

# Further Final Decision on Proposed Revisions to the Access Arrangement for the Western Power Network 2017/18 – 2021/22

Submitted by Western Power

2 January 2019

Economic Regulation Authority

WESTERN AUSTRALIA

## Economic Regulation Authority

4<sup>th</sup> Floor Albert Facey House  
469 Wellington Street, Perth

**Mail to:**

Perth BC, PO Box 8469  
PERTH WA 6849

**T:** 08 6557 7900

**F:** 08 6557 7999

**E:** [records@erawa.com.au](mailto:records@erawa.com.au)

**W:** [www.erawa.com.au](http://www.erawa.com.au)

National Relay Service TTY: 13 36 77  
(to assist people with hearing and voice impairment)

We can deliver this report in an alternative format for those with a vision impairment.

© 2019 Economic Regulation Authority. All rights reserved. This material may be reproduced in whole or in part provided the source is acknowledged.

## Contents

|  |           |
|--|-----------|
| <b>DECISION</b>  | <b>1</b>  |
| <b>REASONS</b>   | <b>3</b>  |
| <b>Access Arrangement Commencement Date</b>  | <b>3</b>  |
| <b>Form of price control</b>   | <b>4</b>  |
| <b>Metering Pricing</b>  | <b>6</b>  |
| <b>Target revenue</b>  | <b>7</b>  |
| Forecast operating expenditure   | 15        |
| Opening regulated capital base for AA4   | 16        |
| Forecast regulated capital base for AA4  | 18        |
| Return on regulated capital base   | 20        |
| Return on working capital  | 21        |
| Taxation   | 21        |
| Adjustments to target revenue  | 22        |
| Investment adjustment mechanism  | 22        |
| Gain sharing mechanism   | 22        |
| Unforeseen events adjustment   | 23        |
| <b>Reference and non-reference services</b>  | <b>24</b> |
| Time of use and demand services  | 24        |
| Metering services  | 26        |
| Reference services sought by users   | 28        |
| Metering definitions and conditions  | 30        |
| Reference service eligibility criteria   | 31        |
| <b>Pricing methods, price list and price list information</b>  | <b>32</b> |
| Price list to be updated   | 32        |
| Transmission tariffs   | 32        |
| Side constraint correction factor  | 33        |
| Tariff Equalisation Contribution   | 34        |
| Metering charges   | 34        |
| Pricing of the new time of use services  | 35        |
| High and low voltage metered demand tariffs  | 36        |
| Excess Network Usage Charge  | 37        |
| Streetlight tariffs  | 38        |
| <b>Service standard benchmarks</b>   | <b>39</b> |
| Removal of the system minutes interrupted performance measures   | 39        |
| Amending the calculation of system peak demand for the loss of supply event frequency performance measures                           | 40        |
| Using the distribution of best fit to historical performance data to set service standard benchmarks                                 | 41        |
| Setting the service standard benchmarks at the 97.5 <sup>th</sup> (or 2.5 <sup>th</sup> ) percentile of the distribution of best fit | 41        |
| Implementation of a service standard benchmark for momentary interruptions   | 42        |

|  |           |
|--|-----------|
| Exclusion of zone substation transformers from transmission performance measures                                       | 42        |
| <b>Adjustments to target revenue</b>   | <b>45</b> |
| Investment adjustment mechanism  | 45        |
| Gain sharing mechanism   | 45        |
| Interrelationship with service standards   | 46        |
| Separate benchmarks for transmission and distribution  | 47        |
| Setting the efficiency and innovation benchmarks   | 47        |
| Service standard adjustment mechanism  | 49        |
| Set the service standard targets at the average annual performance achieved during the third access arrangement period | 49        |
| Apply revised weightings of values of customer reliability to SAIDI and SAIFI incentive rates                          | 50        |
| Updated revenue-at-risk, and allocation on the transmission network  | 51        |
| D-factor   | 54        |
| <b>Standard access contract</b>  | <b>55</b> |
| Provision and use of services (clause 3.1)   | 55        |
| Use of the words “materially modify” and “adversely impact”  | 56        |
| Written notification period  | 56        |
| Limitation of liability (clause 19.5(c))   | 57        |
| Intermediary indemnity (clause 19.11)  | 58        |
| Force majeure (clause 22)  | 58        |
| <b>Applications and queuing policy</b>   | <b>59</b> |
| Dormant applications   | 59        |
| Forecast natural load growth considerations  | 59        |
| Refund of preliminary offer processing fee   | 60        |
| Refund of preliminary acceptance fee   | 61        |
| Modified plant compliance with the technical rules   | 61        |
| Multiple trading relationships at a connection point   | 61        |
| Relationship with transfer and relocation policy   | 62        |
| Confidentiality  | 62        |
| Process overview   | 63        |
| More than one change or modification within 12 months  | 64        |
| <b>Contributions policy</b>  | <b>66</b> |
| Provision of security for new revenue  | 66        |
| Distribution low voltage connection headworks scheme   | 67        |
| Section 2.2 and 5.1 – time period for updating prices  | 67        |
| Section 6 – exclusion  | 67        |
| <b>Transfer and relocation policy</b>  | <b>69</b> |
| New clause 6.4   | 69        |
| <b>APPENDICES</b>  | <b>70</b> |
| <b>Appendix 1</b> <b>Glossary</b>  | <b>71</b> |

## Tables

|           |   |    |
|-----------|---|----|
| Table 1   | ERA final decision on target revenue for the transmission network (\$ million real June 2017)   | 8  |
| Table 2   | ERA final decision on target revenue for the distribution network (\$ million real June 2017)   | 9  |
| Table 3   | Western Power amended target revenue for the transmission network (\$ million real June 2017)   | 10 |
| Table 4   | Western Power amended target revenue for the distribution network (\$ million real June 2017)   | 11 |
| Table 5   | Forecast change in average charges for the transmission network based on the final decision target revenue (\$ real June 2017)  | 12 |
| Table 6   | Forecast change in average charges for the distribution network based on the final decision target revenue (\$ real June 2017)  | 12 |
| Table 7   | Forecast change in total average charge based on the final decision target revenue (\$ real June 2017)  | 12 |
| Table 8   | Forecast change in average charges for the transmission network based on Western Power's amended proposed target revenue (\$ real June 2017)  | 13 |
| Table 9   | Forecast change in average charges for the distribution network based on Western Power's amended proposed target revenue (\$ real June 2017)  | 13 |
| Table 10  | Forecast change in total average charge based on Western Power's amended proposed target revenue (\$ real June 2017)  | 13 |
| Table 11  | ERA Final Decision operating expenditure (\$ million real June 2017)  | 15 |
| Table 12  | Western Power amended operating expenditure (\$ million real June 2017)   | 16 |
| Table 13  | ERA final decision capital base as at 30 June 2017 for the transmission network (\$ million real June 2017)   | 17 |
| Table 14  | ERA final decision capital base as at 30 June 2017 for the distribution network (\$ million real June 2017)   | 17 |
| Table 15  | ERA final decision forecast depreciation (\$ million nominal)   | 18 |
| Table 16  | ERA final decision forecast transmission capital base (\$ million real June 2017)   | 18 |
| Table 17  | ERA final decision forecast distribution capital base (\$ million real June 2017)   | 19 |
| Table 18  | Western Power amended forecast transmission capital base (\$ million real June 2017)  | 19 |
| Table 19  | Western Power amended forecast distribution capital base (\$ million real June 2017)  | 19 |
| Table 20  | ERA final decision Weighted Average Cost of Capital (WACC) parameters   | 20 |
| Table 21  | Distributions of best fit, parameters and service standard benchmarks (SSBs) derived at the 97.5th (or 2.5th*) percentile for the years 2018/19 to 2021/22  | 44 |
| Table 22  | Average annual performance during the AA3 period and adjustments for the new major event day threshold (MEDT) method, capital expenditure and system protection measure (SPM), and service standard benchmark (SSB) penalty caps, to determine service standard targets for the AA4 period, from 2019/20 to 2021/22 | 50 |
| Table 23: | Previous and revised weightings of values of customer reliability rates to SAIDI and SAIFI in the service target performance incentive scheme   | 51 |
| Table 24: | Western Power proposed and ERA required allocation of revenue-at-risk on the transmission network   | 52 |

|          |   |    |
|----------|---|----|
| Table 25 | Service standard targets (SST) and incentive rates for the service standard adjustment mechanism for the AA4 period | 53 |
|----------|---|----|

## DECISION

1. On 2 October 2017, Western Power submitted proposed revisions to the access arrangement for the Western Power Network. The submission was made in accordance with the requirements of section 4.79 of the *Electricity Networks Access Code 2004* (Access Code) and is for the fourth access arrangement period (AA4) from 1 July 2017 to 30 June 2022.
2. The Economic Regulation Authority is required to consider the proposed revisions and make a decision to either approve or not approve the 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.
  - Comply with the specific requirements of the Access Code.
3. On 20 September 2018, the ERA issued a final decision in accordance with the requirements of sections 4.52 and 4.17 of the Access Code.<sup>1</sup> The ERA's final decision was not to approve Western Power's proposed revisions to the access arrangement for the Western Power Network. As part of its reasons for the final decision, the ERA required 66 amendments to be made before it would approve the revised access arrangement.
4. On 16 November 2018, and in accordance with section 4.19 of the Access Code, Western Power submitted amended proposed revisions to its access arrangement to the ERA. The amended proposed revisions and amended access arrangement information are available on the ERA's website.
5. The ERA is required by section 4.21 of the Access Code to issue a further final decision that either approves or does not approve the amended proposed revisions. The requirements for approval are set out in section 4.23 of the Access Code:

If the *Authority's final decision* is to not *approve* a *proposed access arrangement* and the *service provider* submits an *amended proposed access arrangement* and either:

  - (a) the *amended proposed access arrangement* implements the amendments required under section 4.17(b); or
  - (b) the *amended proposed access arrangement* does not implement the amendments required under section 4.17(b) but otherwise (in the *Authority's view*) adequately addresses the matters which prompted the *Authority* to require the amendments,

then the *Authority's further final decision* must be to *approve* the *amended proposed access arrangement* unless:

  - (c) *approving* the *amended proposed access arrangement* would be inconsistent with the *Code objective*; and
  - (d) the *Authority* determines that the advantages of not *approving* the *amended proposed access arrangement* outweigh the disadvantages,

---

<sup>1</sup> Economic Regulation Authority, *Final Decision on Proposed Revisions to the Access Arrangement for the Western Power Network 2017/18 – 2021/22*, 20 September 2018.

in particular the disadvantages associated with decreased regulatory certainty and increased regulatory cost and delay.

6. Western Power has complied with or adequately addressed 55 of the 66 required amendments. Western Power has not complied with or adequately addressed the matters that prompted the ERA to require 11 of the required amendments.
7. Consequently, the ERA's further final decision is to not approve Western Power's amended proposed revisions to the access arrangement.
8. As required under section 4.24 of the Access Code, the ERA will draft, approve, publish and advertise its own access arrangement which will be based on Western Power's amended proposed access arrangement and amended to the extent necessary to:
  - 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.
  - Comply with the specific requirements of the Access Code.
9. The revised access arrangement must be published no later than 28 February 2019.<sup>2</sup> As proposed by Western Power the revised access arrangement and new price list will take effect on 1 July 2019.
10. The ERA's reasons for this further final decision are provided in the following sections of this document. These reasons are set out in the order of the elements of the proposed access arrangement revisions that the ERA required to be amended under the final decision.

---

<sup>2</sup> Section 4.25 of the Access Code requires the ERA to publish the access arrangement within 20 business days after the further final decision is published, which can be extended up to a further 20 business days under section 4.66(l).

## REASONS

### Access Arrangement Commencement Date

12. Under section 4.26 of the Access Code, the ERA is required to specify the access arrangement commencement date on which the amended access arrangement takes effect. The access arrangement commencement date is required to be consistent with the Access Code objective and be at least 20 business days after the further final decision, or at least 20 business days after the ERA publishes its own access arrangement if the further final decision is to not approve the access arrangement.
13. In the final decision, the ERA determined that the earliest realistic commencement date for the fourth access arrangement period (AA4) was 1 February 2019 and that the actual date would be settled in the further final decision.
14. In its amended proposal, Western Power has proposed a commencement date of 1 July 2019:<sup>3</sup>

Following engagement with the ERA, we consider a 1 July 2019 commencement date is appropriate, as it will allow sufficient time for Western Power and users to modify their billing systems and related processes to enable the implementation of the changes made under the approved access arrangement. As highlighted by the ERA in its final decision, Synergy has advised it requires at least four to six months from the further final decision to implement revised tariffs.

The ERA's further final decision is due on 7 December 2018, however, if the ERA takes the full extent of extensions available to it, the further final decision may not be made until 2 January 2019. We therefore submit that the revised tariffs for the AA4 period should come into effect on 1 July 2019, which will accommodate the period users have stated it will take to implement the changes (including Synergy's four to six-month implementation timeframe).

The consequential changes arising from the 1 July 2019 commencement date have been made in the amended proposed access arrangement, price list and price list information, including provisions for the annual update of the debt risk premium.
15. As the ERA's further final decision is to not approve Western Power's amended proposed access arrangement, the ERA must publish its own access arrangement no later than 28 February 2019. Western Power's proposed commencement date of 1 July 2019 is more than 20 business days after that date and will provide at least four months for users to implement any system changes required.
16. The ERA considers Western Power's proposed access arrangement commencement date of 1 July 2019 is consistent with the Access Code requirements.

---

<sup>3</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 2, para. 13-15.

## Form of price control

17. The Access Code requires an access arrangement to include a “price control”, which means the provisions in an access arrangement under section 5.1(d) and chapter 6 of the Access Code which determine target revenue.
18. The current access arrangement applies a “revenue cap” form of price control. Under this form, reference tariffs are set on the basis of a target revenue comprising an amount of required revenue for a given year, plus corrections for under or over-recovery of target revenue in prior years.
19. The formula for calculating target revenue each year when setting annual tariffs is set out in sections 5.6 and 5.7 of the current access arrangement. The formula includes a separate factor for any costs incurred by the distribution system resulting from any Tariff Equalisation Contribution (TEC) that Western Power is required to pay in accordance with section 6.37A of the Access Code.
20. The ERA determined that the current price control had not met the objectives of section 6.4(b) of the Access Code as it had not enabled users to predict the likely annual changes in target revenue during the access arrangement period, and had not met the objective of section 6.4(c) to avoid price shocks.
21. The ERA required amendments to Western Power’s proposed price control in order to:
  - Enable users to predict the likely annual changes in target revenue during the access arrangement period (as required under section 6.4(b) of the Access Code).
  - Avoid price shocks, that is, sudden material tariff adjustments between succeeding years (as required under section 6.4(c) of the Access Code).
22. The ERA considered this would be achieved by ensuring demand risk is faced by Western Power rather than users, and that this could best be achieved by:
  - Removing the correction factor for under or over-recovery of target revenue for prior periods from the price control formula.
  - Requiring the forecast revenue recovery from Western Power’s proposed tariffs in each year’s Price List to be based on customer numbers, energy volumes and any other charging parameters for each reference service to be consistent with the demand forecast approved with the decision for the fourth access arrangement period (AA4).
23. As set out in the final decision, the revised price control will come into effect with the first price list approved as part of the AA4 access arrangement. The revised price control only applies from that point forward so there is no retrospectivity.
24. In the final decision, the ERA acknowledged the TEC was a charge that cannot be influenced by Western Power and implements a government policy of uniform tariffs. Consequently, it is reasonable to enable Western Power to collect the TEC charges in full from distribution customers. The ERA considered this could be achieved by including an under/over recovery adjustment in the price control specifically for the TEC element of tariffs.
25. The final decision required the following amendment:

**Final Decision Required Amendment 1**

Western Power must amend its proposed revised access arrangement to:

- Remove the correction factor for under or over-recovery of target revenue for prior periods from the price control formula; and
- Add a requirement that the forecast customer numbers, energy volumes and any other charging parameters for each reference service must be consistent with the demand forecast approved with the access arrangement decision.
- Include a correction factor for under or over-recovery of the TEC for prior periods.

