is equal to, or is less than, the stand-alone cost¹¹² of service provision.
- 7.4 Subject to sections 7.5, 7.7 and 7.12, the pricing methods in an access arrangement must have the objectives that:
- (a) the charges paid by different users of a reference service differ only to the extent necessary to reflect differences in the average cost of service provision to the users; and
 - (b) the structure of reference tariffs so far as is consistent with the Code objective accommodates the reasonable requirements of users collectively; and

¹¹² The Access Code defines stand-alone cost of service provision as “in relation to a *user* or group of *users*, a *covered service* and a specified period of time, means that part of *approved total costs* that the *service provider* would incur in providing the *covered service* to the *user* or group of *users*, for the period of time if the *covered service* was the sole *covered service* provided by the *service provider* and the *user* or group of *users* was the sole *user* of group of *users* supplied by the *service provider* during the specified period of time.”

- (c) the structure of reference tariffs enables a user to predict the likely annual changes in reference tariffs during the access arrangement period; and
- (d) the structure of reference tariffs avoids price shocks (that is, sudden material tariff adjustments between succeeding years).

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

Section 7.6 of the Access Code provides guidance for establishing components of tariffs:

- 7.6 Unless an access arrangement containing alternative pricing methods would better achieve the Code objective, for a reference service:
- (a) the incremental cost of service provision should be recovered by tariff components that vary with usage or demand; and
 - (b) any amount in excess of the incremental cost of service provision should be recovered by tariff components that do not vary with usage or demand.

Section 7.7 of the Access Code requires that tariffs be established as “postage stamp” tariffs in certain circumstances:

- 7.7 The tariff applying to a standard tariff user in respect of a standard tariff exit point must not differ from the tariff applying to any other standard tariff user in respect of a standard tariff exit point as a result of differences in the geographic locations of the standard tariff exit points.

Section 7.9 of the Access Code provides for “prudent discounts” to be made available to some users:

- 7.9 A service provider may propose in its access arrangement to discriminate between users in its pricing of services to the extent that it is necessary to do so to aid economic efficiency, including:
- (a) by entering into an agreement with a user to apply a discount to the equivalent tariff to be paid by the user for a covered service; and
 - (b) then, recovering the amount of the discount from other users of reference services through reference tariffs.

In sections 7.9 and 7.10 of the Access Code, “equivalent tariff” means:

- (i) For a reference service – the reference tariff; and
- (ii) For a non-reference service – the tariff that it is reasonably likely would have been set as the reference tariff had the non-reference service been a reference service.

Section 7.10 of the Access Code provides for discounts for users connecting distributed generation plant:

- 7.10 If a user seeks to connect distributed generating plant to a covered network, a service provider must reflect in the user’s tariff, by way of a discount, a share of any reductions in either or both of the service provider’s capital-related costs or non- capital costs which arise as a result of the entry point for distributed generating plant being located in a particular part of the covered network by:
- (a) entering into an agreement with a user to apply a discount to the equivalent tariff to be paid by the user for a covered service; and

- (b) then, recovering the amount of the discount from other users of reference services through reference tariffs.

Section 7.11 of the Access Code requires an access arrangement to include a detailed policy setting out how discounts under sections 7.9 and 7.10 will be implemented, including a detailed mechanism for determining when a user will be entitled to receive a discount and for calculating the discount to which the user will be entitled.

Section 7.12 of the Access Code requires that the value of any tariff equalisation contributions be recovered as a tariff component from users of the distribution network:

- 7.12 If an amount is added to the target revenue under section 6.37A and is intended to be recovered from users of reference services through one or more reference tariffs, then the recovery must have the objective of:
- (a) applying only to users of reference services provided in respect of exit points on the distribution system; and
 - (b) being equitable in its effect as between users referred to in section 7.12(a); and
 - (c) otherwise being consistent with the Code objective.

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

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

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

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

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

Pricing methods, price lists and price information are included in the current access arrangement at section 6.

5.4.2 AA4 Proposal

Attachment 11.1 to the access arrangement information sets out the changes Western Power is proposing to make to reference tariffs. Western Power notes the document has been developed following a period of consultation with its customers and key stakeholders and that the document outlines how it has addressed customer feedback.

Western Power summarises its proposal as:

“Western Power will provide 21 reference services in the access arrangement for the AA4 period. Each reference service has a corresponding reference tariff. Of the 21 reference tariffs, the structure of 15 remain unchanged for the AA4 period.

We are proposing the following changes to reference tariffs for the AA4 period:

- Introducing two new time of use tariffs
- Introducing two new demand-based tariffs
- Modifying peak/off-peak time periods in the existing RT5 and RT6 demand tariffs to reflect the time periods in the new time of use tariffs
- Modifying existing demand-based tariffs for medium to large businesses (RT5-RT8) to allow for bi-directional flows;
- Recovering Tariff Equalisation Contribution (TEC) from the fixed component of tariffs rather than the variable component of most tariffs.”¹¹³

Western Power has also included its proposed Price List and Price List Information for the 2018/19 year in its submission. These documents set out its proposed prices for 2018/19.

Issue 12

Submissions are invited from interest parties on Western Power’s proposed tariffs.

¹¹³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, Attachment 11.1, p. 1.

5.5 Service Standard Benchmarks

5.5.1 *Regulatory Requirements and Current Access Arrangement*

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

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

The current access arrangement includes the following service standard benchmarks:

- distribution services:
 - system average interruption duration index (SAIDI) for urban areas, rural-short and rural-long feeders and the Perth central business district;
 - system average interruption frequency index (SAIFI) for urban areas, rural-short and rural-long feeders and the Perth central business district; and
 - call centre performance.
- transmission services:
 - circuit availability;
 - system minutes interrupted (for the meshed and radial network);
 - loss of supply events; and
 - average outage duration.
- streetlighting services:
 - repair time.

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

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

System minutes interrupted records the period of network outages measured in minutes and is separately recorded for transmission meshed and radial networks. A meshed network refers to an electricity network where there is more than one path between network

nodes. The system minutes interrupted benchmark is the summation of megawatt minutes of unserved energy at substations connected to the meshed/radial transmission network divided by the system peak megawatts. A lower value of system minutes interrupted corresponds to a higher service standard.

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

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

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

5.5.2 AA4 Proposal

Western Power is proposing to:

- Remove the system minutes interrupted measure
- Clarify the loss of supply event frequency definition
- Establish the data series on which the service standard benchmarks are based using:
 - The five-year average of actual performance for all measures, rather than three years for SAIDI and SAIFI and five years for all other measures.
 - A Box-Cox transformation to determine the probability of a major event day, rather than a normal distribution
 - When calculating the major event day threshold, use distribution unplanned daily SAIDI rather than daily SAIDI including all interruptions
- Set the benchmarks using the average of the 99th percentile (or 1st percentile for circuit availability and call centre performance) of the distributions of best fit rather than the 97.5th (or 2.5th) percentile approved for AA3.
- Apply the AA3 service standard benchmarks during 2017/18

Details of Western Power's proposed service standard benchmarks are set out in section 6.5 and 6.6 of the access arrangement information.

Issue 13

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

- Whether the proposed measures are reasonable and sufficiently detailed and complete to enable users or applicants to determine the value represented by the reference service at the reference tariff.

- Whether the system minutes interrupted measure should be removed.
- The reasonableness of the methods used to establish the data series on which the service standard benchmarks are based including using:
 - the five-year average of actual performance for all measures, rather than three years for SAIDI and SAIFI and five years for all other measures.
 - a Box-Cox transformation to determine the probability of a major event day, rather than a normal distribution.
 - using distribution unplanned daily SAIDI rather than daily SAIDI including all interruptions when calculating the major event day threshold.
- Setting the benchmarks using the average of the 99th percentile (or 1st percentile for circuit availability and call centre performance) of the distributions of best fit rather than the 97.5th (or 2.5th) percentile approved for AA3.
- Applying the current (AA3) service standard benchmarks during 2017/18.
- Whether the supporting information provided by Western Power is sufficiently detailed to enable users or applicants to determine the value represented by the reference service at the reference tariff.

5.6 Adjustments to Target Revenue at next review

5.6.1 *Regulatory Requirements and Current Access Arrangement*

Sections 6.6 to 6.32 of the Access Code provides for the target revenue for an access arrangement period to include certain amounts “carried over” from the previous access arrangement period, including:

- an amount in respect of costs incurred as a result of a force majeure event under sections 6.6 to 6.8 of the Access Code;
- an amount in respect of costs incurred as a result of changes to the Technical Rules, for which no allowance was made in the access arrangement, under sections 6.9 to 6.12 of the Access Code;
- an amount under an investment adjustment mechanism under sections 6.13 to 6.18 of the Access Code;
- an amount under a gain sharing mechanism under sections 6.19 to 6.28 of the Access Code; and
- an amount under a service standards adjustment mechanism under sections 6.29 to 6.37 of the Access Code.

The current access arrangement provides for several revenue adjustment mechanisms to adjust target revenue in the third access arrangement period to account for unforeseen events or other cost pass-throughs, over or under-recovery of revenue in preceding years or provide financial incentives to Western Power to be more efficient or perform better. These adjustments occur under the following mechanisms:

- Correction factor – a year-on-year adjustment to allowed revenue to account for under-recover or over-recovery of revenue under the revenue cap.
- Unforeseen events adjustment – an adjustment to account for costs incurred in AA3 as a result of force majeure events.
- Technical rule change revenue adjustment – an adjustment to account for costs incurred as a result of changes to the Technical Rules that could not have reasonably been foreseen at the commencement of AA3.
- Investment adjustment mechanism – an adjustment to account for differences between forecast and actual costs of certain classes of new facilities investment.
- Gain sharing mechanism – an adjustment to account for the out-performance of the forecast operating expenditure in AA3.
- Service standards adjustment mechanism – an adjustment to account for any difference between service standard performance and service standard benchmarks in AA3.
- D-factor – an adjustment to account for any additional operating expenditure incurred which was a result of deferring a capital expenditure project and any additional operating or capital expenditure in relation to demand management initiatives.

- Deferred revenue from AA2 – an adjustment to account for the amount of revenue deferred in AA2 which was to be recovered in subsequent access arrangement periods.¹¹⁴

5.6.2 AA4 Proposal

Western Power has proposed amendments or updates to the adjustment mechanisms as set out below.

Force majeure

Western Power proposes amending the specified force majeure events included in clause 7.1.4.

It has removed reference to the carbon pricing mechanism that was introduced in 2011 on the basis that it is no longer relevant. It has retained broader reference to the introduction of any scheme or mechanism for dealing with emissions of greenhouse gases.

It has removed the mandated roll-out of advanced meters as a specified force majeure event as it has proposed, instead, to include metering costs in the expenditure categories subject to the investment adjustment mechanism. This is discussed below.

It has introduced a new specified force majeure event of “government energy reforms”. Western Power states:

“Any Government-led reform, such as those proposed under the EMR some of which have recently been reaffirmed by the Minister for Energy¹¹⁵, could have a significant impact on Western Power’s expenditure. As these would be mandated and largely outside of Western Power’s control, we should be provided with the opportunity to recover these costs either:

- in-period using the trigger event provision to re-open the access arrangement
- in the following access arrangement period using the unforeseen event provision.”

Issue 14

Submissions are invited from interested parties on the proposed amendments to the specified force majeure events in clause 7.1.4 of the access arrangement, particularly the inclusion of “government energy reforms”.

¹¹⁴ The deferred revenue arose due to Western Power changing its treatment of capital contributions in the calculation of target revenue between AA1 and AA2.

¹¹⁵ This includes the Minister for Energy’s re-affirmation to extend retail choice and move from an unconstrained to a constrained access regime by 2020.

Technical Rules

Western Power proposes amending clause 7.2.1 of the access arrangement so that it need only report on amendments to the Technical Rules that result in a material change in costs, rather than being required to report on every single amendment.

Issue 15

Submissions are invited from interest parties on the proposed amendments to the Technical Rules adjustment clause 7.2.1 of the access arrangement, to only report on material changes in costs.

Investment Adjustment Mechanism

The investment adjustment mechanism allows for the carryover from one access arrangement period to the next period of costs or benefits arising from differences in forecast and actual capital costs. The mechanism applies only to the following classes of capital expenditure:

- connecting new generation capacity;
- connecting new loads;
- augmentation of the network to provide covered services;
- augmentation under the Rural Power Improvement Program and State Underground Power Program; and
- distribution wood pole management.

Western Power proposes amending the categories as follows:

- removing distribution wood pole management;
- removing the Rural Power Improvement Program; and
- including provision of metering installations on the distribution system from 1 July 2017.

Issue 16

Submissions are invited from interested parties on the proposed amendments to clause 7.3.7 of the access arrangement to change the investment categories subject to the Investment Adjustment Mechanism as follows:

- remove distribution wood pole management;
- remove the Rural Power Improvement Program; and
- include provision of metering installations on the distribution system from 1 July 2017.

Gain Sharing Mechanism

The gain sharing mechanism provides a financial reward to Western Power for out-performance of the forecast operating expenditure for AA3.

Western Power has proposed the following amendments to the gain sharing mechanism:

- apply the mechanism separately to the transmission and distribution services rather than a single mechanism as is currently the case; and
- amend and update the network growth escalation assumptions and uncontrollable cost input values to reflect latest forecasts.

Issue 17

Submissions are invited from interested parties on the proposed amendments to the gain sharing mechanism as set out in section 6.9 of the access arrangement information and section 7.4 of the marked up access arrangement.

Submissions are also invited on how effective the gain sharing mechanism has been in promoting efficiency and what changes might be required to improve its effectiveness.

Service Standard Adjustment Mechanism

The service standard adjustment mechanism provides a financial reward or penalty depending on Western Power's actual performance compared to its service standard targets.

Western Power has proposed a number of amendments including:

- Setting the service standard targets using the average of the 50th percentile of the distributions of best fit
- Adjusting rural long service standard targets to account for the improvement in service expected from the Kalbarri microgrid project
- Using the value of customer reliability estimates from AEMO's 2014 study, adjusted to apply to WA, to set distribution reliability incentive rates
- Using updated revenue at risk, weighted to account for the removal of system minutes interrupted and forecast AA4 revenue, to set the transmission and call centre incentive rates.

Details of Western Power's proposed service standard adjustment mechanism are set out in section 6.7 of the access arrangement information.

Issue 18

Submissions are invited from interest parties on:

- Western Power’s proposed amendments to the service standard adjustment mechanism.
- How effective the service standard mechanism has been and what changes are necessary to improve it.