26. In its amended proposal, Western Power states:<sup>4</sup>

The correction factor has been removed from the price control from the AA4 commencement date. Section 5 of the access arrangement reflects this change. That section also details the new TEC correction factor which has been included to adjust for differences between forecast and actual TEC recovery.

The AA3 form of price control (i.e. a revenue cap) remains in place for 2017/18 and 2018/19.

To ensure the new form of price control is not applied retrospectively, a one-off correction factor will be applied in the 2020/21 Price List to reflect the fact that 2018/19 revenue is still subject to a revenue cap. The adjustment is made to 2020/21 as there needs to be time for actual revenue to become available for incorporation into the calculation. A placeholder 2018/19 revenue forecast has been used in the revenue model.

As a result of the change in price control, from 1 July 2019 the terms MTR (maximum transmission revenue) and MDR (maximum distribution revenue) have been changed to reflect the fact that they no longer represent maximum amounts under a revenue cap, but target amounts. The terms are now TTR and TDR (target transmission revenue and target distribution revenue).

Other consequential changes include replacing the terms 'revenue cap services' with 'revenue target services', as the new form of price control is not strictly a price or revenue cap given the presence of a TEC correction factor. The changes in terminology are tracked in a marked-up copy of the amended proposed access arrangement.

A new section 6.4.5 has been added to the access arrangement to include the forecast customers numbers and energy volumes used to determine pricing.

27. The ERA considers Western Power's amendments comply with the first and last bullet points of the required amendment. The ERA is also satisfied in principle with Western Power's proposed amendment to include a one-off correction factor for the 2018/19 revenue is consistent with the final decision that the revised price control was not intended to be retrospective.
28. Although the ERA is satisfied in principle with the one-off correction factor for 2018/19, it does not consider the forecast value Western Power has used for 2018/19 is consistent with the demand forecast underpinning the access arrangement.
29. The forecast expenditure in the access arrangement is based on declining demand over the access arrangement period. In contrast, Western Power's amended access arrangement proposal assumes the 2018/19 revenue will be higher than 2017/18 actual revenue. The 2018/19 revenue forecast should be consistent with the overall

---

<sup>4</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 10.

demand forecast. The one-off correction factor will ensure any under or over recovery of revenue against the forecast for 2018/19 will be adjusted.

30. The ERA is also not satisfied that Western Power has fully complied with the second bullet point of the required amendment. Western Power has included forecast customer numbers and energy volumes used to determine pricing in the amended access arrangement. It has not included any other charging parameters, as required, in the amended access arrangement.
31. Based on Western Power's price list model, 67 per cent of total forecast revenue is directly related to the number of customers or volume of electricity used. A further 7 per cent is directly related to the volume of electricity used but dependent on whether it is used in peak or off-peak time periods. Most of the remaining 26 per cent is related to contract capacity, maximum demand or distance from substation. Forecasts of these charging parameters must be included in the access arrangement to comply with the second bullet point in the Final Decision Required Amendment 1.
32. For the reasons set out above, the ERA is not satisfied that the amendments to the access arrangement as set out above fully implement Final Decision Required Amendment 1.

## Metering Pricing

33. In the final decision, the ERA required Western Power to ensure metering pricing under the access arrangement is consistent with the *Electricity Industry (Metering) Code 2012* by amending clause 5.12 of the access arrangement to state that charges for metering extended services must also comply with clause 6.6(1)(e) of the *Electricity Industry (Metering) Code 2012*.

### **Final Decision Required Amendment 2**

Clause 5.12 must be amended to state that charges for metering extended services must also comply with clause 6.6(1)(e) of the *Electricity Industry (Metering) Code 2012*.

34. Western Power has amended clause 5.1.2 as follows:  

...charges for *access applications* will be consistent with the *Applications and Queuing Policy* and charges for extended metering services (within the meaning of the *MSLA*) will be consistent with the *MSLA* [and clause 6.6\(1\)\(e\) of the \*Electricity Industry \(Metering\) Code 2012\*](#).
35. The ERA is satisfied that the amendment of clause 5.1.2 as set out above implements Final Decision Required Amendment 2.

## Target revenue

36. Under section 6.2 of the Access Code, the target revenue for a price control may be set by reference to the service provider's approved total costs, or by reference to tariffs in previous access arrangement periods and changes to costs and productivity growth in the electricity industry, or by using a combination of these two methods.
37. Western Power determined a value of target revenue by using the building block approach. This is consistent with the requirements of section 6.2(a) of the Access Code and with the method used to determine target revenue for the previous three access arrangement periods.
38. To consider Western Power's proposed target revenue, the ERA has undertaken the following assessments of actual and forecast costs for the third access arrangement period (AA3) and fourth access arrangement period (AA4) respectively.
  - An assessment of whether the forecast operating costs for AA4 meet the requirement of section 6.40 of the Access Code of including only those costs that would be incurred by a service provider efficiently minimising costs.
  - An assessment of whether capital expenditure incurred in AA3 may be added to the capital base under section 6.51A of the Access Code, including an assessment of whether, and to what extent, the capital expenditure satisfies the new facilities investment test under section 6.52 of the Access Code.
  - An assessment of whether forecast capital expenditure for AA4 may be taken into account in determining target revenue (by inclusion in the forecast regulated capital base), including an assessment of whether, and to what extent, the capital expenditure can reasonably be expected to satisfy the new facilities investment test under section 6.52 of the Access Code.
39. The values of target revenue for the transmission and distribution networks determined by the ERA in its final decision are set out in Table 1 and Table 2 below.

**Table 1 ERA final decision on target revenue for the transmission network (\$ million real June 2017)**

|   | 2017/18      | 2018/19      | 2019/20      | 2020/21      | 2021/22      | Final Decision Total |
|---|--------------|--------------|--------------|--------------|--------------|----------------------|
| Operating costs                             | 82.1         | 80.6         | 80.3         | 81.5         | 79.7         | 404.3                |
| Depreciation                                | 109.7        | 115.2        | 122.0        | 128.8        | 132.2        | 608.0                |
| Accelerated depreciation (redundant assets) | -            | -            | -            | -            | -            | -                    |
| Return on regulated asset base              | 122.9        | 123.5        | 125.9        | 128.0        | 127.8        | 628.1                |
| Return on working capital                   | 1.1          | 1.4          | 1.4          | 1.9          | 2.3          | 8.0                  |
| Taxation                                    | 12.2         | 10.3         | 10.5         | 10.4         | 12.9         | 56.4                 |
| Deferred revenue recovery                   | 4.4          | 4.4          | 4.4          | 4.4          | 4.4          | 22.2                 |
| Investment adjustment mechanism             | (35.8)       | -            | -            | -            | -            | (35.8)               |
| Service standard adjustment mechanism       | 13.3         | -            | -            | -            | -            | 13.3                 |
| Unforeseen events                           | -            | -            | -            | -            | -            | -                    |
| D-factor                                    | -            | -            | -            | -            | -            | -                    |
| Gain sharing mechanism                      | 8.6          | 9.3          | 9.3          | 7.1          | 16.6         | 50.9                 |
| K-factor                                    | 1.2          | -            | -            | -            | -            | 1.2                  |
| <b>Total costs</b>                          | <b>319.9</b> | <b>344.8</b> | <b>354.0</b> | <b>362.2</b> | <b>375.9</b> | <b>1,756.7</b>       |

**Table 2 ERA final decision on target revenue for the distribution network (\$ million real June 2017)**

|   | 2017/18        | 2018/19        | 2019/20        | 2020/21        | 2021/22        | Final Decision Total |
|---|----------------|----------------|----------------|----------------|----------------|----------------------|
| Operating costs                             | 271.4          | 268.4          | 268.3          | 273.6          | 270.0          | 1,351.8              |
| Depreciation                                | 258.3          | 274.9          | 278.6          | 269.4          | 262.5          | 1,343.6              |
| Accelerated depreciation (redundant assets) | 4.4            | 6.9            | 4.4            | -              | -              | 15.6                 |
| Return on regulated asset base              | 229.3          | 237.6          | 245.5          | 254.7          | 260.3          | 1,227.3              |
| Return on working capital                   | 6.8            | 6.5            | 6.3            | 5.9            | 5.8            | 31.3                 |
| Taxation                                    | 74.8           | 31.4           | 29.6           | 23.9           | 28.3           | 188.0                |
| Deferred revenue recovery                   | 35.6           | 35.6           | 35.6           | 35.6           | 35.6           | 177.8                |
| Tariff Equalisation Contribution            | 164.0          | 190.9          | 153.4          | 146.0          | 147.0          | 801.2                |
| Investment adjustment mechanism             | (7.1)          | -              | -              | -              | -              | (7.1)                |
| Service standard adjustment mechanism       | 240.7          | -              | -              | -              | -              | 240.7                |
| Unforeseen events                           | -              | -              | -              | -              | -              | -                    |
| D-factor                                    | 8.7            | -              | -              | -              | -              | 8.7                  |
| Gain sharing mechanism                      | 27.4           | 29.3           | 29.3           | 22.5           | 52.7           | 161.2                |
| K-factor                                    | 36.4           | -              | -              | -              | -              | 36.4                 |
| <b>Total costs</b>                          | <b>1,350.6</b> | <b>1,081.4</b> | <b>1,050.8</b> | <b>1,031.7</b> | <b>1,062.0</b> | <b>5,576.6</b>       |

40. The final decision required Western Power to:

- Amend forecast operating expenditure (Final Decision Required Amendment 4)
- Amend the opening capital base for AA4 (Final Decision Required Amendment 6)
- Amend forecast capital expenditure and depreciation for AA4 (Final Decision Required Amendment 5 and 6)
- Amend the WACC (Final Decision Required Amendment 7)
- Amend the return on working capital (Final Decision Required Amendment 8)
- Amend taxation costs (Final Decision Required Amendment 9)
- Amend the investment adjustment mechanism (Final Decision Required Amendment 10)
- Amend the gain sharing mechanism (Final Decision Required Amendment 11)

- Amend the unforeseen events expenditure (Final Decision Required Amendment 12)

41. The required amendments are discussed from paragraph 52 onwards. Western Power's proposed amended target revenue, taking account of the required amendments, is set out in Table 3 and Table 4 below.

**Table 3 Western Power amended target revenue for the transmission network (\$ million real June 2017)**

|   | 2017/18      | 2018/19      | 2019/20      | 2020/21      | 2021/22      | Amended Total  | Final Decision |
|---|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| Operating costs                             | 87.1         | 85.5         | 85.2         | 86.5         | 84.6         | 428.8          | 404.3          |
| Depreciation                                | 110.0        | 115.9        | 122.7        | 129.3        | 132.7        | 610.6          | 608.0          |
| Accelerated depreciation (redundant assets) | -            | -            | -            | -            | -            | -              | -              |
| Return on regulated asset base              | 122.9        | 123.5        | 125.9        | 127.8        | 127.5        | 627.6          | 628.1          |
| Return on working capital                   | 1.1          | 1.4          | 1.3          | 1.7          | 2.3          | 7.9            | 8.0            |
| Taxation                                    | 12.1         | 10.3         | 10.5         | 10.4         | 12.9         | 56.3           | 56.4           |
| Deferred revenue recovery                   | 4.4          | 4.4          | 4.4          | 4.4          | 4.4          | 22.2           | 22.2           |
| Investment adjustment mechanism             | (35.8)       | -            | -            | -            | -            | (35.8)         | (35.8)         |
| Service standard adjustment mechanism       | 13.3         | -            | -            | -            | -            | 13.3           | 13.3           |
| Unforeseen events                           | -            | -            | -            | -            | -            | -              | -              |
| D-factor                                    | -            | -            | -            | -            | -            | -              | -              |
| Gain sharing mechanism                      | 8.6          | 9.3          | 9.3          | 7.1          | 16.6         | 50.9           | 50.9           |
| K-factor                                    | 1.2          | -            | -            | -            | -            | 1.2            | 1.2            |
| <b>Total costs</b>                          | <b>324.8</b> | <b>350.3</b> | <b>359.3</b> | <b>367.2</b> | <b>381.0</b> | <b>1,782.9</b> | <b>1,756.7</b> |

**Table 4 Western Power amended target revenue for the distribution network (\$ million real June 2017)**

|   | 2017/18        | 2018/19        | 2019/20        | 2020/21        | 2021/22        | Amended Total  | Final Decision |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Operating costs                             | 273.7          | 270.7          | 270.6          | 275.9          | 272.3          | 1,363.2        | 1,351.8        |
| Depreciation                                | 257.7          | 275.6          | 279.2          | 269.1          | 261.9          | 1,343.4        | 1,343.6        |
| Accelerated depreciation (redundant assets) | 4.4            | 6.9            | 4.4            | -              | -              | 15.6           | 15.6           |
| Return on regulated asset base              | 229.2          | 237.6          | 245.3          | 254.3          | 259.6          | 1,226.1        | 1,227.3        |
| Return on working capital                   | 6.8            | 6.4            | 6.4            | 6.0            | 5.8            | 31.4           | 31.3           |
| Taxation                                    | 74.7           | 31.5           | 29.7           | 24.0           | 28.3           | 188.3          | 188.0          |
| Deferred revenue recovery                   | 35.6           | 35.6           | 35.6           | 35.6           | 35.6           | 177.8          | 177.8          |
| Tariff Equalisation Contribution            | 164.6          | 195.1          | 153.4          | 146.0          | 147.0          | 806.0          | 801.2          |
| Investment adjustment mechanism             | (7.1)          | -              | -              | -              | -              | (7.1)          | (7.1)          |
| Service standard adjustment mechanism       | 240.7          | -              | -              | -              | -              | 240.7          | 240.7          |
| Unforeseen events                           | -              | -              | -              | -              | -              | -              | -              |
| D-factor                                    | 8.7            | -              | -              | -              | -              | 8.7            | 8.7            |
| Gain sharing mechanism                      | 27.4           | 29.3           | 29.3           | 22.5           | 52.7           | 161.2          | 161.2          |
| K-factor                                    | 36.4           | -              | -              | -              | -              | 36.4           | 36.4           |
| <b>Total costs</b>                          | <b>1,352.7</b> | <b>1,088.8</b> | <b>1,053.9</b> | <b>1,033.3</b> | <b>1,063.0</b> | <b>5,591.7</b> | <b>5,576.6</b> |

42. The forecast change in average charges based on the ERA's final determination of target revenue and Western Power's forecast energy volumes is shown in Table 5, Table 6 and Table 7 below. The date assumed for the first price change was 1 February 2019.

**Table 5 Forecast change in average charges for the transmission network based on the final decision target revenue (\$ real June 2017)**

|                                    | 2017/18 | July 2018<br>to Jan<br>2019 | Feb 2019<br>to June<br>2019 | 2019/20      | 2020/21      | 2021/22      |
|------------------------------------|---------|-----------------------------|-----------------------------|--------------|--------------|--------------|
| Unsmoothed revenue<br>(\$ million) | 319.9   | 201.1                       | 143.7                       | 354.0        | 362.2        | 375.9        |
| Smoothed revenue<br>(\$ million)   | 280.9   | 160.6                       | 131.6                       | 355.2        | 397.3        | 442.6        |
| Energy transported<br>(GWh)        | 17,698  | 10,303                      | 7,360                       | 17,628       | 17,502       | 17,309       |
| Average charge<br>(\$/MWh)         |         |                             | 17.9                        | 20.1         | 22.7         | 25.6         |
| <b>% change</b>                    |         |                             | <b>12.7%</b>                | <b>12.7%</b> | <b>12.7%</b> | <b>12.7%</b> |

**Table 6 Forecast change in average charges for the distribution network based on the final decision target revenue (\$ real June 2017)**

|                                    | 2017/18 | July 2018<br>to Jan<br>2019 | Feb 2019<br>to June<br>2019 | 2019/20      | 2020/21      | 2021/22      |
|------------------------------------|---------|-----------------------------|-----------------------------|--------------|--------------|--------------|
| Unsmoothed revenue<br>(\$ million) | 1,350.6 | 630.8                       | 450.6                       | 1,050.8      | 1,031.7      | 1,062.0      |
| Smoothed revenue<br>(\$ million)   | 1,188.2 | 691.4                       | 470.41                      | 1,120.8      | 1,077.4      | 1,038.3      |
| Energy transported<br>(GWh)        | 13,691  | 7,966                       | 5,690                       | 13,505       | 13,276       | 13,083       |
| Average charge<br>(\$/MWh)         |         |                             | 84.9                        | 83.0         | 81.2         | 79.4         |
| <b>% change</b>                    |         |                             | <b>-2.2%</b>                | <b>-2.2%</b> | <b>-2.2%</b> | <b>-2.2%</b> |

**Table 7 Forecast change in total average charge based on the final decision target revenue (\$ real June 2017)**

|  | 2017/18 | July 2018<br>to Jan<br>2019 | Feb 2019<br>to June<br>2019 | 2019/20     | 2020/21     | 2021/22     |
|--|---------|-----------------------------|-----------------------------|-------------|-------------|-------------|
| Total unsmoothed<br>revenue (\$ million) | 1,670.5 | 831.9                       | 594.2                       | 1,404.8     | 1,393.8     | 1,437.9     |
| Total smoothed<br>revenue (\$ million)   | 1,469.2 | 854.9                       | 599.1                       | 1,475.7     | 1,474.3     | 1,480.4     |
| Total average charge<br>(\$/MWh)         |         |                             | 102.8                       | 103.1       | 103.9       | 104.9       |
| <b>% change</b>                          |         |                             | <b>0.1%</b>                 | <b>0.3%</b> | <b>0.7%</b> | <b>1.0%</b> |

43. The forecast change in average charges based on Western Power's amended target revenue and with new tariffs commencing on 1 July 2019 is shown in Table 8, Table 9 and Table 10 below.