D- Factor

As discussed earlier, the D-factor provides for the recovery in the next access arrangement period of operating expenditure incurred as a result of deferring a capital expenditure proposal or for demand-management initiatives.

As the Access Code does not include a mechanism for the retrospective recovery of non-capital costs, this could result in Western Power not choosing the overall least cost option. The D-factor scheme was approved to remove the apparent disincentive.

Western Power proposes adding new clauses 7.6.6 to 7.6.10 to enable it to lodge an application during the access arrangement period for a determination on whether expenditure satisfies the D factor non-capital costs test:

- 7.6.6. Western Power may at any time during this access arrangement period apply to the Authority for the Authority to determine that a business case contains proposed non-capital costs that satisfy the D factor non-capital costs test.
- 7.6.7 If an application is made to the Authority under section 7.6.6 the Authority must make a determination within 25 Business Days.
- 7.6.8 If the Authority determines that proposed non-capital costs satisfy the D factor non-capital costs test (“approved business case amount”) then if D factor incurred costs are not more than the approved business case amount the Authority will add the D factor incurred costs to Western Power’s target revenue in the next access arrangement period. If the D factor incurred costs are more than the approved business case amount, the Authority will add the D factor incurred costs to Western Power’s target revenue in the next access arrangement period and Western Power may seek the further amount to be added to target revenue for the next access arrangement period by demonstrating to the Authority’s satisfaction that the further amount of non-capital costs satisfy the requirements of section 6.40 and 6.41 of the Code.
- 7.6.9 A determination of an approved business case amount does not oblige Western Power to proceed with the project that is the subject of the business case.
- 7.6.10 If the Authority determines that proposed non-capital costs do not satisfy the D factor non-capital costs test then the Authority will provide reasons for that determination to Western Power and Western Power may make an amended application under section 7.6.6.

Issue 19

Submissions are invited from interested parties on Western Power's proposed amendments to the D-factor scheme to enable it to lodge an application during the access arrangement period for a determination on whether expenditure satisfies the D factor non-capital costs test. In particular, the ERA is interested in views on whether these amendments are necessary to ensure Western Power chooses the overall least cost option when choosing between capital and non-capital solutions.

Deferred revenue

The current access arrangement includes provision for a deferral of revenue from the second access arrangement period with the deferred amount (escalated for inflation and by the rate of return) to be included in target revenue in subsequent access arrangement periods.

Western Power has updated the values in the access arrangement (clauses 7.7.1 to 7.7.3) to reflect the opening balance for the next access arrangement period (AA5) at June 2017 prices and the remaining time frame for recovering the deferred revenue.

It has calculated the value at the beginning of AA5 as \$89.0 million (\$ real as at June 2017) for transmission, to be recovered over 40 years and \$408.8 million (\$ real as at June 2017) for distribution, to be recovered over 32 years.

Issue 20

Submissions are invited from interested parties on Western Power's proposed updates to the deferred revenue that will be recovered in future access arrangement periods.

5.7 Trigger Events

5.7.1 *Regulatory Requirements and Current Access Arrangement*

Under section 5.34 of the Access Code, an access arrangement may specify one or more trigger events. A trigger event is defined in the Access Code as a set of one or more circumstances specified in the access arrangement, the occurrence of which requires a service provider to submit proposed revisions to the ERA under section 4.37 of the Access Code.

Trigger events may be either proposed by the service provider or included in an access arrangement by the ERA under section 5.35 of the Access Code.

Under section 5.36 of the Access Code, before determining whether a trigger event is consistent with the Code objective, the ERA must 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.¹¹⁶

Trigger events are set out in clause 8 of the current access arrangement. They include:

- ... any significant unforeseen development which has a materially adverse impact on the service provider and which is:
 - (i) outside the control of Western Power; and
 - (ii) not something that Western Power, acting in accordance with good electricity industry practice, should have been able to prevent or overcome; and
 - (iii) so substantial 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.

Clause 8.1.2 of the current access arrangement includes carbon policies, full retail contestability and the mandated roll-out of advanced interval meters as specific trigger events.

Clause 8.1.3 of the current access arrangement requires that Western Power must submit proposed revisions to the ERA within 90 business days after a trigger event has occurred.

5.7.2 *AA4 Proposal*

Western Power has proposed similar amendments to clause 8.1.2 to those it proposes for specific force majeure events discussed in the previous section:

¹¹⁶ The Access Code provides the following example: “The *service provider* may wish to include a *trigger event* allowing it to reopen the *access arrangement* if actual *covered service* consumption is more than x % below forecast. However, if the *ERA* were minded to allow such a *trigger event*, it may also require the inclusion of a complementary *trigger event* requiring the *service provider* to reopen the *access arrangement* if *covered service* consumption is more than y% above forecast.”

A *trigger event* may include without limitation the introduction of any scheme or mechanism with respect, directly or indirectly, to emissions of greenhouse gases and with respect to any activity including pricing, reduction, cessation, offset and sequestration, ~~(including the Carbon Pricing Mechanism announced by the Commonwealth in February 2011), full retail contestability, and the mandated roll-out of Advanced Interval Meters, and any other government energy reforms,~~ to the extent that such costs were not included in the calculation of *target revenue* for this *access arrangement period* or otherwise addressed through the unforeseen event provisions in sections 7.1.1 to 7.1.4 of this *access arrangement*.

Issue 21

Submissions are invited from interested parties on the proposed amendments to the trigger events included in clause 8.1.2 of the access arrangement, particularly the addition of “government energy reforms” as a specific trigger event.

5.8 Supplementary Matters

5.8.1 *Regulatory Requirements and Current Access Arrangement*

Section 5.1(k) of the Access Code requires that an access arrangement include provisions dealing with supplementary matters under sections 5.27 and 5.28. These comprise:

- balancing;
- line losses;
- metering;
- ancillary services;
- stand-by;
- trading;
- 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.

Section 5.28 of the Access Code requires that the supplementary matters be dealt with in the access arrangement in accordance with other relevant regulatory requirements including written laws, the Wholesale Electricity Market Rules and the Technical Rules.

Supplementary matters are dealt with in clauses 9.1 to 9.7 of the current access arrangement. The requirements of section 5.27 of the Access Code are met by specifying each matter will be in accordance with the Wholesale Electricity Market Rules, Electricity Industry Metering Code and/or Metering Code Model Service Level Agreement.

5.8.2 *AA4 Proposal*

Western Power notes:

“... many of the supplementary matters defined in the Access Code now relate to WEM functions rather than Western Power’s activities. Several of Western Power’s functions such as balancing and trading have transferred to the AEMO. Western Power’s functions such as balancing and trading have transferred to the AEMO. Western Power’s role is now more that of a traditional network operator and meter data agent under the WEM Rules.

Western Power therefore proposes revisions to the access arrangement to clarify that it:

- does not have any direct requirements to perform balancing, ancillary services, stand-by, trading or settlement functions, but
- will continue to fulfil its obligations as a network operator and meter data agent under the WEM Rules and Technical Rules to support the AEMO in performing its functions, including by providing network and metering information.”¹¹⁷

¹¹⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 272

As can be seen in the marked up version of the access arrangement included in Western Power's submission, it proposes:

- Deleting the following clauses:
 - 9.1 Balancing
 - 9.4 Ancillary services
 - 9.5 Stand by
 - 9.6 Trading
 - 9.7 Settlement
- Inserting a new general clause stating:

“Previous versions of the access arrangement have referred, in the Supplementary Matters chapter, to balancing requirements, ancillary service, trading and settlement requirements.