**Table 8 Forecast change in average charges for the transmission network based on Western Power's amended proposed target revenue (\$ real June 2017)**

|                                 | 2017/18 | 2018/19 | 2019/20      | 2020/21      | 2021/22      |
|---------------------------------|---------|---------|--------------|--------------|--------------|
| Unsmoothed revenue (\$ million) | 325.0   | 350.2   | 359.2        | 367.4        | 381.1        |
| Smoothed revenue (\$ million)   | 281.9   | 282.1   | 340.0        | 407.7        | 486.9        |
| Energy transported (GWh)        | 17,698  | 17,663  | 17,628       | 17,502       | 17,309       |
| Average charge (\$/MWh)         |         |         | 19.3         | 23.3         | 28.1         |
| <b>% change</b>                 |         |         | <b>20.8%</b> | <b>20.8%</b> | <b>20.8%</b> |

**Table 9 Forecast change in average charges for the distribution network based on Western Power's amended proposed target revenue (\$ real June 2017)**

|                                 | 2017/18 | 2018/19 | 2019/20      | 2020/21      | 2021/22      |
|---------------------------------|---------|---------|--------------|--------------|--------------|
| Unsmoothed revenue (\$ million) | 1,352.7 | 1,088.8 | 1,053.9      | 1,033.3      | 1,063.0      |
| Smoothed revenue (\$ million)   | 1,192.5 | 1,178.7 | 1,127.8      | 1,072.7      | 1,022.8      |
| Energy transported (GWh)        | 13,691  | 13,656  | 13,505       | 13,276       | 13,083       |
| Average charge (\$/MWh)         |         |         | 83.5         | 80.8         | 78.2         |
| <b>% change</b>                 |         |         | <b>-3.2%</b> | <b>-3.2%</b> | <b>-3.2%</b> |

**Table 10 Forecast change in total average charge based on Western Power's amended proposed target revenue (\$ real June 2017)**

|                                       | 2017/18 | 2018/19 | 2019/20     | 2020/21     | 2021/22     |
|---------------------------------------|---------|---------|-------------|-------------|-------------|
| Total unsmoothed revenue (\$ million) | 1,677.7 | 1,439.0 | 1,413.2     | 1,400.8     | 1,444.1     |
| Total smoothed revenue (\$ million)   | 1,474.4 | 1,460.8 | 1,467.8     | 1,480.4     | 1,509.7     |
| Total average charge (\$/MWh)         |         |         | 102.8       | 104.1       | 106.3       |
| <b>% change</b>                       |         |         | <b>0.5%</b> | <b>1.3%</b> | <b>2.1%</b> |

44. The change in average charges compared with the final decision reflects the first price increase will be on 1 July 2019, rather than 1 February 2019, and there will only be three price changes during AA4, rather than four.
45. As noted in the final decision, approximately 95 per cent of Western Power's revenue comes from users charged for both transmission and distribution services. Prices for these users are generally in line with the overall average change in charges.
46. However, charges for customers connected directly to the transmission network are generally in line with the average change in transmission charges. Based on the 2016/17 Price List Information, 58 customers are connected directly to the transmission network, generating \$78 million of revenue. Revenue recovered from generators was \$46.1 million, and \$31.9 million from transmission connected loads.
47. As discussed in the draft and final decision, transmission charges will increase over AA4 and distribution charges will decrease. In the draft decision, the ERA had considered price shock for transmission only users could be managed by using the flexibility within the side constraint. However, the current side constraint only permits charges within each service to vary by a maximum of two per cent from the average change in charges.
48. As set out in the final decision, applying the side constraint to the overall charge rather than each service, will enable transmission costs to be reallocated across customer groups, with less cost allocated to transmission only connected customers and more to customers receiving combined services.

#### **Final Decision Required Amendment 3**

The proposed access arrangement must be amended to reflect the ERA's final decision on target revenue.

The side constraint for each tariff should be applied to the overall change in tariff (transmission and distribution combined) rather than separately to each service as it currently is.

49. Western Power has amended the access arrangement so that the side constraint for each tariff is applied to the overall change in tariffs (transmission and distribution combined).
50. Western Power has amended the proposed access arrangement to reflect the ERA's final decision on target revenue with some minor differences which are discussed later in this decision. However, there is a small error on the TEC (due to an incorrect CPI being used in Western Power's model) and, as discussed under Final Decision Required Amendment 1, the forecast revenue for 2018/19 needs to be amended to be consistent with the demand forecast.
51. On that basis, the ERA does not consider Western Power has fully addressed the matters that prompted the ERA to require Final Decision Required Amendment 3.

## Forecast operating expenditure

52. Under section 6.40 of the Access Code, the ERA must be satisfied that forecast operating costs include only those costs that would be incurred by a service provider efficiently minimising costs.
53. In the final decision, the ERA determined that Western Power's proposed forecast operating expenditure did not satisfy the requirements of section 6.40 of the Access Code and required the forecasts to be amended. The ERA's final decision for operating expenditure is set out in Table 11 below.

**Table 11 ERA Final Decision operating expenditure (\$ million real June 2017)**

| Expenditure                          | 2017/18      | 2018/19      | 2019/20      | 2020/21      | 2021/22      | AA4 Total      |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Recurrent network base costs         | 316.3        | 316.3        | 316.3        | 316.3        | 316.3        | 1,581.5        |
| Step changes                         | -5.0         | -5.0         | -5.0         | -7.5         | -12.5        | -35.0          |
| <b>Total recurrent network costs</b> | <b>311.3</b> | <b>311.3</b> | <b>311.3</b> | <b>308.8</b> | <b>303.8</b> | <b>1,546.5</b> |
| Network growth escalation            | 1.6          | 3.4          | 5.4          | 7.2          | 8.7          | 26.3           |
| Efficiency                           | -3.1         | -6.3         | -9.4         | -12.5        | -15.3        | -46.6          |
| Non-recurrent network costs          | 0.5          | 0.0          | 0.0          | 0.0          | 0.5          | 1.0            |
| Expensed indirect network costs      | 42.1         | 38.4         | 38.0         | 47.1         | 46.4         | 212.0          |
| Labour cost escalation               | 1.1          | 2.3          | 3.4          | 4.6          | 5.6          | 16.9           |
| <b>Total</b>                         | <b>353.5</b> | <b>349.1</b> | <b>348.7</b> | <b>355.2</b> | <b>349.7</b> | <b>1,756.1</b> |

54. The Final Decision required forecast operating expenditure to be amended to the amounts determined by the ERA.

#### Final Decision Required Amendment 4

Western Power must amend its operating expenditure forecasts to be consistent with the values determined by the ERA in this Final Decision as set out in Table 51 [Table 11] above.

55. Western Power has amended forecast operating expenditure forecasts in line with the final decision with one adjustment.<sup>5</sup>

Total forecast opex included in the AA4 target revenue is \$36 million greater than the amount provided in Table 51 of the ERA's final decision.

The key driver of this variation is a \$31.5 million upward adjustment to recurrent network base costs for SCADA and communications. The adjustment corrects what we believe is an error in the expenditure model.

<sup>5</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 30, para. 80-98.

In the draft decision, the ERA excluded a portion of SCADA and communications opex from target revenue on the basis Western Power's forecast SCADA and communications capex program was significantly increasing in AA4. However, in the final decision, the ERA reduced forecast SCADA and communications capex to AA3 levels. It therefore follows that the SCADA and communications opex should also remain consistent with AA3 levels.

56. The ERA acknowledges the inconsistency identified by Western Power and accepts the operating expenditure should be adjusted to reflect the level of capital expenditure approved for SCADA and communications.
57. Western Power's amended proposed operating expenditure is set out in Table 12 below.

**Table 12 Western Power amended operating expenditure (\$ million real June 2017)**

| Expenditure                          | 2017/18      | 2018/19      | 2019/20      | 2020/21      | 2021/22      | AA4 Total      | Final Decision |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| Recurrent network base costs         | 322.6        | 322.6        | 322.6        | 322.6        | 322.6        | 1,612.9        | 1,581.5        |
| Step changes                         | -5.0         | -5.0         | -5.0         | -7.5         | -12.5        | -35.0          | -35.0          |
| <b>Total recurrent network costs</b> | <b>317.6</b> | <b>317.6</b> | <b>317.6</b> | <b>315.1</b> | <b>310.1</b> | <b>1,577.9</b> | <b>1,546.5</b> |
| Network escalation growth            | 1.7          | 3.4          | 5.5          | 7.4          | 8.8          | 26.7           | 26.3           |
| Efficiency                           | -3.2         | -6.4         | -9.6         | -12.7        | -15.6        | -47.5          | -46.6          |
| Non-recurrent network costs          | 0.5          | 0.0          | 0.0          | 0.0          | 0.5          | 1.0            | 1.0            |
| Expensed indirect network costs      | 43.1         | 39.2         | 38.9         | 48.0         | 47.4         | 216.6          | 212.0          |
| Labour cost escalation               | 1.2          | 2.3          | 3.4          | 4.7          | 5.7          | 17.3           | 16.9           |
| <b>Total</b>                         | <b>360.8</b> | <b>356.2</b> | <b>355.8</b> | <b>362.4</b> | <b>356.9</b> | <b>1,792.0</b> | <b>1,756.1</b> |

58. The ERA is satisfied that the amendments made to the forecast operating expenditure forecasts as set out above adequately address the matters that prompted the ERA to require Final Decision Required Amendment 4.

## Opening regulated capital base for AA4

59. The capital base is the value ascribed to the network assets 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.
60. In the final decision, the ERA required the removal of costs associated with unplanned pole replacements from the new facilities investment proposed by

Western Power for AA3. The ERA's final decision on the opening capital base values is shown in Table 13 and Table 14 below.

**Table 13 ERA final decision capital base as at 30 June 2017 for the transmission network (\$ million real June 2017)**

|                           | 30 June<br>2013 | 30 June<br>2014 | 30 June<br>2015 | 30 June<br>2016 | 30 June<br>2017 | Total   |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------|
| Opening asset value       | 2,816.7         | 2,927.7         | 3,161.6         | 3,197.5         | 3,135.5         | 2,816.7 |
| New facilities investment | 209.3           | 341.6           | 159.2           | 119.9           | 104.1           | 934.1   |
| Asset disposals           | (4.4)           | (4.2)           | (9.3)           | (60.6)          | (1.4)           | (80.1)  |
| Depreciation              | (94.0)          | (103.4)         | (114.1)         | (121.3)         | (129.4)         | (562.2) |
| Accelerated depreciation  |                 |                 |                 |                 |                 |         |
| Closing asset base        | 2,927.6         | 3,161.6         | 3,197.5         | 3,135.5         | 3,108.6         | 3,108.6 |

**Table 14 ERA final decision capital base as at 30 June 2017 for the distribution network (\$ million real June 2017)**

|                           | 30 June<br>2013 | 30 June<br>2014 | 30 June<br>2015 | 30 June<br>2016 | 30 June<br>2017 | Total     |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------|
| Opening asset value       | 4,248.7         | 4,708.5         | 5,142.9         | 5,494.3         | 5,723.1         | 4,248.7   |
| New facilities investment | 678.5           | 671.4           | 618.2           | 498.0           | 357.4           | 2,823.5   |
| Asset disposals           | (0.9)           | (0.3)           | (4.9)           | (2.8)           | (0.6)           | (9.6)     |
| Depreciation              | (214.0)         | (236.2)         | (261.9)         | (266.5)         | (281.5)         | (1,260.1) |
| Accelerated depreciation  | (3.8)           | (0.5)           |                 |                 |                 | (4.3)     |
| Closing asset base        | 4,708.5         | 5,142.9         | 5,493.3         | 5,723.1         | 5,798.4         | 5,798.4   |

61. Western Power has amended its capital base values to be consistent with the values shown in Table 13 and Table 14 above.
62. The ERA is satisfied that the amendments made to the opening regulated capital base set out above implement the final decision requirements.

## Forecast regulated capital base for AA4

63. Section 6.51 of the Access Code provides for the target revenue for an access arrangement period to include forecast capital costs that are reasonably expected to satisfy the new facilities investment test.
64. In the final decision, the ERA required Western Power to amend forecast capital expenditure and forecast depreciation.
65. The ERA's final decision forecast depreciation is set out in Table 15 below.

**Table 15 ERA final decision forecast depreciation (\$ million nominal)**

|                          | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | AA4 Total |
|--------------------------|---------|---------|---------|---------|---------|-----------|
| Transmission             | 109.7   | 115.2   | 122.0   | 128.8   | 132.2   | 607.8     |
| Distribution             | 258.3   | 274.9   | 278.6   | 269.4   | 262.5   | 1,343.6   |
| Distribution accelerated | 4.4     | 6.9     | 4.4     | -       | -       | 15.6      |

### Final Decision Required Amendment 5

Western Power must amend forecast depreciation for AA4 to the values shown in Table 121 [Table 15] above.

The asset life for "other non-network assets" must be amended to 27 years.

The classification of business support expenditure must be amended to allocate expenditure for land to the correct asset category.

66. Western Power has amended forecast depreciation in line with the amounts set out in Table 15 above.
67. Western Power has also amended the asset life for "other non-network assets" to 27 years and used the classification of business support expenditure to allocate expenditure for land to the correct asset category.
68. The ERA's final decision forecast capital base values are set out in Table 16 and Table 17 below.

**Table 16 ERA final decision forecast transmission capital base (\$ million real June 2017)**

|                           | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | Total   |
|---------------------------|---------|---------|---------|---------|---------|---------|
| Opening asset value       | 3,108.6 | 3,122.9 | 3,185.0 | 3,237.7 | 3,231.7 | 3,108.6 |
| New facilities investment | 123.9   | 177.3   | 174.7   | 122.9   | 123.8   | 722.6   |
| Depreciation              | (109.7) | (115.2) | (122.0) | (128.8) | (132.2) | (608.0) |
| Closing asset base        | 3,122.9 | 3,185.0 | 3,237.7 | 3,231.7 | 3,223.2 | 3,223.2 |

**Table 17 ERA final decision forecast distribution capital base (\$ million real June 2017)**

|                           | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | Total     |
|---------------------------|---------|---------|---------|---------|---------|-----------|
| Opening asset value       | 5,798.4 | 6,008.4 | 6,208.6 | 6,442.9 | 6,582.4 | 5,798.4   |
| New facilities investment | 472.6   | 482.0   | 517.3   | 408.9   | 411.2   | 2,292.0   |
| Depreciation              | (258.3) | (274.9) | (278.6) | (269.4) | (262.5) | (1,343.6) |
| Accelerated depreciation  | (4.4)   | (6.9)   | (4.4)   |         |         | (15.6)    |
| Closing asset base        | 6,008.4 | 6,208.6 | 6,442.9 | 6,582.4 | 6,731.1 | 6,731.1   |

**Final Decision Required Amendment 6**

The revised proposed access arrangement revisions must be amended to incorporate the forecast capital expenditure, depreciation and capital asset base values set out in this final decision.

69. Western Power has amended forecast capital expenditure, depreciation and capital asset base values to reflect the final decision. An additional adjustment was made by Western Power to correct the labour cost escalation parameter used in the capital expenditure model to reflect the final decision. This resulted in a reduction in capital expenditure compared with the final decision.
70. Western Power's amended forecast capital base is set out in Table 18 and Table 19 below.

**Table 18 Western Power amended forecast transmission capital base (\$ million real June 2017)**

|                           | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | Total   |
|---------------------------|---------|---------|---------|---------|---------|---------|
| Opening asset value       | 3,108.6 | 3,122.8 | 3,183.4 | 3,233.5 | 3,224.7 | 3,108.6 |
| New facilities investment | 124.1   | 176.5   | 172.8   | 120.6   | 120.5   | 714.5   |
| Depreciation              | (110.0) | (115.9) | (122.7) | (129.3) | (132.7) | (610.6) |
| Closing asset base        | 3,122.8 | 3,183.4 | 3,233.5 | 3,224.7 | 3,212.5 | 3,212.5 |

**Table 19 Western Power amended forecast distribution capital base (\$ million real June 2017)**

|                           | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | Total     |
|---------------------------|---------|---------|---------|---------|---------|-----------|
| Opening asset value       | 5,798.4 | 6,008.6 | 6,205.6 | 6,433.2 | 6,565.6 | 5,798.4   |
| New facilities investment | 472.3   | 479.4   | 511.2   | 401.5   | 401.4   | 2,265.9   |
| Depreciation              | (257.7) | (275.6) | (279.2) | (269.1) | (261.9) | (1,343.4) |
| Accelerated depreciation  | (4.4)   | (6.9)   | (4.4)   | -       | -       | (15.6)    |
| Closing asset base        | 6,008.6 | 6,205.6 | 6,433.2 | 6,565.6 | 6,705.2 | 6,705.2   |

71. The ERA is satisfied that the amendments made to the forecast regulated capital base as set out above implement Final Decision Required Amendment 6.

## Return on regulated capital base

72. Section 6.64 of the Access Code requires an access arrangement to set out the Weighted Average Cost of Capital (WACC) for a covered network.
73. The ERA did not approve Western Power's proposed WACC of 6.12 per cent and required that a value of 5.87 per cent be applied in the determination of target revenue.

### Final Decision Required Amendment 7

Western Power must amend the (nominal after-tax) weighted average cost of capital to 5.87 per cent, based on the parameters set out in Table 129 [Table 20] of this final decision and reasoning detailed in Appendix 5 of this final decision.

74. The ERA's final decision WACC parameters are set out in Table 20 below.

**Table 20** ERA final decision Weighted Average Cost of Capital (WACC) parameters

| Parameter  | ERA final decision |
|--|--------------------|
| Averaging period                                   | 29 March 2018      |
| Nominal risk free rate (%)                         | 2.37               |
| Equity beta  | 0.7                |
| Market risk premium (%)                            | 6.0                |
| <b>Nominal after tax return on equity (%)</b>      | <b>6.57</b>        |
| Five-year interest rate swap (effective yield) (%) | 2.590              |
| Debt risk premium (%)                              | 2.487              |
| Benchmark credit rating                            | BBB+               |
| Term of debt for debt risk premium                 | 10 years           |
| Debt issuing costs (%)                             | 0.100              |
| Debt hedging costs (%)                             | 0.114              |
| <b>Nominal cost of debt (return on debt) (%)</b>   | <b>5.29</b>        |
| Debt proportion (gearing) (%)                      | 55                 |
| Forecast inflation rate (%)                        | 1.84               |
| Franking credits (gamma) (%)                       | 50                 |
| Corporate tax rate (%)                             | 30                 |
| <b>Nominal after-tax WACC (%)</b>                  | <b>5.87</b>        |
| <b>Real after tax-WACC (%)</b>                     | <b>3.95</b>        |

75. Western Power has amended the nominal after-tax WACC to 5.87 per cent based on the parameters set out in Table 20 above.
76. In its amended proposal Western Power highlights that due to the AA4 commencement date being 1 July 2019, the first annual update of the debt risk premium (DRP) will apply for the financial year ending 30 June 2020 (2019/20). The

corresponding update to revenue will be made at the same time as the update for the DRP for the financial year ending 30 June 2021 in the 2020/21 Price List.<sup>6</sup>

77. The ERA is satisfied that the amendment made to the WACC as set out above implements Final Decision Required Amendment 7.

## Return on working capital

78. The objectives for a price control set out in section 6.4 of the Access Code include giving the service provider an opportunity to earn an amount of target revenue that meets the forward looking and efficient costs of providing covered services, including a return on investment commensurate with the commercial risks involved.
79. The return on working capital required adjustment as a result of amendments elsewhere in the final decision to the WACC, smoothed target revenue, forecast new facilities investment and forecast non-capital costs.

### Final Decision Required Amendment 8

The values of smoothed target revenue, forecast new facilities investment, forecast non-capital costs and weighted average cost of capital used to calculate working capital must be adjusted to be consistent with this final decision.

80. Western Power has adjusted the values of smoothed target revenue, forecast new facilities investment, forecast non-capital costs and weighted average cost of capital used to calculate working capital as required in the final decision.
81. The ERA is satisfied that the adjustment made to the target revenue as set out above implements Final Decision Required Amendment 8.

## Taxation

82. As a “post-tax” WACC is used, the revenue model incorporates a tax module to estimate tax liabilities. A tax building block is included in the annual revenue requirement estimate for each year.
83. The final decision required the taxation cost to be updated to reflect the final decision amendments to target revenue and to use the annual unsmoothed revenue to calculate tax payable.

### Final Decision Required Amendment 9

Forecast taxation costs must be updated to be consistent with the final decision and the calculation must be amended to use unsmoothed revenue for each service.

84. Western Power has updated forecast taxation costs to be consistent with the final decision and used annual unsmoothed revenue to calculate tax payable.
85. The ERA is satisfied that the adjustment made to the target revenue as set out above implements Final Decision Required Amendment 9.

---

<sup>6</sup> Western Power, *Amended AA4 proposal: Response to the ERA’s final decision*, 16 November 2018, p. 14.

## Adjustments to target revenue

86. Section 6.4 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 for costs incurred as a result of a force majeure event under sections 6.6 to 6.8 of the Access Code;
  - an amount for 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.
87. With the exception of the service standard adjustment mechanism, the final decision required amendments to all of Western Power’s proposed adjustments to target revenue. The required amendments are discussed below.

### *Investment adjustment mechanism*

88. In the final decision, it was determined that Western Power was to amend its revenue adjustment for the investment adjustment mechanism to reflect the ERA’s final decision on AA3 capital expenditure.

#### **Final Decision Required Amendment 10**

Western Power must update the Investment Adjustment Mechanism value to reflect the ERA’s final decision on AA3 capital expenditure.

89. Western Power has updated the investment adjustment mechanism to reflect the ERA’s final decision on AA3 capital expenditure.
90. The ERA is satisfied that the adjustment made to the target revenue as set out above implements Final Decision Required Amendment 10.

### *Gain sharing mechanism*

91. 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 one would be retained for five years but savings in year five 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.
92. The gain sharing mechanism is set out in sections 7.4.1 to 7.4.9 of the current access arrangement. Section 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.

93. In its revised proposal, Western Power complied with part of draft decision required amendment 10. For the final decision, it was determined that Western Power was to comply with the full amendment that requires all values to be consistent with the ERA's decision.

**Final Decision Required Amendment 11**

Western Power must update the Gain Sharing Mechanism to reflect the ERA's final decision on wood pole expenditure and unforeseen events.

94. Western Power has updated the gain sharing mechanism to reflect the ERA's final decision on wood pole expenditure and unforeseen events.
95. The ERA is satisfied that the adjustment made to the target revenue as set out above implements Final Decision Required Amendment 11.

### ***Unforeseen events adjustment***

96. In the final decision, the ERA considered that the costs identified by Western Power in its proposed unforeseen events adjustment were not necessary for the provision of covered services, and so did not form part of Western Power's target revenue, and would not be incurred by a service provider efficiently minimising costs. Consequently, they could not be included as costs in an unforeseen events adjustment, regardless of whether the events that led to them were unforeseen or not.

**Final Decision Required Amendment 12**

Western Power must adjust target revenue to remove its proposed unforeseen event adjustment.

97. Western Power has adjusted its target revenue by removing its proposed unforeseen event adjustment.
98. The ERA is satisfied that the adjustment made to the target revenue as set out above implements Final Decision Required Amendment 12.

## Reference and non-reference services

99. A reference service is a service described in the access arrangement that includes a specified reference tariff and service standard benchmark. The access arrangement must specify a reference service for each covered service that is likely to be sought by either or both of a significant number of users/applicants or a substantial proportion of the market for services in the covered network.
100. The current access arrangement lists 11 exit reference services, two entry reference services and four bi-directional reference services.
101. In its initial submission, Western Power proposed:
- introducing four new reference services
    - 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
  - expanding four existing exit services to be bi-directional
    - High voltage metered demand service, A5
    - Low voltage metered demand service, A6
    - High voltage contract maximum demand service, A7
    - Low voltage contract maximum demand service A8
  - modifying the peak/off peak time periods for two reference services.
102. Following the draft decision, Western Power:
- withdrew two of the proposed new reference services
  - added four new bi-directional services and kept the existing services as exit only.

## Time of use and demand services

103. In its initial proposal, Western Power proposed introducing four new reference services for residential and small business users:
- 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
104. Western Power proposed that the new time of use energy services (D1 and D2) should be mandatory for all new customers with the option of taking up the new time of use demand service. The ERA's draft decision determined that the proposed new reference services should not be mandatory.

105. In its response to the draft decision, Western Power accepted that the proposed new services should not be mandatory. Western Power also removed the proposed time of use demand services (D3 and D4) from its proposed reference services.
106. In the final decision, the ERA required Western Power to reinstate its proposed time of use based demand service as a reference service to satisfy the requirements of section 5.2(b) of the Access Code.

**Final Decision Required Amendment 13**

Western Power must reinstate its proposed residential and business time of use based demand services in its proposed reference services.

107. Western Power has amended Appendix E of the access arrangement to reinstate the proposed residential and business time of use based demand services.
108. The proposed new time of use services have also been expanded to offer separate exit only and bi-directional services with the numbering changed accordingly:<sup>7</sup>
- Where the service is an exit service only – A12, A13, A14 and A15
  - Where the service is a bi-directional service – C9, C10, C11 and C12.
109. The ERA is satisfied that the amendments made to Appendix E of the access arrangement as set out above implement Final Decision Required Amendment 13.
110. In the final decision, the ERA also determined:
- Existing users with interval capable meters should be able to access Western Power's new reference services without being required to pay for an advanced meter.
  - The time periods in the existing time of use reference services should be consistent with the new time of use services, with an additional shoulder period of 7am to 3pm.

**Final Decision Required Amendment 14**

The new time of use services must be available to users with existing interval capable meters.

Western Power must amend the peak period for the existing residential and business time of use services (A3, A4, C3 and C4) to be consistent with the peak and shoulder periods used in its proposed new residential and business time of use services (D1 and D2) and 7am-3pm should be classified as a shoulder period.

111. Western Power has amended the eligibility criteria so that the new time of use services are available to users with an appropriately configured interval meter installed.<sup>8</sup>
112. Western Power has not amended the time periods for the existing residential and business time of use services. It submits:<sup>9</sup>
- The corresponding reference tariff for the existing time of use services will not be modified as there are approximately 20,000 customers with meters on these services

<sup>7</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 15.

<sup>8</sup> Ibid, p. 15.

<sup>9</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 15

who have accumulation meters programmed to the existing time bands. It would be inefficient to reprogram all of these to the new time bands and would also constitute a material change to the service.

However, Western Power has created several new time of use reference services with multi-period time bands (see required amendment 16), which users can opt to move to.

113. Users who wish to move a customer to one of the new time of use services would be required to pay a fee to reconfigure the meter and registry to align to the new time bands. The fee is specified in the Model Service Level Agreement and is currently set at \$54.45.
114. The ERA acknowledges the costs of reprogramming the meters. Providing the cost charged to users is efficient, the ERA considers allowing users to decide if they wish to remain on the existing time of use service or transfer to one of the new time of use services will result in the best outcome for users and lowest overall cost.
115. The level of charges for reprogramming meters is being considered as part of the ERA's review of the Model Service Level Agreement.
116. The ERA is satisfied Western Power has adequately addressed the matters which prompted the ERA to require Final Decision Required Amendment 14.

## Metering services

117. The final decision required Western Power to unbundle metering services from reference services and specify separate metering services as reference services based on the meter reading services required by users.
118. The ERA considered that including the bundled "standard metering service" as a reference service does not meet the requirement in section 5.2(c) of the Access Code that, to the extent reasonably practicable, reference services must be specified in such a manner that a user or applicant is able to acquire only those elements of a covered service that the user or applicant wishes to acquire.
119. The ERA considered these requirements were not being met for metering because:
  - The current specification of reference services lacks clarity and detail of the metering service included.
  - Bundling metering with the reference service restricts the choice for users who may want a different level of metering.
  - The current metering services included with reference services do not meet the requirements of users.
120. The ERA considered that metering services should be supplied as separate reference services with sufficient detail specified so that users can be certain of the service they will receive.

### **Final Decision Required Amendment 15**

Western Power must unbundle metering services from reference services and specify separate metering services as reference services based on the meter reading services required by users. As a minimum this should include:

- An accumulation meter manual read every two months

- An interval meter manual read with data provided every two months
- An interval meter manual read with data provided every month
- A one-off interval meter manual read
- An interval meter read remote read daily

121. In response to the final decision, Western Power submits:<sup>10</sup>

Western Power has unbundled metering services from existing reference services so a user will be able to select which metering service it requires as part of its reference service.

Western Power will offer a suite of metering services M1-M16, which can be selected by the user and provided in combination with the user's network reference services under its existing ETAC.

The new metering reference services are listed in Annexure 2 to Appendix E of the access arrangement. These new metering reference services will be available from 1 July 2020.

122. Western Power proposes the new metering services will be offered from 1 July 2020:<sup>11</sup>

As acknowledged by the ERA in its final decision, there are implementation problems that will need to be resolved before these new metering reference services can be offered to users. The major issues relate to limitations with Western Power's and users' metering and billing systems.

Existing metering and billing systems used by Western Power have not been designed to facilitate separate metering reference services at a connection point. Further, the ERA's final decision results in Western Power offering 44 network reference services in combination with 16 metering reference services. This gives rise to a large number of possible combinations, which Western Power's current systems do not have the capacity to manage without a high level of manual intervention. We understand that billing systems of users have similar limitations.

High level estimates indicate system changes to Western Power's systems would cost between \$2 million to \$3 million. A manual workaround is not feasible as the solution would require more than one million connection points to be nominated. Users are also likely to incur costs to update their systems.

There are also regulatory issues that need to be addressed before the new meter reference services can be offered. These include consequential changes to the MSLA and the metering communication rules (build pack).

Western Power therefore proposes a transitional period before users can access the new metering reference services. Western Power will work with users to address the necessary system and regulatory issues, with the aim of the new unbundled metering reference services being accessible on and from 1 July 2020. This is 12 months after the proposed AA4 commencement date.

This transitional period will allow sufficient time for Western Power and users to re-design and implement updated billing systems, as well as agree the process for accessing these metering services and any consequential changes to the MSLA and build pack.

In the interim, to address the ERA's concerns that the current specification of reference services lacks clarity and detail of the metering service, Western Power has maintained the Guide included in Annexure A of Appendix E of the access

<sup>10</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 15.