Under the Wholesale Electricity Market Rules these functions are now principally undertaken by the Australian Energy Market Operator (“AEMO”).

However Western Power will discharge such obligations in relation to these matters as they are imposed upon Western Power by the Wholesale Electricity Market Rules from time to time and, in accordance with those rules, support AEMO in discharge of its functions including by providing information to AEMO as required by the Wholesale Electricity Market Rules.-As at 2 October 2017 this access arrangement is prepared by Western Power, the principal role Western Power will have is to provide network information to AEMO to support settlements and balancing.”
- Amending clause 9.3.1 on metering as follows:

Metering requirements under the access arrangement shall be in accordance with the Electricity Industry (Metering Code) ~~2005~~ 2012 and the model service level agreement most recently approved by the Authority under the Electricity Industry (Metering Code) 2012. ~~Metering Code Model Service Level Agreement.~~

Issue 22

Submissions are invited from interested parties on:

- the operation of the access arrangement provisions for supplementary matters during AA3;
- Western Power's proposed revisions for AA4; and
- whether any revisions are needed in addition to those proposed by Western Power.

5.9 Standard Access Contract

5.9.1 Regulatory Requirements and Current Access Arrangement

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

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

5.3 A *standard access contract* must be:

- (a) reasonable; and
- (b) sufficiently detailed and complete to:
 - (iii) form the basis of a commercially workable *access contract*; and
 - (iv) enable a *user* or *applicant* to determine the value represented by the *reference service* at the *reference tariff*.

5.4 A *standard access contract* may:

- (a) be based in whole or in part upon the *model standard access contract*, in which case, to the extent that it is based on the *model standard access contract*, any matter which in the *model standard access contract* is left to be completed in the *access arrangement*, must be completed in a manner consistent with:
 - (i) any instructions in relation to the matter contained in the *model standard access contract*; and
 - (ii) section 5.3;
 - (iii) the *Code objective*;

and
- (b) be formulated without any reference to the *model standard access contract* and is not required to reproduce, in whole or in part, the *model standard access contract*.

{Note: The intention of this section 5.4(b) is to ensure that the *service provider* is free to formulate its own *standard access contract* which complies with section 5.3 but is not based on the *model standard access contract*.}

5.5 The [ERA]:

- (a) must determine that a *standard access contract* is consistent with section 5.3 and the *Code objective* to the extent that it reproduces without material omission or variation the *model standard access contract*; and
- (b) otherwise must have regard to the *model standard access contract* in determining whether the *standard access contract* is consistent with section 5.3 and the *Code objective*.

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

5.9.2 AA4 Proposal

Western Power has proposed amendments which it states will “enhance the integrity and development of the network and better achieve the intent of existing provisions”.

The proposed changes, including stakeholder engagement and rationale for the changes are set out in attachment 12.1 of the access arrangement information. A marked up version of the Electricity Transfer Access Contract is included in Western Power’s submission.

The proposed changes include:

- Strengthening the provisions requiring users to keep within their contracted capacity and requiring generators (other than small customers operating small scale generators) to give advance notice to Western Power of material changes to their plant;
- Allowing Western Power to nominate new services which will be applicable to small customers (for example to reflect a meter upgrade);
- Ensuring the liability provisions operate as intended and are not circumvented by large commercial users utilizing the services but electing not to be party to contractual arrangements with Western Power;
- Making it clear that, where a user provides Western Power with a cash deposit, any excess cash which accrues to Western Power (for example due to interest earned) will be refunded to the user on a monthly basis and within a reasonable time; and
- Inserting CPI escalation for resetting of liability caps.

In considering Western Power’s proposed amendments for AA4, the ERA will also give consideration to whether, in view of practical experience, the terms and conditions of the electricity transfer access contract that are proposed to continue, are consistent with the requirements of the Access Code.

Issue 23

Submissions are invited from interested parties on any practical issues and/or difficulties experienced with the electricity transfer access contract during AA3, or any issues arising from the revisions proposed by Western Power for AA4 (as set out in attachment 12.1 of the access arrangement information and the marked up version of the Electricity Transfer Access Contract), that:

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

Submissions are also invited on any additional amendments needed to form the basis of a commercially workable access contract and enable users or applicants to determine the value represented by the reference service at the reference tariff.

5.10 Applications and Queuing Policy

5.10.1 Regulatory Requirements and Current Access Arrangement

Section 5.1(g) of the Access Code requires that an access arrangement include an application and queuing policy (**AQP**). Sections 5.7 to 5.11 of the Access Code set out the requirements for an applications and queuing policy.

- 5.7 An applications and queuing policy must:
- (a) to the extent reasonably practicable, accommodate the interests of the service provider and of users and applicants; and
 - (b) be sufficiently detailed to enable users and applicants to understand in advance how the applications and queuing policy will operate; and
 - (c) set out a reasonable timeline for the commencement, progressing and finalisation of access contract negotiations between the service provider and an applicant, and oblige the service provider and applicants to use reasonable endeavours to adhere to the timeline; and
 - (d) oblige the service provider, subject to any reasonable confidentiality requirements in respect of competing applications, to provide to an applicant all commercial and technical information reasonably requested by the applicant to enable the applicant to apply for, and engage in effective negotiation with the service provider regarding, the terms for an access contract for a covered service including:
 - (i) information in respect of the availability of covered services on the covered network; and
 - (ii) if there is any required work:
 - A. operational and technical details of the required work; and
 - B. commercial information regarding the likely cost of the required work;
 and
 - (e) set out the procedure for determining the priority that an applicant has, as against another applicant, to obtain access to covered services, where the applicants' access applications are competing applications; and
 - (f) to the extent that contestable consumers are connected at exit points on the covered network, contain provisions dealing with the transfer of capacity associated with a contestable consumer from the user currently supplying the contestable consumer ("outgoing user") to another user or an applicant ("incoming user") which, to the extent that it is applicable, are consistent with and facilitate the operation of any customer transfer code; and
 - (g) establish arrangements to enable a user who is:
 - (i) a 'supplier of last resort' as defined in section 67 of the Act to comply with its obligations under Part 5 of the Act; and
 - (ii) a 'default supplier' under regulations made in respect of section 59 of the Act to comply with its obligations under section 59 of the Act and the regulations; and
 - (h) facilitate the operation of Part 9 of the Act, any enactment under Part 9 of the Act and the 'market rules' as defined in section 121(1) of the Act; and

- (i) if applicable, contain provisions setting out how access applications (or other requests for access to the covered network) lodged before the start of the relevant access arrangement period are to be dealt with.