<sup>11</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 35, pp. 110-119.

arrangement in the response to the draft decision. During this interim period users requiring the new metering reference services will be able to access the equivalent metering service as an extended metering service under the MSLA arrangements or as an additional metering service (as explained in the Guide included in Annexure A of Appendix E of the access arrangement).

The price list for the current bundled services will apply upon commencement of the amended access arrangement on 1 July 2019.

Tariffs for new metering reference services M1 to M16 will be provided in the 2020/21 price list as per the usual annual price list update process, and will take effect as reference tariffs from 1 July 2020.

We submit that this proposed method of unbundling metering reference services is the most prudent and efficient method of implementing the ERA's required amendment. The specification of services M1 to M16 as reference services and the provision for users to obtain the metering service they wish to acquire from 2020/21 based on separate reference tariffs implements the ERA's reasons for its decision at paragraph 1156, and is compliant with section 5.2(c) of the Access Code, on which the ERA relies.

123. Western Power considers it has adequately addressed the matters which prompted the ERA to require Final Decision Required Amendment 15.
124. Although Western Power has indicated it will ultimately implement the required amendment in full, it has deferred the changes to 1 July 2020. The amended access arrangement provides insufficient information on how the changes will be implemented.
125. The ERA recognises there are a number of implementation issues to be addressed and that Western Power has had limited time to resolve them. However, the ERA does not consider Western Power's proposed amended access arrangement provides sufficient detail for the ERA to assess whether Western Power will adequately implement Final Decision Required Amendment 15. This includes establishing whether any parts of the required amendment could be made available earlier than 1 July 2020.
126. On that basis, the ERA is not satisfied that the amendments made to Appendix E of the access arrangement and discussed above implement Final Decision Required Amendment 15.

## Reference services sought by users

127. In the final decision, the ERA required Western Power to include the following reference services as they were likely to be sought by a significant number of users or a substantial portion of the market:
  - Services that enable network users to provide non-network solutions to customers (as described in the Australian Energy Council's [AEC] submission).
  - A thin connection (as described in Perth Energy's submission).
  - Services set out in Synergy's submission:

- New multi-part time of use residential and business reference services<sup>12</sup>
- New distributed generation service<sup>13</sup>
- New capacity allocation service<sup>14</sup>
- New direct load control and load limitation<sup>15</sup>
- New supply abolishment and remote connection/disconnection services<sup>16</sup>
- New street lighting services (as set out in the Western Australian Local Government Association's [WALGA] submission):
  - A clearer basis of services, more robustly defining the street lighting services that Western Power provides including light levels, spillage and technology.
  - An LED replacement service.
  - Different ownership models.
  - A new metering type based on metering-grade information technology within smart street lighting controllers and similar devices.

#### **Final Decision Required Amendment 16**

Western Power must include reference services that meet the services listed in paragraph 1200 [127 above] of the final decision or identify how existing reference services can be utilised to enable users to obtain these services.

128. Western Power considers it has implemented the required amendment.<sup>17</sup>

For each of the services referenced in the ERA's paragraph 1202, Western Power has either implemented a new reference service, or identified how an equivalent service can be obtained by users via the existing reference services. Enhancements to existing reference services have also been made to provide further clarity to users.

As with our proposed solution to unbundling metering services, our aim is to enable users to access those services they wish to acquire, and to achieve this in the most efficient and cost-effective manner. Where possible, this has been via a reference service.<sup>18</sup>

129. However, Western Power notes it had limited time to develop the new services and proposes to continue to engage on these matters during AA4.

Western Power has implemented the new reference services required by the ERA to the extent it can within the timeframe provided. However, due to the complexity of the services, some may need refinement after further analysis is completed. Western Power will continue to engage with stakeholders and the ERA on these matters during the AA4 period.<sup>19</sup>

<sup>12</sup> Synergy submission on draft decision, June 2018, pp. 11-12.

<sup>13</sup> Synergy submission on draft decision, June 2018, pp. 13-20.

<sup>14</sup> Synergy submission on draft decision, June 2018, pp. 20-22.

<sup>15</sup> Synergy submission on draft decision, June 2018, pp. 22-23.

<sup>16</sup> Synergy submission on draft decision, June 2018, p. 24.

<sup>17</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 37, pp. 127-133.

<sup>18</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 16.

<sup>19</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 9, pp. 49-51.

130. Similar to unbundling metering services, there are many issues that need to be dealt with when developing new reference services. Western Power's amended access arrangement has made a good start on developing the required reference services. However, not all of the required services have been included in the amended access arrangement and some of the terms and conditions for those that have been included are likely to restrict the availability of the service.
131. Examples of this include:
- Requiring users to apply for a network augmentation to replace existing non-LED streetlights with LED rather than offering a reference service.
  - Requiring users on the new distributed generation services to enter into a network support service contract.
  - Including a requirement that Western Power's advanced metering infrastructure project is implemented in the eligibility criteria for some of the new reference services.
  - Requiring users to amend existing contracts to be able to use the new reference services.
132. As highlighted by Western Power, the proposed new reference services were developed in a very short time period. This is unlikely to have provided sufficient time for consultation with users and a comprehensive review by Western Power and the ERA. As noted above, Western Power considers some of the new services may need refinement after further analysis is completed and that it will engage with stakeholders and the ERA during AA4. However, this does not provide certainty that the new reference services will be modified as required on a timely basis.
133. The ERA is not satisfied that the amendments made to Appendix E of the access arrangement implement Final Decision Required Amendment 16.

## Metering definitions and conditions

134. Appendix E to the access arrangement sets out all the reference services, including the eligibility criteria, reference tariff, service level and applicable contract for each service.
135. In the final decision, the ERA required Western Power to revise the changes to metering definitions and conditions in Appendix E to be consistent with final decision required amendment 15.

### **Final Decision Required Amendment 17**

Western Power must revise the changes to metering definitions and conditions (including new clause 1.4 and Annexure A) in Appendix E Reference Services, to be consistent with required amendment 15.

136. As discussed above, the ERA is not satisfied that Western Power has implemented Final Decision Required Amendment 15. Consequently, the ERA is not satisfied Western Power has implemented Final Decision Required Amendment 17.

## Reference service eligibility criteria

137. The current access arrangement includes the following eligibility criteria for each reference service:

The terms and conditions of the access contract under which the service will be provided are [not] materially different to the Applicable Standard Access Contract for this service

138. In the final decision, the ERA required Western Power to amend the eligibility criteria for reference services by adding a definition of “materially different” that provided sufficient clarity and certainty to users with access contracts that they would be able to continue to use reference services during AA4 under their existing contracts.

### **Final Decision Required Amendment 18**

Western Power must amend the eligibility criteria for reference services by adding a definition of “materially different” that provides sufficient clarity and certainty to users with access contracts that they will be able to continue to use reference services during AA4 under their existing contracts.

139. Western Power has removed the “materially different” eligibility criterion. It submits:<sup>20</sup>

Rather than providing a definition of ‘*materially different*’, we have addressed the ERA’s required amendment by removing the ‘materially different’ eligibility criterion completely. We consider this removes any ambiguity as to whether a user will be able to continue to use reference services during AA4 under their existing contracts.

Put simply, users will continue to be able to use reference services irrespective of how their contract compares to any new standard access contract, so there is no need to include an eligibility criterion regarding whether their reference service is materially different.

140. The ERA is satisfied that the amendment made to the eligibility criteria for reference services as set out above adequately addresses the matters that prompted the ERA to require Final Decision Required Amendment 18.

---

<sup>20</sup> Western Power, *Amended AA4 proposal: Response to the ERA’s final decision*, 16 November 2018, p. 16-17.

## Pricing methods, price list and price list information

141. 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.
142. 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.
143. In the final decision, the ERA required nine amendments to the pricing methods, price list and price list information that are necessary for the ERA to approve Western Power’s revised proposed access arrangement. The ERA’s final decision required amendments and Western Power’s response to these amendments are addressed below.

## Price list to be updated

144. In the final decision, the ERA did not approve Western Power’s revised proposed target revenue. The commencement date for the new tariffs was also required to be amended. Consequently, Western Power was required to update the 2018/19 Price List and Price List Information to be consistent with the target revenue approved in the final decision and a commencement date of 1 February 2019.
145. The ERA also required Western Power to amend the price list to incorporate the new reference services and other required amendments to reference services and tariff structures.

### **Final Decision Required Amendment 19**

Western Power must amend the 2018/19 Price List and Price List Information to be consistent with the target revenue approved by the ERA in this final decision and apply them from a commencement date of 1 February 2019. Western Power must also amend the 2018/19 Price List and Price List Information for other relevant changes in the final decision on reference services and tariff structures as set out in Pricing Methods, Price List and Price List Information.

146. As Western Power has not fully complied with some elements of required amendments affecting the Price List and Price List Information as outlined in paragraphs 117 to 136 above, it has also not fully complied with the requirements of Final Decision Required Amendment 19.

## Transmission tariffs

147. In the final decision, the ERA determined that Western Power’s revised proposal did not provide evidence that transmission tariffs were set between the incremental and stand-alone costs of service provision, or that the variable components of transmission tariffs recovered the incremental costs of service provision. Western Power was required to demonstrate this to be compliant with sections 7.3(b) and 7.6 of the Access Code.

**Final Decision Required Amendment 20**

Western Power must amend the 2018/19 Price List and Price List Information to include tables similar to those provided for distribution tariffs, to demonstrate that transmission tariffs are set between the incremental and stand-alone costs of service provision and that the variable components of transmission tariffs recover the incremental costs of service provision.

148. Western Power has added Table 6.3 to the Price List Information demonstrating forecast revenue from the transmission entry and exit services is between the incremental and stand-alone cost of service.
149. Western Power estimates the incremental cost is \$2 million for both the exit and entry service which is approximately 6 per cent of the total transmission revenue. Western Power has not included a table comparing variable components of transmission tariffs with the incremental costs. It notes the requirement of section 7.6 of the Access Code:
- 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.
150. Western Power notes the following in the Price List Information:
- Applying the steps outlined in section 7.6 would result in transmission tariffs that largely do not vary with usage or demand. That is, with the exception of the small incremental costs, the balance of transmission revenue would be recovered evenly on a per network user basis. This means that all transmission connected loads and generators would be charged a flat fee with a very small variable component, regardless of their size and how much of the downstream network they use. This outcome does not facilitate the Code objective to 'to promote the economically efficient investment in and operation and use of, networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the networks.' Western Power's approach set out in this Price List Information of pricing transmission usage based on the capacity share and the usage of the network during peak periods better achieves the Code objective.
151. With the exception of metering charges and user-specific charges, each component of the transmission exit and entry tariff is based on contracted demand and does not vary as a result of actual generation or load volume or demand. All transmission customers pay the same fixed metering charge and a user specific charge based on the cost of the specific connection assets of the user.
152. The ERA is satisfied that the amendments made to the price list information as set out above adequately address the matters that prompted the ERA to require Final Decision Required Amendment 20.

**Side constraint correction factor**

153. Consistent with the amendments to the price control, the ERA required Western Power to remove the correction factor for under or over recovery of target revenue from prior periods from the price control mechanism. As the current side constraint

formula includes the correction factor, the side constraint formula was also required to be amended.

**Final Decision Required Amendment 21**

Western Power must amend the side constraint formula to remove the correction factor for under or over recovery of target revenue from prior periods.

154. Western Power has removed the correction factor from the side constraint formula in section 5 of the access arrangement.
155. The ERA is satisfied that the amendment made to the access arrangement as set out above implements Final Decision Required Amendment 21.

## Tariff Equalisation Contribution

156. Historically, Western Power has not allocated Tariff Equalisation Contribution (TEC) costs to users with demand greater than 7,000 kVA.
157. In the final decision, taking into account Synergy's submission,<sup>21</sup> the ERA determined that these users fall within the class of users that are required to pay the TEC specified in section 7.12 of the Access Code. Consequently, Western Power was required to amend the price list information and price list to allocate TEC charges to these users in order to be compliant with sections 7.12(a) and 7.12(b) of the Access Code.

**Final Decision Required Amendment 22**

Western Power must include distribution connected users with demand greater than 7,000 kVA in the class of users charged the TEC.

158. Western Power has updated section 7.6.4 of the Price List Information which details the TEC values included within the distribution components of tariffs for users with demand greater than 7,000 kVA to reflect that these users are required to pay the TEC and has amended the tariffs.
159. The ERA is satisfied that the amendment made to the price list information as set out above implements Final Decision Required Amendment 22.

## Metering charges

160. Final Decision Required Amendment 15 required Western Power to develop metering reference services. Consequently, Western Power was required to develop tariffs for these new reference services and include supporting information on how the costs have been derived and the basis of the tariffs in its price list information and price list.

**Final Decision Required Amendment 23**

Western Power must develop tariffs compliant with the Code requirements and include supporting information on how the costs have been derived and the basis of the tariffs in its price list information and price list for the metering services required by the ERA in Reference Services and Non Reference Services.

---

<sup>21</sup> Synergy submission on draft decision, June 2018, pp. 45-46.

161. Western Power in response to the final decision submits:<sup>22</sup>

Consistent with the start date of 1 July 2020 proposed for the new unbundled metering reference services (see required amendment 15), the new tariffs will be produced for the 2020/21 Price List. The 2020/21 price list information will include detail on how these tariffs have been developed.

162. As discussed earlier in paragraphs 117 to 126, the ERA is not satisfied that Western Power has implemented Final Decision Required Amendment 15. Consequently the ERA is not satisfied Western Power has implemented Final Decision Required Amendment 23.

## Pricing of the new time of use services

163. The ERA was not able to identify any information in the Price List Information regarding how the tariffs for the proposed new services were set. From a review of the Price List, it appeared that the shoulder periods for D1 and D2 were set based on the corresponding anytime energy rates. The peak and off peak were slightly above and below the shoulder rates.
164. The C5 to C8 reference services were allocated the same tariffs as the existing exit only services.
165. The ERA determined that further information was required to understand and support the differential rates for the D1 and D2 services. This was to include sufficient information to enable users to understand whether, and if so how, these differential rates may change in future.

### Final Decision Required Amendment 24

Western Power must provide sufficient information in the Price List Information to enable users to understand (and provide evidence for) the differential rates for the D1 and D2 services. This should also include sufficient information to enable users to understand whether, and if so how, these differential rates may change in the future.

166. Western Power has included information on the new tariffs in section 7.1.11 of the Price List Information.

These are the new tariffs that are designed to better reflect Western Power's system peak than the existing time of use tariffs (RT3, RT4, RT15 and RT16). Short peak and shoulder times and longer off-peak provide customers with more options to adjust their energy consumption in a cost-reflective manner.

Currently, there are no customers on these new tariffs which represents complexity in estimating uptake levels and cost allocation. It is expected that the new customers will migrate to RT17 and RT18 over time. Therefore, the initial shoulder rates of the tariffs are set on the same levels as RT1 for RT17 and RT2 for RT18. The peak component of the tariff is initially set with 10% increase in price, while off-peak provides 10% discount, that way ensuring the tariffs broadly reflect the costs of a typical customer on comparable tariffs.

This pricing approach will be reviewed in the next access arrangement period, when sufficient customers are on these tariffs to analyse their costs more appropriately. For now, it is assumed that given they are effectively the same customers as were previously on RT1 and 2, they will have the same costs to supply as these customers.

<sup>22</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 18.

167. Western Power has not provided any cost information to support its new time of use pricing. The variation in price between peak and off-peak rates for the new time of use service is plus and minus ten percent of the anytime rate. This is significantly different from the current time of use tariffs where the peak rate is 73 percent higher than the anytime rate and the off-peak rate is 61 percent lower than the anytime rate.
168. In addition, Western Power's proposal to review the pricing approach at the next access arrangement period creates uncertainty for any users considering the proposed new time of use services.
169. The ERA is not satisfied that the amendment made to the Price List Information as set out above implements Final Decision Required Amendment 24.