5.8 The paragraphs of section 5.7 do not limit each other.

5.9 Under section 5.7(e), the applications and queuing policy may:

- (a) provide that if there are competing applications, then priority between the access applications is to be determined by reference to the time at which the access applications were lodged with the service provider, but if so the applications and queuing policy must:
 - (i) provide for departures from that principle where necessary to achieve the Code objective; and
 - (ii) contain provisions entitling an applicant, subject to compliance with any reasonable conditions, to:
 - A. current information regarding its position in the queue; and
 - B. information in reasonable detail regarding the aggregated capacity requirements sought in competing applications ahead of its access application in the queue; and
 - C. information in reasonable detail regarding the likely time at which the access application will be satisfied;
- and
- (b) oblige the service provider, if it is of the opinion that an access application relates to a particular project or development:
 - (i) which is the subject of an invitation to tender; and
 - (ii) in respect of which other access applications have been lodged with the service provider,

(“project applications”) to, treat the project applications, for the purposes of determining their priority, as if each of them had been lodged on the date that the service provider becomes aware that the invitation to tender was announced.

5.9A If:

- (a) an access application (the “first application”) seeks modifications to a contract for services; and
- (b) the modifications, if implemented, would not materially impede the service provider’s ability to provide a covered service sought in one or more other access applications (each an “other application”) compared with what the position would be if the modifications were not implemented,

then the first application is not, by reason only of seeking the modifications, a competing application with the other applications.

5.10 An applications and queuing policy may:

- (a) be based in whole or in part upon the model applications and queuing policy, in which case, to the extent that it is based on the model applications and queuing policy, any matter which in the model applications and queuing policy is left to be completed in the access arrangement, must be completed in a manner consistent with:

- (i) any instructions in relation to the matter contained in the model applications and queuing policy; and
 - (ii) sections 5.7 to 5.9;
 - (iii) the Code objective; and
- (b) be formulated without any reference to the model applications and queuing policy and is not required to reproduce, in whole or in part, the model applications and queuing policy.

5.11 The [ERA]:

- (a) must determine that an applications and queuing policy is consistent with sections 5.7 to 5.9 and the Code objective to the extent that it reproduces without material omission or variation the model applications and queuing policy; and
- (b) otherwise must have regard to the model applications and queuing policy in determining whether the applications and queuing policy is consistent with sections 5.7 to 5.9 and the Code objective.

5.10.2 AA4 Proposal

The current access arrangement includes the applications and queuing policy at Appendix A.

Significant changes were made at the AA3 review, including the creation of “competing applications groups” (CAGs), where applicants are grouped behind common network constraints to assess and tailor joint network solutions to provide access to all applicants within the CAG – rather than the previous process that provided one-off, single applicant solutions. It was considered this would lead to more efficient and less costly augmentation of the network over time.

In its proposal for AA4, Western Power states:

“The changes resulted in a significant improvement to how our customers connect to the network, and we plan to build on this through the proposed changes ...”

Western Power has proposed 26 amendments to the AQP as well as some administrative changes it considers improves its application. Western Power notes the amendments have been developed in consultation with stakeholders and through its experience in implementing the AQP during AA3.

Western Power has included a summary of key changes in Table 12.1 of its access arrangement information and further detail in the change summary report included in attachment 12.3 of the access arrangement information. A marked up copy of the applications and queuing policy has also been provided with Western Power’s submission.

The proposed changes include:

- Making spare capacity available to non-competing applications group members
- Withdrawing dormant applications from access queues
- Providing customers with more options for their connection applications when their circumstances change
- Providing more clarity around the preliminary access offer process

- Providing Western Power with the ability to terminate competing application groups when a network access solution is not viable, rather than the group existing in perpetuity
- Ensuring consistency with the *Electricity Corporations (Prescribed Customers) Order 2007*. Western Power notes the following:

“Currently the applications and queuing policy considers contestability on an exit point by exit point basis. Where the customer consumes (or is reasonably expected to consume) 50 MWh or more at an exit point, the customer is considered contestable. Where consumption is below 50 MWh, the customer is not contestable.

Western Power has identified this is inconsistent with the Prescribed Customers Order, which considers the customer’s portfolio of exit points.

The Order provides that a customer is contestable where it has a portfolio of exit points (a hospital or university for example), and one or more of the exit points exceeds the 50 MWh threshold. Under the current AQP, the customer would only be considered contestable (and, therefore, able to purchase electricity from retailers other than Synergy) at the exit point that exceeds 50 MWh, but not at the other sub-50 MWh exit points.

We propose to amend the AQP to align it with the Prescribed Customers Order.”

- Clarifying the policy only applies to covered services
- Clarifying what information provided by customers is confidential and what can be shared with third parties
- Allowing provisions for both electricity transfer applicants and connection applicants to depart from the policy in progressing an application

The applications and queuing policy applies to all covered services including reference and non-reference services.

Most customers are on reference services but the ERA is aware that Western Power has negotiated non-reference services with some customers, including constrained network connections.¹¹⁸ As discussed earlier, negotiating non-reference services is permitted, and encouraged, under the Code.

Prior to March 2016, in order to offer a constrained network connection Western Power had to apply to the ERA for an exemption from the Technical Rules. In November 2016 the ERA approved an amendment to Western Power’s Technical Rules.

As set out in the final decision¹¹⁹ published in November 2016:

Western Power proposed to amend the N-1 criterion¹²⁰ in the Technical Rules in order to allow voluntary load shedding and post contingent “run back” generation tripping for

¹¹⁸ That is, under certain agreed circumstances the customer will curtail its load or generation.

¹¹⁹ Economic Regulation Authority, *Western Power’s Proposed Amendments to the Technical Rules Submitted March 2016 Final Decision*, November 2016, p. 12.

¹²⁰ Terminology such as “N” or “N-1” is commonly used for describing the level of security of the transmission system. Where loss of a single transmission element (a line, transformer or other essential piece of equipment) could cause a supply interruption to some customers, the level of security of supply is said to be “N” or “N-0”. “N-1” is a higher level of security and describes a network built to a standard such that a network element can be out of service without overloading the remaining elements or resorting to load shedding.

user agreed connections. This will allow Western Power, where it has an agreement with a user, to switch off some loads (and some generators), in response to network needs. Western Power considers this amendment will promote more efficient network operation.”

However, the Wholesale Electricity Market design is based on an assumption that all generators have unconstrained connections¹²¹ and, therefore, will be able to generate whenever called upon in normal operating conditions. System Management therefore does not have the necessary tools to physically manage significant numbers of constrained generators.

There is also a risk the economic dispatch of energy in the wholesale market will be affected as constraints are not taken into account when developing the merit order.¹²²

Plans were being made to introduce a constrained network wholesale market design by July 2018. The Government has indicated its intention to proceed with this plan but the implementation date is uncertain.

The difficulties it causes for the current Wholesale Electricity Market design have restricted the number of constrained connections Western Power has been able to offer. Consequently, Western Power has developed an interim solution which will enable generators in some long standing groups of competing applicants to connect on a constrained basis over the next year or so.

Issue 24

Submissions are invited from interested parties on:

- the operation of the applications and queuing policy in AA3;
- the revisions proposed by Western Power for AA4 as set out in attachment 12.3 of the access arrangement information and the marked up version of the applications and queuing policy provided by Western Power in its submission;
- whether the processes for developing and offering non-reference services, particularly constrained network connections, are adequately covered by the applications and queuing policy; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of sections 5.7 to 5.9 of the Access Code.

¹²¹ That is they will always be able to generate if they are selected in the merit order to be dispatched.

¹²² The merit order is the ranking of generator pricing offers to the wholesale electricity market from lowest to highest with the cheapest generators being selected to generate.

5.11 Contributions Policy

5.11.1 Regulatory Requirements and Current Access Arrangement

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

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

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

- 5.12 The objectives for a contributions policy must be that:
- (a) it strikes a balance between the interests of:
 - (i) contributing users; and
 - (ii) other users; and
 - (iii) consumers; and
 - (b) it does not constitute an inappropriate barrier to entry.
- 5.13 A contributions policy must facilitate the operation of this Code, including:
- (a) sections 2.10 to 2.12; and
 - (b) the test in section 6.51A; and
 - (ba) sections 5.14 and 5.17D; and
 - (c) the regulatory test.
- 5.14 Subject to section 5.17A and a headworks scheme, a contributions policy:
- (a) must not require a user to make a contribution in respect of any part of new facilities investment which meets the new facilities investment test; and
 - (b) must not require a user to make a contribution in respect of any part of non- capital costs which would not be incurred by a service provider efficiently minimising costs; and
 - (c) may only require a user to make a contribution in respect of required work;

and
 - (d) without limiting sections 5.14(a) and 5.14(b), must contain a mechanism designed to ensure that there is no double recovery of new facilities investment or non-capital costs.
- 5.15 A contributions policy must set out:
- (a) the circumstances in which a contributing user may be required to make a contribution; and

- (b) the method for calculating any contribution a contributing user may be required to make; and
 - (c) for any contribution:
 - (i) the terms on which a contributing user must make the contribution; or
 - (ii) a description of how the terms on which a contributing user must make the contribution are to be determined.
- 5.16 A contributions policy may:
- (a) be based in whole or in part upon the model contributions policy, in which case, to the extent that it is based on the model contributions policy, any matter which in the model contributions policy is left to be completed in the access arrangement, must be completed in a manner consistent with:
 - (i) any instructions in relation to the matter contained in the model contributions policy; and
 - (ii) sections 5.12 to 5.15; and
 - (iii) the Code objective;
- and
- (b) be formulated without any reference to the model contributions policy and is not required to reproduce, in whole or in part, the model contributions policy.
- 5.17 The [ERA]:
- (a) must determine that a contributions policy is consistent with sections 5.12 to 5.15 and the Code objective to the extent that it reproduces without material omission or variation the model contributions policy; and
 - (b) otherwise must have regard to the model contributions policy in determining whether the contributions policy is consistent with sections 5.12 to 5.15 and the Code objective.
- 5.17A Despite section 5.14, Electricity Networks Corporation may require a contribution for Appendix 8 work of up to the maximum amount determined under Appendix 8 for the relevant type of Appendix 8 work.
- 5.17B From 1 July 2007 until the first revisions commencement date for the Western Power Network access arrangement, section 5.17A prevails over any inconsistent provisions of the Western Power Network access arrangement.
- 5.17C Despite section 5.14, the [ERA] may approve a contributions policy that includes a “headworks scheme” which requires a user to make a payment to the service provider in respect of the user’s capacity at a connection point on a distribution system because the user is a member of a class, whether or not there is any required work in respect of the user.

5.17D A headworks scheme must:

- (a) identify the class of works in respect of which the scheme applies, which must not include any works on a transmission system or any works which effect a geographic extension of a network; and
- (b) not seek to recover headworks charges in an access arrangement period which in aggregate exceeds 1 per cent of the distribution system target revenue for the access arrangement period; and
- (c) identify the class of users who must make a payment under the scheme; and
- (d) set out the method for calculating the headworks charge, which method:
 - (i) must have the objective that headworks charges under the headworks scheme will, in the long term, and when applied across all users in the class referred to in section 5.17D(c), recover no more than the service provider's costs (such as would be incurred by a service provider efficiently minimising costs) of any headworks; and
 - (ii) must have the objective that the headworks charge payable by one user will differ from that payable by another user as a result of material differences in the users' capacities and the locations of their connection points, unless the [ERA] considers that a different approach would better achieve the Code objective; and
 - (iii) may use estimates and forecasts (including long term estimates and forecasts) of loads and costs; and
 - (iv) must contain a mechanism designed to ensure that there is no double recovery of costs in all the circumstances, including the manner of calculation of other contributions and tariffs; and
 - (v) may exclude a rebate mechanism (of the type contemplated by clauses A4.13(d) or A4.14(c)(ii) of Appendix 4) and may exclude a mechanism for retrospective adjustments to account for the difference between forecast and actual values.

The contributions policy is contained in Appendix C of the current access arrangement. It comprises three documents:

- Contributions policy;
- Distribution headworks methodology; and
- Distribution low voltage connection headworks scheme methodology.

5.11.2 AA4 Proposal

Western Power has proposed a number of changes to the contributions policy that it considers adds clarity and makes connecting to the network more accessible. It has also removed parts of the policy it considers are out of date or redundant.

The proposed changes and rationale for them are set out in attachment 12.4 to the access arrangement information. A marked up copy of the contributions policy is included with the proposed access arrangement.

The most significant proposed changes are outlined below.

Revenue offset for residential customers

Western Power proposes to expand the provision of the revenue offset to also include residential customers:

“This means we will estimate the amount of incremental revenue resulting from the new residential connection over a 15-year period, and deduct this from the upfront capital contribution payable by the customers. This brings residential customers into line with commercial customers who are already eligible for an offset of up to 15 years, depending on the nature of the commercial project.

The proposed change recognises that over time, like commercial customers, residential customers making a new connection to the distribution network contribute to Western Power’s network tariff revenues. Extending the revenue offset to our residential customers means the initial cost of connection could be more affordable for more people, as they will have to pay less upfront.”¹²³

Further details are provided in attachment 12.4 to the access arrangement information. Western Power states:

“[It] believes the change can be given effect without any specific wording change within the Contributions Policy.”

Security clauses

Western Power has amended the security clauses which it considers will “better enable Western Power’s connecting customers to understand when, and for how long, security may be held by Western Power”.¹²⁴

These amendments are in section 4.3 of the Contribution Policy and provide Western Power with discretion for requiring an applicant to provide a bank guarantee if Western Power determines there is a risk of not receiving estimated new revenue from the connection.

Distribution headworks scheme

The distribution headworks scheme was designed to cover enhancements required to the existing HV three phase distribution system to provide an increase in capacity of that system. It applied if Western Power considered the forecast costs of distribution headworks

¹²³ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 268.

¹²⁴ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, Attachment 12.4 p. 2.

required for a relevant area over a 25 year period exceeded the amount of new revenue likely to be gained from providing covered services to applicants over that period and:

- the connection point was less than 160 kms from a zone substation and the nominated capacity was less than 2,000 kVA; or
- the connection point was greater than 160 kms from the zone substation and the nominated capacity was less than 1,000 kVA.

Western Power states it proposes to remove the distribution headworks scheme from the policy, noting it is not a mandatory requirement of the Access Code.

In attachment 12.4 to the access arrangement information Western Power notes that only recovering a portion of the costs for supply upgrades leaves Western Power liable for the remainder of the costs. It states:

“[It] had committed to the State Government not to charge for headworks for the 2012/13 financial year, however the Policy has not been applied since.

Western Power’s current approach, in line with the issue identified [under recovery of costs], is to charge the forecast cost of the works (minus any portion deemed to meet NFIT) to supply upgrades in regional areas.”¹²⁵

Distribution low voltage connection headworks scheme

The distribution low voltage connection headworks scheme was proposed and approved as part of the AA3 review. It applies to upgrades to power supply in rural and regional areas situated 25 kilometres or more from the nearest Western Power substation.