## High and low voltage metered demand tariffs

170. As identified in submissions from Change Energy<sup>23</sup> and Perth Energy,<sup>24</sup> users on the high and low voltage metered demand reference services are not able to immediately amend the fixed component of their bill when there is a step change in their requirements as a result of investing in behind-the-meter energy measures. Instead, it takes 12 months until their reduced usage fully flows through to reduce the fixed charges.<sup>25</sup>
171. The ERA determined that this element of the structure of the proposed tariff was inconsistent with the Access Code objective as it did not promote competition downstream of the network. It would also result in users paying for a level of service they do not require.
172. The ERA considered that this could be addressed by including a mechanism to enable demand to be re-evaluated where it can be clearly demonstrated that future demand will be lower as a result of installing a behind the meter energy measure such as batteries or solar.

### Final Decision Required Amendment 25

Western Power must amend the RT5 and RT6 tariffs to include a mechanism that adjusts the rolling 12-month maximum half-hourly demand where it can be clearly demonstrated that future demand will be lower.

173. In response to the final decision, Western Power submits:<sup>26</sup>
- Section 7.1.4 of the price list information has been amended accordingly. Descriptions of the RT5 and RT6 tariffs have also been updated in the 2018/19 price list.
174. Section 7.1.4 of the price list information states:<sup>27</sup>
- ... a customer can make an application under section 10.2 of the Applications and Queuing Policy to reduce their demand where it can be reasonably demonstrated that

<sup>23</sup> Change Energy, *Change Energy's Submission on AA4*, 11 December 2017, p. 2.

<sup>24</sup> Perth Energy, *Submission to the Economic Regulation Authority regarding ERA's Draft Decision Regarding Western Power's Access Arrangement Proposal (2018-2022)*, 30 May 2018, p. 8.

<sup>25</sup> Because the charges are based on the rolling 12-month maximum half-hourly demand.

<sup>26</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, p. 18.

<sup>27</sup> Western Power, *Appendix F.6 - 2019/20 Price List Information – Amended Proposed access arrangement*, 16 November 2018, p. 46-47.

future demand will be lower. This new demand will effectively reset the previous 12 months data.

175. Section 10.2 of the Applications and Queuing Policy is an existing provision. It applies where users with contracted capacity want to apply for an increase or decrease in contracted capacity. The user must lodge an electricity transfer application to increase or decrease contracted capacity for an existing covered service under its access contract. The lodgement fee for an access contract modification applies to the application plus any costs for any associated connection application.
176. Users on the RT5 and RT6 tariffs do not have a contracted maximum demand set for a defined period. Instead, the tariff is based on the rolling 12 month maximum half-hourly actual demand. Western Power was required to include a mechanism that enabled the rolling 12 month maximum half-hourly demand to be adjusted where it can be clearly demonstrated that future demand will be lower. Western Power has not proposed any amendments to section 10.2 of the Applications and Queuing Policy to make it applicable to amending the rolling 12 month maximum half-hourly actual demand for users on the RT5 and RT6 tariffs.
177. The ERA does not consider Final Decision Required Amendment 25 has been implemented or otherwise addressed.

## Excess Network Usage Charge

178. The ERA was concerned the Electricity Network Usage Charge was a penalty rather than a charge to recover forward-looking efficient costs. Reference tariffs are required to recover the forward-looking efficient costs of providing reference services and charges paid by different users of the reference services. A reference service should only differ to the extent necessary to reflect differences in the average cost of service provision to the users.
179. The ERA required Western Power to demonstrate that the charge was based on the forward-looking efficient costs from a user exceeding its contracted capacity and that the factors applied for different geographical areas were consistent with the Access Code requirement that charges paid by different users of the reference service only differ to the extent necessary to reflect differences in the average cost of service provision.

### **Final Decision Required Amendment 26**

Western Power must include in the price list information specific cost information to demonstrate the level of the proposed Excess Network Usage Charges is based on the forward-looking efficient costs from a user exceeding its contracted capacity and that the factors applied for different geographical areas are consistent with the Access Code requirement that charges paid by different users of the reference service only differ to the extent necessary to reflect differences in the average cost of service provision.

180. Western Power has included additional information in section 7.1.14 of the Price List Information. The information demonstrates that in constrained parts of the network (Eastern Goldfields and Albany) the Excess Network Usage Charge is less than would be incurred by Western Power to obtain a network control service or expand the transmission network. Charges to users who exceed their contracted capacity, but are not in constrained areas are charged at standard rates for the additional capacity.

181. The ERA is satisfied that the amendment made to the price list information as set out above implements Final Decision Required Amendment 26.

## Streetlight tariffs

182. Final Decision Required Amendment 16 required Western Power to expand its streetlight services. Consequently, the Price List Information and Price List needed to be updated to incorporate these new services. Streetlight tariffs also needed to be amended to reflect the ERA's final decision on target revenue.

### **Final Decision Required Amendment 27**

Western Power must amend the Price List and Price List Information to include the required new reference services.

183. As Western Power has not fully implemented the requirements of Final Decision Required Amendment 16, it has also not fully complied with Final Decision Required Amendment 27.

## Service standard benchmarks

184. Section 5.1(c) of the Access Code requires an access arrangement to include service standard benchmarks for each reference service.
185. Section 5.6 of the Access Code requires service standard benchmarks to be reasonable and sufficiently detailed and complete to enable a user or applicant to determine the value represented by the reference service at the reference tariff.
186. The ERA required the following amendments to service standard benchmarks:
- Discontinuing the system minutes interrupted performance measures as service standard benchmarks, clarifying the classification of circuits between Muja Terminal and Merredin Terminal, and reporting disaggregated loss of supply event frequency for radial and meshed transmission networks.
  - Amending the calculation of the system peak demand for the loss of supply event frequency performance measures to remove the coincident demand of direct connect customers not receiving a reference service.
  - Applying the distribution of best fit to historical performance data to set service standard benchmarks.
  - Setting service standard benchmarks at the 97.5<sup>th</sup> percentile of the distribution of best fit, or 2.5<sup>th</sup> percentile for call centre performance and circuit availability.
  - Reporting momentary interruptions.
  - Removing zone substation transformers from the list of permitted exclusions for circuit availability and average outage duration.

## Removal of the system minutes interrupted performance measures

187. In the final decision, the ERA considered the system minutes interrupted service standard benchmarks on the radial and meshed transmission networks would not be consistent with the requirements of the Access Code. Western Power was required to remove these performance measures from the access arrangement:

### **Final Decision Required Amendment 28**

Western Power must discontinue reporting the system minutes interrupted (radial and meshed) performance measures as service standard benchmarks.

188. The ERA also required Western Power to clarify the classification of transmission circuits between the Muja and Merredin Terminals and report disaggregated loss of supply event frequency performance measures for the radial and meshed circuits. Western Power was not required to set service standard benchmarks for the radial and meshed elements of the loss of supply event frequency performance measures:

### **Final Decision Required Amendment 29**

Western Power must make clear the classification of 220kV circuits between Muja Terminal and Merredin Terminal, and report disaggregated loss of supply event frequency performance measures for radial and meshed circuits. Western Power is not required to set service standard benchmark for the radial and meshed elements of the loss of supply event frequency performance measures.

189. Western Power has amended section 4.3 of the access arrangement to remove the System Minutes Interrupted performance measures on the radial and meshed transmission networks. The amendment to section 4.3 of the amended proposed access arrangement to remove the System Minutes Interrupted performance measures implements the Final Decision Required Amendment 28.
190. Western Power has confirmed that the 220kV circuit between Muja Terminal and Merredin Terminal operates as a radial circuit as a result of the system protection mechanism, and will report disaggregated loss of supply event frequency for radial and meshed circuits in the Annual Service Standard Performance Report from 2018/19.
191. The clarification of the transmission circuits between Muja Terminal and Merredin Terminal, and proposed reporting of disaggregated loss of supply event frequency performance measures on the radial and meshed networks in the Annual Service Standard Performance Report adequately addresses the Final Decision Required Amendment 29.

## Amending the calculation of system peak demand for the loss of supply event frequency performance measures

192. The ERA required Western Power to modify the method of calculating system peak demand (in MW) to exclude the coincident demand of customers directly connected to the transmission network, but receiving a non-reference service:

### **Final Decision Required Amendment 30**

Western Power must amend the definition of “System Peak MW” within the loss of supply event frequency formula as follows:

“System Peak MW” is the maximum peak demand recorded on the South West Interconnected System for the previous financial year, excluding the coincident demand of customers directly connected to the transmission system and receiving a non-reference service.

193. Western Power has amended section 4.3.4 of the access arrangement as follows:
  - For the financial year ending 30 June 2019 and each financial year thereafter, “System Peak MW” is the maximum peak demand recorded for the South West Interconnected System for the previous year, excluding the coincident demand for those customers receiving a *non-reference service* where the impact of an Unplanned Customer outage event is excluded for the purpose of this measure.
194. Western Power has consequently revised the service standard benchmark for loss of supply event frequency for events greater than 1.0 system minutes, from six to seven events per year.
195. The amendment to section 4.3.4 of the amended proposed access arrangement implements the Final Decision Required Amendment 30.
196. Service standard benchmarks are shown in Table 21, below.

## Using the distribution of best fit to historical performance data to set service standard benchmarks

197. The ERA considered Western Power's proposed method of averaging percentile values from multiple distributions to derive service standard benchmarks to be not consistent with the requirements of the Access Code. Western Power was required to derive the service standard benchmark for each performance measure at the required percentile value from the single probability distribution of best fit to historical performance data:

### **Final Decision Required Amendment 31**

Western Power must use the single probability distribution of best fit to derive service standard benchmarks.

198. Western Power has amended sections 4.2 and 4.3 of the access arrangement to derive the service standard benchmarks for each performance measure at the required percentile value from the single probability distribution of best fit.
199. The amendments to sections 4.2 and 4.3 of the access arrangement implement Final Decision Required Amendment 31.

## Setting the service standard benchmarks at the 97.5<sup>th</sup> (or 2.5<sup>th</sup>) percentile of the distribution of best fit

200. The ERA considered that Western Power had not demonstrated the compliance of its proposal to set service standard benchmarks at the 99<sup>th</sup> (or 1<sup>st</sup>) percentile to be consistent with the Access Code and did not approve the proposed amendment. Western Power was required to derive service standard benchmarks at the 97.5<sup>th</sup> (or 2.5<sup>th</sup>) percentile of a single probability distribution of best fit to historical performance data:

### **Final Decision Required Amendment 32**

Western Power must derive service standard benchmarks at the 97.5<sup>th</sup> percentile of the single probability distribution of best fit for SAIDI, SAIFI, loss of supply event frequency and average outage duration performance measures, and at the 2.5<sup>th</sup> percentile for call centre performance and circuit availability performance measures.

201. Western Power has amended sections 4.2 and 4.3 of the access arrangement to derive service standard benchmarks for the financial year ending 30 June 2019 and each subsequent financial year at the 97.5<sup>th</sup> percentile for System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), loss of supply event frequency and average outage duration performance measures, and at the 2.5<sup>th</sup> percentile for the call centre performance and circuit availability performance measures.
202. The amendments to sections 4.2 and 4.3 of the access arrangement implement the Final Decision Required Amendment 32.
203. Service standard benchmarks are shown in Table 21, below.

## Implementation of a service standard benchmark for momentary interruptions

204. The ERA approved Western Power's proposal in the final decision, to record and report momentary average interruption frequency events (MAIFI<sub>e</sub>) within the annual Service Standard Performance Reports, for the purpose of establishing service standard benchmarks and targets in the next access arrangement period:

### **Final Decision Required Amendment 33**

Western Power must record and report momentary interruption events, consistent with the proposed MAIFI<sub>e</sub> formula, within the annual Service Standard Performance Report during the fourth access arrangement period, for the purpose of establishing service standard benchmarks and targets in the next access arrangement period.

205. The ERA also required Western Power to record and report momentary interruption events by feeder category within the Service Standard Performance Report, consistent with the categories of momentary interruptions reported in the Service Standard Performance Report:

### **Final Decision Required Amendment 34**

Western Power must record and report momentary interruption events by feeder category within the Service Standard Performance Report during the fourth access arrangement period.

206. The ERA also considered Western Power's proposal to measure and report SAIDI and SAIFI during the fourth access arrangement period (AA4) using existing and proposed new interruption thresholds to be reasonable.
207. Western Power has proposed to record and report momentary average interruption frequency events in annual Service Standard Performance Reports.
208. Western Power has also stated that it will record and report momentary interruption events by feeder category within the Service Standard Performance Report during the fourth access arrangement period.
209. The required amendments do not require any change to the access arrangement. Western Power's proposed revisions to the Service Standard Performance Report adequately address Final Decision Required Amendments 33 and 34.

## Exclusion of zone substation transformers from transmission performance measures

210. The ERA considered the exclusion of zone substation transformers from transmission network performance measures was not consistent with the requirements of the Access Code and required Western Power to remove zone substation transformers from the list of exclusions for the circuit availability and average outage duration performance measures:

### **Final Decision Required Amendment 35**

Western Power must remove zone substation transformers from the list of exclusions for the circuit availability and average outage duration performance measures.

211. Western Power has amended sections 4.3.2 and 4.3.6 of the access arrangement to remove zone substation transformers from the list of exclusions for the circuit availability and average outage duration performance measures.
212. Western Power has advised that the performance of zone substation transformers is not included in the circuit availability and average outage duration performance measures in any case.<sup>28</sup> Zone substation transformers support system reliability, rather than system security, and transformer performance is captured in the loss of supply event frequency performance measures.
213. The amendments to sections 4.3.2 and 4.3.6 of the access arrangement to remove zone substation transformers from the list of permitted exclusions from the circuit availability and average outage duration performance measures implement Final Decision Required Amendment 35.

---

<sup>28</sup> Western Power, *Amended AA4 proposal: Response to the ERA's final decision*, 16 November 2018, pp. 43-45.

**Table 21 Distributions of best fit, parameters and service standard benchmarks (SSBs) derived at the 97.5th (or 2.5th\*) percentile for the years 2018/19 to 2021/22**

| Performance measure                | Distribution of best fit  | Parameters  | SSB    | Units                        |
|------------------------------------|---------------------------|---|--------|------------------------------|
| <b>Distribution network</b>        |                           |   |        |                              |
| SAIDI – CBD                        | Weibull                   | Shape: 2.63<br>Scale: 20.52                       | 33.7   | Average system minutes       |
| SAIDI – Urban                      | Weibull (3 parameter)     | Shape: 1.93<br>Scale: 19.59<br>Threshold: 92.05   | 130.6  |                              |
| SAIDI – Rural short                | Weibull                   | Shape: 14.48<br>Scale: 196.86                     | 215.4  |                              |
| SAIDI – Rural long                 | Weibull (3 parameter)     | Shape: 1.46<br>Scale: 99.52<br>Threshold: 604.21  | 848.3  |                              |
| SAIFI – CBD                        | Weibull (3 parameter)     | Shape: 8.56<br>Scale: 0.38<br>Threshold: -0.23    | 0.21   | Average annual outages       |
| SAIFI – Urban                      | Generalised extreme value | Shape: -0.54<br>Scale: 0.11<br>Location: 1.10     | 1.27   |                              |
| SAIFI – Rural short                | Normal                    | Mean: 2.00<br>Std. deviation.: 0.18               | 2.34   |                              |
| SAIFI – Rural long                 | Weibull (3 parameter)     | Shape: 2.86<br>Scale: 1.39<br>Threshold: 3.50     | 5.70   |                              |
| Call centre performance            | Generalised extreme value | Shape: -0.71<br>Scale: 1.77<br>Location: 91.37    | 86.8%* | Calls answered in 30 seconds |
| <b>Transmission network</b>        |                           |   |        |                              |
| Circuit availability               | Generalised extreme value | Shape: -0.58<br>Scale: 0.31<br>Location: 98.41    | 97.8%* | Hours available              |
| LoSEF >0.1 and ≤1.0 system minutes | Binomial                  | Probability: 0.18                                 | 26     | Number of annual outages     |
| LoSEF >1.0 system minutes          | Binomial                  | Probability: 0.03                                 | 7      |                              |
| Average outage duration            | Weibull (3 parameter)     | Shape: 1.85<br>Scale: 305.50<br>Threshold: 615.21 | 1234   | Average system minutes       |

## Adjustments to target revenue

214. Sections 6.6 to 6.32 of the Access Code provide 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.
  - An amount under a service standards adjustment mechanism under sections 6.29 to 6.37 of the Access Code.