The scheme was developed to allow the cost of infrastructure required for connection upgrades to be shared more evenly by all customers using the installed network. Charges are based on requested capacity, rather than whether the current network will have to be expanded because of the submitted application. Western Power notes:

“This means the first customer to request an increase in capacity is not required to fund infrastructure upgrades in their entirety.

Currently the DLVCHS applies only to connection upgrades and not to new connections. Western Power proposes to broaden the application of the DLVCHS to all new capacity connections (excluding the connection of gifted assets). Expanding the scheme will:

- enable the development industry to more accurately forecast charges
- implement consistent charging across customers
- provide customers with more predictable and transparent prices
- streamline the processes for determining charges by providing a simpler approach to charging customers.”

Further details are provided in attachments 12.4 and 12.5 to the access arrangement information and the marked up version of the policy included in Western Power’s submission.

¹²⁵ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, Attachment 12.4, p. 2.

In attachment 12.5, Western Power notes the pricing for the scheme has not been updated since October 2012. Western Power has included proposed new prices, to commence from 1 July 2018, in table 2 of attachment 12.5.

Issue 25

Submissions are invited from interested parties on:

- the operation of the contributions policy during AA3;
- the revisions proposed by Western Power for AA4, as set out in attachments 12.4 to 12.5 to the access arrangement information and the marked up contribution policy, including:
 - making a revenue offset available to residential customers;
 - security requirements for estimated new revenue;
 - removing the distribution headworks scheme;
 - expanding the distribution low voltage connection headworks scheme to include new connections;
 - the updated prices included in Table 2 of attachment 12.5 to the access arrangement information; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of the Access Code.

5.12 Transfer and Relocation Policy

5.12.1 Regulatory Requirements and Current Access Arrangement

Section 5.1(i) of the Access Code requires that an access arrangement include a transfer and relocation policy. The particular requirements for a transfer and relocation policy are set out in sections 5.18 to 5.24 of the Access Code:

- 5.18 A transfer and relocation policy:
- (a) must permit a user to make a bare transfer¹²⁶ without the service provider's consent; and
 - (b) may require that a transferee under a bare transfer notify the service provider of the nature of the transferred access rights before using them, but must not otherwise require notification or disclosure in respect of a bare transfer.
- 5.19 For a transfer other than a bare transfer, a transfer and relocation policy:
- (a) must oblige the service provider to permit a user to transfer its access rights and, subject to section 5.20, may make a transfer subject to the service provider's prior consent and such conditions as the service provider may impose; and
 - (b) subject to section 5.20, may specify circumstances in which consent will or will not be given, and conditions which will be imposed, under section 5.19(a).
- 5.20 Under a transfer and relocation policy, for a transfer other than a bare transfer, a service provider:
- (a) may withhold its consent to a transfer only on reasonable commercial or technical grounds; and
 - (b) may impose conditions in respect of a transfer only to the extent that they are reasonable on commercial and technical grounds.
- 5.21 A transfer and relocation policy:
- (a) must permit a user to relocate capacity at a connection point in its access contract to another connection point in its access contract, (a 'relocation') and, subject to section 5.22, may make a relocation subject to the service provider's prior consent and such conditions as the service provider may impose; and
 - (b) subject to section 5.22, may specify in advance circumstances in which consent will or will not be given, and conditions which will be imposed, under section 5.21(a).
- 5.22 Under a transfer and relocation policy, for a relocation a service provider:
- (a) must withhold its consent where consenting to a relocation would impede the ability of the service provider to provide a covered service that is sought in an access application; and
 - (b) may withhold its consent to a relocation only on reasonable commercial or technical grounds; and

¹²⁶ A bare transfer is a transfer where the user's obligations under the contract for services and all other terms of the contract for services remain in full force and effect after the transfer.

- (c) may impose conditions in respect of a relocation only to the extent that they are reasonable on commercial and technical grounds.
- 5.23 An example of a thing that would be reasonable for the purposes of sections 5.20 and 5.22 is the service provider specifying that, as a condition of its agreement to a transfer or relocation, the service provider must receive at least the same amount of revenue as it would have received before the transfer or relocation, or more revenue if tariffs at the destination point are higher.
- 5.24 Section 5.23 does not limit the things that would be reasonable for the purposes of sections 5.20 and 5.22.

The Access Code does not provide a model transfer and relocation policy.

The current access arrangement includes a transfer and relocation policy at Appendix D. The policy applies to any access contract unless otherwise explicitly stated in the access contract, and includes:

- definitions of terms and rules of interpretation;
- indication that the transfer and relocation policy applies to any access contract unless otherwise explicitly stated in the access contract and prohibition of any transfer of rights under an access contract except as allowed for under the transfer and relocation policy;
- provision for bare transfers of rights under an access contract;
- provision for assignments of rights under an access contract other than a bare transfer, subject to consent of Western Power; and
- provision for a relocation by a user of contracted capacity at one connection point to another connection point, where the user has an access contract for both connection points.

5.12.2 AA4 Proposal

Western Power has proposed changes to the policy which it states:

“.. will act to ensure:

- the policy more closely aligns with the provisions of the Code;
- defined terms are consistent with other instruments;
- boundaries with other regulatory instruments are distinct; and
- the obligations and rights of involved parties are transparent.”¹²⁷

The proposed amendments are set out in attachment 12.6 to the access arrangement information and in the marked up transfer and relocation policy provided with the proposed access arrangement.

Attachment 12.6 also includes a summary of Western Power’s stakeholder engagement, including stakeholder feedback, and the way in which it was incorporated into the proposed amendments.

¹²⁷ Western Power, *Access arrangement information: Access arrangement revisions for the fourth access arrangement period*, 2 October 2017, p. 271.

The amendments include:

- A new clause (2.3) stating that if there is an amendment to the Access Code then the application of the policy is subject to any varied or additional requirements imposed or required by those amendments.to be added.
- Amendments to clause 5.3 and insertion of a new clause (6.4) regarding the circumstances under which Western Power can refuse a transfer request and conditions it may impose before approving a transfer.
- A new clause (6.5) stating that a user requesting a relocation, must also apply under the applications and queuing policy if required and that any such application will be processed in accordance with the applications and queuing policy and the user's access contract.

Issue 26

Submissions are invited from interested parties on:

- the operation of the transfer and relocation policy during AA3;
- the revisions proposed by Western Power, as set out in attachment 12.6 to the Access Arrangement Information and the marked up transfer and relocation policy submitted by Western Power; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of the Access Code.

Appendix 1 Summary of issues

Issue 1

Submissions are invited from interested parties on whether the approach Western Power has taken to developing its network investment plan for AA4, including its consideration of future uncertainties and possible effects of new technologies, and the expenditure it is proposing meet the Access Code objectives and new facility investment test requirements.

Issue 2

Submissions are invited from interested parties on:

- the effectiveness of the gain sharing mechanism in encouraging Western Power to become more efficient;
- the effectiveness of the service standard adjustment mechanism in ensuring Western Power maintains service standards and only improves them where it is of value to customers; and
- Any amendments needed to the gain sharing mechanism and service standard adjustment mechanism for AA4.

Issue 3

Submissions are invited from interested parties on:

- practical experience in seeking access to the network;
- any changes necessary to facilitate easier access to network connections;
- any additional reference services needed; and
- any views on the ability for customers to connect to the network and obtain the services they require.

Issue 4

Submissions are invited from interested parties on:

- Western Power's proposal to install advanced meters, including whether the expenditure meets the Access Code objectives and new facilities investment test;
- the proposed new time of use and demand tariffs;
- the balance between fixed and variable charges; and
- any other tariff developments considered necessary to meet the Code requirements.

Issue 5

Submissions are invited from interested parties on the dates Western Power has proposed for the next review of the access arrangement.

Issue 6

Submissions are invited from interested parties on the proposed price control and side constraint formula. In particular, any views on how variations in demand during the access arrangement period should be managed to avoid price shocks to customers.

Issue 7

Submissions are invited from interested parties on whether Western Power's proposed operating expenditure meets the requirement of section 6.40 to 6.42 of the Access Code.

Issue 8

Submissions are invited from interested parties on:

- whether actual capital expenditure during AA3 meets the requirements of the Access Code including sections 6.51A to 6.54; and
- whether Western Power's proposed capital expenditure for AA4 meets the requirements of the Access Code including sections 6.51A to 6.54.

Issue 9

Submissions are invited from interested parties on the following:

- the approach to the rate of return, and the estimation of its various parameters, as proposed by Western Power;
- Western Power's proposed amendments to the ERA's approach to estimating the market risk premium; and
- the process for, and timing of, the annual update of the debt risk premium proposed by Western Power.

Issue 10

Submissions are invited from interested parties on the following building blocks:

- Return on working capital
- Taxation
- Investment adjustment mechanism
- Service standard adjustment mechanism
- Unforeseen events
- D-factor
- Gain sharing mechanism
- Deferred revenue
- Tariff equalisation contribution
- K-factor adjustment

Issue 11

Submissions are invited from interested parties on the following:

- have the reference services included in the current access arrangement met the requirements of users, and the requirements of section 5.2 of the Access Code;
- are additional reference services, or modifications to existing reference services, needed to meet the requirements of users;
- do the proposed amendments to current reference services meet the requirements of users, and the requirements of section 5.2 of the Access Code;
- do the proposed new reference services (D1, D2, D3 and D4) meet the requirements of users, and the requirements of section 5.2 of the Access Code ; and
- does the proposed approach to requests for non-standard services (i.e. to provide non-reference service contracts that are not listed or priced other than in the contract and do not have minimum service standards prescribed) meet the requirements of users.

Issue 12

Submissions are invited from interest parties on Western Power's proposed tariffs.

Issue 13

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

- Whether the proposed measures are reasonable and sufficiently detailed and complete to enable users or applicants to determine the value represented by the reference service at the reference tariff.
- Whether the system minutes interrupted measure should be removed.
- The reasonableness of the methods used to establish the data series on which the service standard benchmarks are based including using:
 - the five-year average of actual performance for all measures, rather than three years for SAIDI and SAIFI and five years for all other measures.
 - a Box-Cox transformation to determine the probability of a major event day, rather than a normal distribution.
 - using distribution unplanned daily SAIDI rather than daily SAIDI including all interruptions when calculating the major event day threshold.
- Setting the benchmarks using the average of the 99th percentile (or 1st percentile for circuit availability and call centre performance) of the distributions of best fit rather than the 97.5th (or 2.5th) percentile approved for AA3.
- Applying the current (AA3) service standard benchmarks during 2017/18.
- Whether the supporting information provided by Western Power is sufficiently detailed to enable users or applicants to determine the value represented by the reference service at the reference tariff.

Issue 14

Submissions are invited from interested parties on the proposed amendments to the specified force majeure events in clause 7.1.4 of the access arrangement, particularly the inclusion of "government energy reforms".

Issue 15

Submissions are invited from interest parties on the proposed amendments to the Technical Rules adjustment clause 7.2.1 of the access arrangement, to only report on material changes in costs.

Issue 16

Submissions are invited from interested parties on the proposed amendments to clause 7.3.7 of the access arrangement to change the investment categories subject to the Investment Adjustment Mechanism as follows:

- remove distribution wood pole management;
- remove the Rural Power Improvement Program; and
- include provision of metering installations on the distribution system from 1 July 2017.

Issue 17

Submissions are invited from interested parties on the proposed amendments to the gain sharing mechanism as set out in section 6.9 of the access arrangement information and section 7.4 of the marked up access arrangement.

Submissions are also invited on how effective the gain sharing mechanism has been in promoting efficiency and what changes might be required to improve its effectiveness.

Issue 18

Submissions are invited from interest parties on:

- Western Power's proposed amendments to the service standard adjustment mechanism.
- How effective the service standard mechanism has been and what changes are necessary to improve it.

Issue 19

Submissions are invited from interested parties on Western Power's proposed amendments to the D-factor scheme to enable it to lodge an application during the access arrangement period for a determination on whether expenditure satisfies the D factor non-capital costs test. In particular, the ERA is interested in views on whether these amendments are necessary to ensure Western Power chooses the overall least cost option when choosing between capital and non-capital solutions.

Issue 20

Submissions are invited from interested parties on Western Power's proposed updates to the deferred revenue that will be recovered in future access arrangement periods.

Issue 21

Submissions are invited from interested parties on the proposed amendments to the trigger events included in clause 8.1.2 of the access arrangement, particularly the addition of "government energy reforms" as a specific trigger event.

Issue 22

Submissions are invited from interested parties on:

- the operation of the access arrangement provisions for supplementary matters during AA3;
- Western Power's proposed revisions for AA4; and
- whether any revisions are needed in addition to those proposed by Western Power.

Issue 23

Submissions are invited from interested parties on any practical issues and/or difficulties experienced with the electricity transfer access contract during AA3, or any issues arising from the revisions proposed by Western Power for AA4 (as set out in attachment 12.1 of the access arrangement information and the marked up version of the Electricity Transfer Access Contract), that:

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

Submissions are also invited on any additional amendments needed to form the basis of a commercially workable access contract and enable users or applicants to determine the value represented by the reference service at the reference tariff.

Issue 24

Submissions are invited from interested parties on:

- the operation of the applications and queuing policy in AA3;

- the revisions proposed by Western Power for AA4 as set out in attachment 12.3 of the access arrangement information and the marked up version of the applications and queuing policy provided by Western Power in its submission;
- whether the processes for developing and offering non-reference services, particularly constrained network connections, are adequately covered by the applications and queuing policy; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of sections 5.7 to 5.9 of the Access Code.

Issue 25

Submissions are invited from interested parties on:

- the operation of the contributions policy during AA3;
- the revisions proposed by Western Power for AA4, as set out in attachments 12.4 to 12.5 to the access arrangement information and the marked up contribution policy, including:
 - making a revenue offset available to residential customers;
 - security requirements for estimated new revenue;
 - removing the distribution headworks scheme;
 - expanding the distribution low voltage connection headworks scheme to include new connections;
 - the updated prices included in Table 2 of attachment 12.5 to the access arrangement information; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of the Access Code.

Submissions are invited from interested parties on:

- the operation of the transfer and relocation policy during AA3;
- the revisions proposed by Western Power, as set out in attachment 12.6 to the Access Arrangement Information and the marked up transfer and relocation policy submitted by Western Power; and
- whether any revisions to this policy, in addition to those proposed by Western Power, are required to meet the requirements of the Access Code.