## Investment adjustment mechanism

215. 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 currently applies to the following classes of capital expenditure:
- Connection of new generation capacity.
  - Connection of new loads.
  - Augmentation of the network to provide covered services.
  - Augmentation under the Rural Power Improvement Program and State Underground Power Program.
  - Distribution wood pole management.
216. Western Power proposed including metering expenditure in the investment adjustment mechanism. The ERA did not approve this.

### **Final Decision Required Amendment 36**

Metering expenditure must be removed from the investment adjustment mechanism.

217. Western Power has deleted metering expenditure from clause 7.3.7 of the amended access arrangement.
218. The ERA is satisfied Western Power has implemented Final Decision Required Amendment 36.

## Gain sharing mechanism

219. The gain sharing mechanism allows Western Power to retain the benefits of operating expenditure for five years from when the efficiency was achieved (that is, the year it makes the saving plus five years of carry over) regardless of which year

the efficiency is first made. The gain sharing mechanism is intended to ensure that Western Power has equal incentives to pursue efficiency throughout the access arrangement period.

220. The final decision required three amendments to the gain sharing mechanism.

### *Interrelationship with service standards*

221. The Access Code specifies that an above-benchmark surplus does not exist to the extent that a service provider achieves efficiency gains or innovation in excess of the benchmarks during the previous access arrangement period by failing to meet the service standard benchmarks set out in the access arrangement.
222. The current gain sharing mechanism specifies that Western Power must achieve all of its service standard benchmarks in a particular year to be eligible for any gain share surplus in that year.
223. The ERA determined that the current approach could lead to unintended consequences. In particular, as soon as Western Power becomes aware that it has, or is likely to, fail a service standard benchmark, the incentives to achieve efficiencies for that year reduce and it is possible there may even be incentives to increase expenditure in that year in order to achieve savings in future years.
224. The gain share should be calculated for the entire period without adjustments for service standard benchmark failures. An adjustment for service standard failures over the period can then be calculated based on the proportion of years that service standard benchmarks were not achieved.

#### **Final Decision Required Amendment 37**

Section 7.4.3 of the proposed revised access arrangement must be amended to specify that an adjustment, based on the proportion of years with service standard benchmark failures over the access arrangement period, will be made to the total above benchmark surplus.

225. As required by the amendment, Western Power has added a new clause 7.4.3 to the access arrangement which calculates the total gain share for the access arrangement period.
226. It has modified existing clause 7.4.4 to set out how service standard benchmark failures will be assessed to derive an “SSB Deficiency Proportion” where there is a service standard benchmark failure. This is then used in new clause 7.4.7 to calculate an adjustment to the total above benchmark surplus.
227. However, clause 7.4.4 only requires the “SSB Deficiency Proportion” to be calculated in a year where the above benchmark surplus is positive. The clause also sets out a process whereby Western Power would seek a determination of the SSB Deficiency Proportion from the ERA.
228. To address the deficiencies identified by the ERA, service standard benchmark failures need to be accounted for in each year, not just those where the above benchmark surplus is positive. There is also no need for a separate determination process as the value to be added to target revenue will be assessed at the next access arrangement review.

229. The ERA is not satisfied that the amendment made to the access arrangement as set out above implements Final Decision Required Amendments 37 or otherwise addresses the concerns that led to the ERA requiring the amendment.

### *Separate benchmarks for transmission and distribution*

230. The current access arrangement includes benchmarks for the total business. Western Power proposed setting separate benchmarks for the transmission and distribution system.
231. The ERA determined that a much more robust cost allocation framework and access arrangement information guideline would be necessary to support separate transmission and distribution gain share mechanisms. The ERA considered that the additional measures required to set separate mechanisms would add unnecessary complexity and, therefore, were inconsistent with the requirements of section 6.21(b) of the Access Code.<sup>29</sup>

#### **Final Decision Required Amendment 38**

Western Power must delete proposed new section 7.4.2 and the following tables from the proposed revised access arrangement:

- Table 32: Efficiency and innovation benchmarks for the transmission system.
- Table 33: Efficiency and innovation benchmarks for the distribution system.

Western Power must include a single table with efficiency and innovation benchmarks for the total business consistent with the ERA's determination of efficient operating costs.

232. Western Power has amended section 7.4 of the access arrangement by deleting proposed section 7.4.2 and Tables 32 and 33. Western Power has also added a single table (Table 39) with efficiency and innovation benchmarks for the total business consistent with the ERA's determination of efficient operating expenditure adjusted for the additional supervisory control and data acquisition (SCADA) costs discussed under forecast operating expenditure.
233. The ERA is satisfied that the amendments made to the access arrangement as set out above adequately addresses the matters that prompted the ERA to require Final Decision Required Amendment 38.

### *Setting the efficiency and innovation benchmarks*

234. The ERA required Western Power to amend the efficiency and innovation benchmarks included in section 7.4.11 of the proposed revisions to the access arrangement to be consistent with the ERA's determination of efficient operating costs set out in the final decision.

#### **Final Decision Required Amendment 39**

Western Power must amend the efficiency and innovation benchmarks to be consistent with the final decision on operating expenditure.

235. Western Power has amended the benchmarks included in section 7.4 of the access arrangement to be consistent with the ERA's determination of efficient operating

---

<sup>29</sup> Section 6.21(b) being objective, transparent, easy to administer and replicable from one access arrangement to the next; and...

expenditure adjusted for the additional SCADA costs discussed under forecast operating expenditure.

236. The ERA is satisfied that the amendment made to the access arrangement as set out above adequately addresses the matters that prompted the ERA to require Final Decision Required Amendment 39.

## Service standard adjustment mechanism

238. Section 6.30 of the Access Code requires an access arrangement to include a service standard adjustment mechanism.
239. The service standard adjustment mechanism details how the service provider's performance against the service standard benchmarks during the access arrangement period is to be treated by the ERA at the next access arrangement review.
240. The ERA's final decision required the following amendments to the service standard adjustment mechanism:
- Set service standard targets at the average annual performance achieved during the third access arrangement period (AA3).
  - Apply revised weightings of values of customer reliability to SAIDI and SAIFI incentive rates.
  - Updated revenue-at-risk and allocation on the transmission network.

### *Set the service standard targets at the average annual performance achieved during the third access arrangement period*

241. In the final decision, the ERA considered Western Power's proposed method of deriving service standard targets to be inconsistent with the objective of the Access Code and required Western Power to set service standard targets for the years 2018/19 to 2021/22 at the average annual performance levels achieved in AA3, adjusted for anticipated changes in service reliability and where individual penalty caps have been applied during AA3:

#### **Final Decision Required Amendment 40**

Western Power must set service standard targets for the financial years from 2018/19 to 2021/22 at the average annual level of performance achieved in the third access arrangement period, adjusted for anticipated changes in service reliability and where individual penalty caps have been applied during the third access arrangement period, as shown in [Table 22].

242. Western Power has amended clause 7.5 (Tables 43 to 48) of the access arrangement by setting service standard targets for the financial years from 1 July 2019 at the average annual level of performance achieved in the AA3 period, adjusted for anticipated changes in service reliability and where individual penalty caps have been applied during the AA3 period, as shown in Table 22, below.
243. Western Power has adjusted the service standard target for loss of supply event frequency (>1.0 system minutes) following the removal of coincident demand from directly connected non-reference customers from the calculation of system peak demand, as required in Final Decision Required Amendment 30.
244. The amendments to clause 7.5 (Tables 43 to 48) of the access arrangement implement Final Decision Required Amendment 40.

**Table 22** Average annual performance during the AA3 period and adjustments for the new major event day threshold (MEDT) method, capital expenditure and system protection measure (SPM), and service standard benchmark (SSB) penalty caps, to determine service standard targets for the AA4 period, from 2019/20 to 2021/22

| Performance measure                                  | (A)<br>AA3 average performance | (B)<br>MEDT adjustment | (C)<br>Capex and SPM adjustment | (D)<br>SSB penalty cap adjustment | (E)<br>AA4 service standard target |
|--|--------------------------------|------------------------|---------------------------------|-----------------------------------|------------------------------------|
| <b>Distribution reliability performance measures</b> |                                |                        |                                 |                                   |                                    |
| SAIDI – CBD  | 17.7                           | 0.0                    | -                               | -                                 | 17.7                               |
| SAIDI – Urban  | 101.8                          | 5.0                    | -                               | -                                 | 106.8                              |
| SAIDI – Rural short                                  | 175.8                          | 12.8                   | -                               | -                                 | 188.6                              |
| SAIDI – Rural long                                   | 649.1                          | 44.0                   | -5.63                           | -9.83                             | 677.7                              |
| SAIFI – CBD  | 0.12                           | 0.00                   | -                               | -                                 | 0.12                               |
| SAIFI – Urban  | 1.06                           | 0.03                   | -                               | -                                 | 1.09                               |
| SAIFI – Rural short                                  | 1.90                           | 0.06                   | -                               | -                                 | 1.96                               |
| SAIFI – Rural long                                   | 4.45                           | 0.20                   | -0.06                           | -0.30                             | 4.29                               |
| Call centre performance (%)                          | 92.1                           | -0.02                  | -                               | -                                 | 92.0                               |
| <b>Transmission reliability performance measures</b> |                                |                        |                                 |                                   |                                    |
| Circuit availability (%)                             | 98.5                           | -                      | -                               | -                                 | 98.5                               |
| LoSEF >0.1 and ≤1.0 sys. mins.                       | 16.6                           | -                      | -                               | -                                 | 17                                 |
| LoSEF >1.0 system minutes                            | 3.0*                           | -                      | -                               | -0.40                             | 3                                  |
| Average outage duration (mins.)                      | 860                            | -                      | -                               | -75.80                            | 784                                |

Note: (\*) Loss of supply event frequency (>1.0 system minutes) performance data has been modified since final decision to implement required amendment 30.

### Apply revised weightings of values of customer reliability to SAIDI and SAIFI incentive rates

245. The ERA considered the weightings of values of customer reliability proposed by Western Power to determine SAIDI and SAIFI incentive rates were not consistent with the Access Code and required Western Power to use the revised weightings proposed by the Australian Energy Regulator to calculate incentive rates for distribution reliability measures in the service standard adjustment mechanism:

#### Final Decision Required Amendment 41

Western Power must apply the revised weightings of values of customer reliability to SAIDI and SAIFI incentive rates listed in [Table 23, below].

**Table 23: Previous and revised weightings of values of customer reliability rates to SAIDI and SAIFI in the service target performance incentive scheme<sup>30</sup>**

| Feeder      | Previous weighting | Revised weighting |
|-------------|--------------------|-------------------|
| CBD         | 1.13               | 1.5               |
| Urban       | 0.97               | 1.5               |
| Rural short | 0.92               | 1.5               |
| Rural long  | 0.92               | 1.5               |

246. Western Power has amended clause 7.5 (Tables 43 and 44) of the access arrangement to apply the revised weightings of values of customer reliability listed in Table 23 above to the calculation of SAIDI and SAIFI incentive rates.
247. The amendments to clause 7.5 (Tables 43 and 44) of the access arrangement implement Final Decision Required Amendment 41.
248. The final decision revised incentive rates to be applied by Western Power under the service standard adjustment mechanism for the AA4 period are shown in Table 25, below.

### **Updated revenue-at-risk, and allocation on the transmission network**

249. The ERA considered the revenue-at-risk caps proposed by Western Power were not consistent with the requirements of the Access Code and required the following revenue-at-risk caps:

#### **Final Decision Required Amendment 42**

Western Power must set revenue-at-risk caps as follows:

Upper revenue-at-risk (cumulative reward) cap on the distribution network of 1.0 per cent.

Lower revenue-at-risk (cumulative penalty) cap on the distribution network of 2.5 per cent

Reward and penalty revenue-at-risk caps of 1.0 per cent on the transmission network.

250. The ERA also considered the proposed allocation of revenue-at-risk on the transmission network to be not consistent with the Access Code and determined the parameter weightings listed in Table 24 to be reasonable and consistent with the objective of the Access Code:

#### **Final Decision Required Amendment 43**

Western Power must allocate revenue-at-risk to the performance measures on the transmission network at the rates shown in [Table 24, below].

<sup>30</sup> Australian Energy Regulator, *Draft Electricity distribution network service providers Service target performance incentive scheme, Version 2*, December 2017, p. 11, Table 1.

**Table 24: Western Power proposed and ERA required allocation of revenue-at-risk on the transmission network**

| Performance measure                  | Western Power proposed allocation | ERA required allocation |
|--------------------------------------|-----------------------------------|-------------------------|
| Circuit availability                 | 50%                               | 50%                     |
| LoSEF (>0.1 and ≤1.0 system minutes) | 12.5%                             | 15%                     |
| LoSEF (>1.0 system minutes)          | 12.5%                             | 15%                     |
| Average outage duration              | 25%                               | 20%                     |

251. Western Power has amended clauses 7.5.8 to 7.5.10 of the access arrangement to implement the required revenue-at-risk caps:

*7.5.8 Notwithstanding section 7.5.7 of this access arrangement, the sum of the rewards or penalties for the transmission system applied to each SST Year is capped at 1% of TRt for that year as set out in Table 34. For the avoidance of doubt, for the purposes of this section TRt in that table will not be updated as a result of the annual updates to weighted average cost of capital as determined in section 5.4.*

*7.5.9 Notwithstanding section 7.5.7 of this access arrangement, the sum of the rewards for the distribution system applied to each SST Year is capped at 1% of DRt for that year, and the sum of the penalties for the distribution system applied to each SST Year is capped at 2.5% as set out in Table 35. For the avoidance of doubt, for the purposes of this section DRt in that table will not be updated as a result of the annual updates to weighted average cost of capital as determined in section 5.4.*

*7.5.10 The amount that will be added to, or deducted from, the target revenue for each of the transmission system and the distribution system is equal to the present value of the sum of the amounts for each of the transmission system and the distribution system calculated under section 7.5.7 of this access arrangement (as subject to sections 7.5.8 and 7.5.9 of this access arrangement).*

252. Western Power has also amended Tables 46, 47 and 48 of the access arrangement to allocate revenue-at-risk to circuit availability, loss of supply event frequency, and average outage duration performance measures at the rates required in Table 24 above.

253. The amendments to clauses 7.5.8 to 7.5.10 of the access arrangement implement Final Decision Required Amendment 42.

254. The amendments to Tables 46, 47, and 48 of the access arrangement implement Final Decision Required Amendment 43.

**Table 25 Service standard targets (SST) and incentive rates for the service standard adjustment mechanism for the AA4 period**

| Performance measure                                  | Unit rate   | SST<br>(2017/18 &<br>2018/19) | SST<br>(2019/20 –<br>2021/22) | Reward<br>rate | Penalty<br>rate |
|--|-------------|-------------------------------|-------------------------------|----------------|-----------------|
| <b>Distribution reliability performance measures</b> |             |                               |                               |                |                 |
| SAIDI – CBD  | minutes     | -                             | 17.7                          | \$30,215       | \$30,215        |
| SAIDI – Urban  | minutes     | -                             | 106.8                         | \$446,660      | \$446,660       |
| SAIDI – Rural short                                  | minutes     | -                             | 188.6                         | \$143,118      | \$143,118       |
| SAIDI – Rural long                                   | minutes     | -                             | 677.7                         | \$52,503       | \$52,503        |
| SAIFI – CBD  | 0.01 events | -                             | 0.12                          | \$29,711       | \$29,711        |
| SAIFI – Urban  | 0.01 events | -                             | 1.09                          | \$291,763      | \$291,763       |
| SAIFI – Rural short                                  | 0.01 events | -                             | 1.96                          | \$91,810       | \$91,810        |
| SAIFI – Rural long                                   | 0.01 events | -                             | 4.29                          | \$55,293       | \$55,293        |
| Call centre performance                              | 0.1%        | -                             | 92.0%                         | -\$38,017      | -\$12,429       |
| <b>Transmission reliability performance measures</b> |             |                               |                               |                |                 |
| Circuit availability                                 | 0.1%        | -                             | 98.5%                         | -\$449,344     | -\$256,768      |
| LoSEF >0.1 and ≤1.0 sys. mins.                       | events      | -                             | 17                            | \$89,869       | \$59,912        |
| LoSEF >1.0 system minutes                            | events      | -                             | 3                             | \$179,737      | \$134,803       |
| Average outage duration                              | minutes     | -                             | 784                           | \$5,661        | \$1,598         |

*Note: Call centre performance and transmission network reward and penalty rates will change if target revenue changes.*

## D-factor

255. 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.
256. Western Power proposed adding new sections to the access arrangement (7.6.6 to 7.6.10) to allow it to lodge an application during the access arrangement period for a determination on whether expenditure satisfies the D-factor non-capital costs.
257. The ERA determined this was unnecessary as there are already provisions in the Access Code for the pre-approval of non-capital expenditure. The ERA required Western Power to delete the proposed new sections.

### **Final Decision Required Amendment 44**

Western Power must delete proposed new sections 7.6.6 to 7.6.10 from the access arrangement.

258. Western Power has deleted sections 7.6.6 to 7.6.10.
259. The ERA is satisfied that the amendments made to the D-factor as set out in access arrangement clause 7.6 implements Final Decision Required Amendment 44.

## Standard access contract

260. 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.
261. Appendix A of the current access arrangement includes a standard access contract, referred to by Western Power as the Electricity Transfer Access Contract (ETAC). The ETAC applies to all reference services currently offered under the access arrangement.

## Provision and use of services (clause 3.1)

262. Clause 3.1(c) of the ETAC currently requires the user to endeavour, as a reasonable and prudent person, to not exceed its contracted capacity. In its initial proposal, Western Power proposed to amend this clause as follows:
- (c) For each Service at each Connection Point, the User must ~~endeavour, as a Reasonable and Prudent Person, to~~ ensure that the rate at which electricity is transferred into or out of the Network by or on behalf of the User does not exceed the Contracted Capacity for that Service.
263. In the final decision, the ERA determined that Western Power had not demonstrated by specific examples or data how the current clause has been ineffective, led to undesirable outcomes for customers, or threatened the integrity of the network.
264. The existing requirement for a user to "*endeavour, as a reasonable and prudent person*", incorporates a concept of good electricity industry practice. Together with the existing Excess Network Usage Charges, the incorporation of this standard provides a reasonable mechanism to encourage compliance with contracted capacity limits, which appropriately balances the interests of Western Power and users.
265. The ERA's final decision, having had regard to the Model Standard Access Contract clause A3.14 and the previously approved ETACs, was that the proposed changes were not consistent with section 5.3 of the Access Code and the Code Objective and must be deleted.

### Final Decision Required Amendment 45

Clause 3.1(c) of the electricity transfer access contract must read:

"For each Service at each Connection Point, the User must endeavour, as a Reasonable and Prudent Person, to ensure that the rate at which electricity is transferred into or out of the Network by or on behalf of the User does not exceed the Contracted Capacity for that Service."

Western Power's proposed clauses 3.1(d) to (g) must be deleted.

266. Western Power has amended clause 3.1(c) and deleted proposed clauses 3.1(d) to (g) to be consistent with Final Decision Required Amendment 45.
267. The ERA is satisfied that the amendment to the ETAC as set out above implements Final Decision Required Amendment 45.

## Use of the words “materially modify” and “adversely impact”

268. Synergy raised concerns over the use of the words “materially modify” (in clause 13(c)) and “adversely impact” (in clause 13(c)(ii)(B)).
269. The ERA considered the words “adversely impact” did not require further clarification or explanation when used in conjunction with the phrase “the safety or security of the Network”.
270. Further, the changes to clause 13(i) were not significantly different to the existing clause 13(c)(i), which already included the phrase “materially modify”. However, in the current form of drafting, to understand the meaning of “materially modify” in clause 13(c), the parties must refer to clauses 10.4 and 16.3 of the applications and queuing policy as they set out when an application is required; that is, whenever a modification changes “any of those characteristics of generating plant connected at a connection point required to be provided in the applicable application form”.
271. Western Power’s revised proposal did not accept the draft decision required amendment and proposed to maintain its initial proposed wording for clause 13(c) and proposed to add new clauses 13(d) and 13(e).
272. In the final decision, the ERA determined that Western Power’s proposed amendments to materiality in clause 13(d) and (e) and the additional amendment required by the ERA would satisfactorily address the concerns regarding the reasonableness requirement of section 5.3 of the Access Code and were sufficiently complete to form the basis of a commercially workable access contract.

### Final Decision Required Amendment 46

Clause 13(e) of the electricity transfer access contract must read:

“Notwithstanding clause 13(d) the replacement of like for like parts within a Generating Plant or the replacement of parts in the ordinary course of maintenance and repair is not a material modification for the purposes of clause 13(c)(ii).”

273. Western Power has amended clause 13(e) of the ETAC as follows:
- ~~The~~ Notwithstanding clause 13(d), the replacement of like for like parts within a Generating Plant or the replacement of parts in the ordinary course of maintenance and repair is not a material modification for the purposes of clause 13(c)(ii).
274. The ERA is satisfied that the amendment of clause 13(e) of the ETAC as set out above implements Final Decision Required Amendment 46.

## Written notification period

275. Western Power proposed a written notification period of 60 days under proposed clause 13(c)(ii)(A). In the final decision, the ERA determined that a 45 day period satisfies the reasonableness requirement of section 5.3 of the Access Code and is consistent with the Access Code objective.

### Final Decision Required Amendment 47

Clause 13(c)(ii)(A) of the electricity transfer access contract must be amended so the notification period is at least 45 days prior to the modification being made.

276. Western Power has amended clause 13(c)(ii)(A) of the ETAC as follows:
- the User notifies Western Power of the modifications to the Generating Plant in writing at least ~~60~~ 45 days prior to the modifications being made; and
277. The ERA is satisfied that the amendment of clause 13(c)(ii)(A) of the ETAC as set out above implements Final Decision Required Amendment 47.
278. The ERA also required the time period in clause 13(f) to be amended to 45 days to be consistent with clause 13(c)(ii).
- Final Decision Required Amendment 48**
- Clause 13(f) of the electricity transfer access contract must be amended so the notification period is at least 45 days prior to the modifications being made.
279. Western Power has amended clause 13(f) of the ETAC as follows:
- If Western Power does not notify the User within ~~60~~ 45 days of receipt of notice under clause 13(c)(ii) that the modification may adversely impact the safety or security of the Network the User may proceed to make the modification.
280. The ERA is satisfied that the amendment of clause 13(f) of the ETAC as set out above implements Final Decision Required Amendment 48.

## Limitation of liability (clause 19.5(c))

281. Clause 19.5(c) covers provisions for the limitation of liability. The existing provisions provide for the maximum liability amounts to be renegotiated every three years from the commencement date. The renegotiation is to be conducted in good faith and have regard to any relevant changed circumstances. Where the parties cannot agree the matter is to be determined as a dispute.
282. In the final decision, the ERA agreed with Western Power that a reset of monetary caps should only be triggered by external events. However, Western Power's revised definition was limited to any change to the regulatory environment or market structure – excluding other legitimate external events such as legislative requirements.
283. The ERA required the definition of Material Change be broadened to read "any change external to the party, including any change to the regulatory environment or market structure of the Western Australian electricity market, which materially alters or could reasonably be expected to materially alter the risk of a Party under this Contract, the nature of any Claim that can be made under this Contract or both."
- Final Decision Required Amendment 49**
- The definition of material change in schedule 1 of the electricity transfer access contract must be amended to reflect the wording in paragraph 2286 [283 above].
284. Western Power has amended the definition of Material Change in schedule 1 of the ETAC as follows:
- ... any change external to a Party, including any change to the regulatory environment or market structure of the Western Australian electricity market, which materially alters or could reasonably be expected to materially alter the risk of a Party under this Contract, the nature of any Claim that can be made under this Contract or both.

285. The ERA is satisfied that the amendment of the definition of Material Change in schedule 1 of the ETAC as set out above implements Final Decision Required Amendment 49.

## Intermediary indemnity (clause 19.11)

286. Western Power proposed to add a new clause (19.11) to require the user, where they are an intermediary, to indemnify Western Power against any claims by the person for whom they act as intermediary.
287. In the final decision, the ERA determined that it was necessary to amend clause 19.11(a) as follows: "the user is the Intermediary (as defined in the Market Rules) of a person, and in so far as they are registered as a Rule Participant (as defined in the Market Rules) and to the extent they perform the functions of an Intermediary".

### Final Decision Required Amendment 50

Clause 19.11(a) of the electricity transfer access contract must be amended in accordance with paragraph 2303 [287 above] of this final decision.

288. Western Power has amended clause 19.11(a) in the ETAC as follows:
- the User is ~~registered under the Market Rules as~~ the Intermediary (as defined in the Market Rules) of a person and in so far as they are registered as a Rule Participant (as defined in the Market Rules) and to the extent they perform the functions of an Intermediary; and
289. The ERA is satisfied that the amendment of clause 19.11(a) of the ETAC as set out above implements Final Decision Required Amendment 50.

## Force majeure (clause 22)

290. To ensure consistency with clause 5.3 of the Access Code and the Code Objective, the ERA required "forming the view" to be replaced with "becoming aware that" and notices were to be issued within five business days to ensure timely notification to users.

### Final Decision Required Amendment 51

Clause 22.3(a) of the electricity transfer access contract must be amended to read:

"A notice under clause 22.3(a) must be given as soon as reasonably practicable and in any event within 5 Business Days of a Party becoming aware an event is or is likely to be a Force Majeure Event."

291. Western Power has amended clause 22.3(a) of the ETAC as follows:
- A notice under clause 22.3(a) must be given as soon as reasonably practicable and in any event within ~~40~~ 5 Business Days of a Party ~~forming the view~~ becoming aware an event is or is likely to be a Force Majeure Event.
292. The ERA is satisfied that the amendment of clause 22.3(a) of the ETAC as set out above implements Final Decision Required Amendment 51.

## Applications and queuing policy

293. Section 5.1(g) of the Access Code requires that an access arrangement include an application and queuing policy, which is a policy that sets out the access application process.
294. In the Final Decision the ERA required 11 amendments to the proposed applications and queuing policy that are necessary for the ERA to approve the revised proposed access arrangement. The ERA's required amendments and Western Power's responses to these amendments are addressed below.

## Dormant applications

295. Western Power proposed to introduce a definition for "dormant application" and a new clause (22) that detailed the process and criteria to determine whether an application is *dormant*, and whether such an application could be progressed or withdrawn.
296. The final decision required amendments to ensure applications less than three years old could not be deemed dormant (unless the applicant sought to withdraw it) or where lack of progress was due to Western Power not progressing the application.

### Final Decision Required Amendment 52

The provisions for dormant applications must be amended to ensure applications cannot be deemed dormant if they are less than three years old or the lack of progress is due to Western Power not progressing the application.

297. Western Power has amended the definition for "dormant application" in clause 2.1 of the applications and queuing policy as follows:
- ...for a period of 12 continuous months calculated retrospectively from the date that the assessment as to dormancy is made, with the exception that an *application* is not a dormant application where:
- (c) the *application's* lack of progress is due to Western Power not progressing the *application*; or
  - (d) the *application* has a *priority date* that is less than 3 years before the date that the assessment as to dormancy is made.
298. The ERA is satisfied the amended definition complies with Final Decision Required Amendment 52.

## Forecast natural load growth considerations

299. Western Power considered that it was able, acting in accordance with good electricity industry practice and the Access Code objective, to take into account matters such as forecast natural load growth to determine available spare capacity and undertake network planning.
300. Western Power proposed to change clause 3.15(d) of the applications and queuing policy to make clear that forecast natural load growth is a relevant consideration in undertaking network planning.

301. In the final decision, the ERA determined that the current requirements in the applications and queuing policy to have regard to existing contractual obligations are sufficient to ensure Western Power does not allocate capacity through the applications and queuing policy that is needed by existing users. Specific applications for capacity and other forecast load increases (including possible applications for subdivisions) can all be taken into account in network planning.
302. The ERA considered Western Power's proposed amendments to clauses 3.15(d) and 24.8(a) and the "spare capacity" definition unnecessary and contrary to the requirements of the Access Code.

**Final Decision Required Amendment 53**

The proposed amendments to include forecast natural load growth in the definition of spare capacity and clause 24.8(a) of the applications and queuing policy must be deleted.

303. Western Power has amended the applications and queuing policy by deleting its proposed amendments to include forecast natural load growth in the definition of spare capacity and clause 24.8(a).
304. The ERA is satisfied that the amendment of the applications and queuing policy as set out above implements Final Decision Required Amendment 53.

## Refund of preliminary offer processing fee

305. Western Power considered that the wording of clause 24.3(a) was inconsistent with actual practice and needed to be clarified. Western Power proposed to amend the drafting of clause 24.3(a) as follows:

... Where the applicant subsequently enters an access contract, the preliminary offer processing fee will be counted towards any contribution payable, where permissible under the contributions policy, ~~or where it exceeds any contribution payable under the contributions policy, the excess will be offset against amounts payable under that access contract~~; or

306. The ERA determined that applicants who enter into access contracts should be refunded amounts of the preliminary offer processing fees paid that are in excess of the contribution payable, subject to Western Power's reasonable processing costs being paid. The ERA recognised it is possible the Competing Applications Group (CAG) applicant and holder of the access contract may be different parties and it would not be correct to pay a CAG applicant's refund to the access contract holder in such cases. Instead, it should be possible to refund the CAG applicant directly.

**Final Decision Required Amendment 54**

Western Power must ensure there is a mechanism for refunding to the CAG applicant any amount of processing fees paid in excess of the contribution payable.

307. Western Power has amended clause 24.3(a) of the applications and queuing policy as follows:

...Where an access contract is subsequently entered into in respect of the application ~~the applicant subsequently enters an access contract~~, the preliminary offer processing fee will be counted towards any contribution payable, where permissible under the contributions policy, and where it exceeds any contribution payable under the contributions policy and the reasonable costs of Western Power incurred in processing the application prior to and including Western Power making a preliminary access offer and processing responses to it, the excess will be offset against amounts payable

under the access contract or refunded to the applicant where the applicant is not a party to that access contract.

308. The ERA is satisfied that the amendment to clause 24.3(a) implements Final Decision Required Amendment 54.

## Refund of preliminary acceptance fee

309. Consistent with its determination on refunds of preliminary offer processing fees, the ERA required Western Power to ensure there is a mechanism for refunding the CAG applicants who enter into access contracts any amounts of the preliminary acceptance fee in excess of the contribution payable.

### Final Decision Required Amendment 55

Western Power must ensure there is a mechanism for refunding to the CAG applicant amounts of the processing fees in excess of the contribution payable.

310. Western Power has amended clause 24.5(b) of the applications and queuing policy as follows:

...The preliminary acceptance fee is non-refundable but, where ~~the applicant subsequently enters~~ an access contract is subsequently entered into in respect of the application, the preliminary acceptance fee will be counted towards any contribution payable, where permissible under the contributions policy, and where it exceeds any contribution payable under the contributions policy and the reasonable costs of Western Power incurred in processing the application until the execution of an access contract, the excess will be offset against amounts payable under the access contract or refunded to the applicant where the applicant is not a party to that access contract.

311. The ERA is satisfied that the amendment of clause 24.5(b) implements Final Decision Required Amendment 55.

## Modified plant compliance with the technical rules

312. In the final decision, the ERA determined, as suggested by Synergy, that adding “and acting in accordance with good electricity industry practice” to clause 16.3 would ensure industry standard practice is taken into account.

### Final Decision Required Amendment 56

Clause 16.3 must be amended as follows:

“... as a reasonable and prudent person, and acting in accordance with good electricity industry practice, ...”

313. Western Power has amended clause 16.3 in line with the required amendment.
314. The ERA is satisfied Western Power has complied with Final Decision Required Amendment 56.

## Multiple trading relationships at a connection point

315. Western Power proposed amendments to clauses 3.8 and 14.5 to facilitate multiple trading relationships at a connection point.

316. Taking account of submissions from stakeholders, particularly the possibility that, depending on how “multiple trading relationships” are defined, a user may be deprived of pre-existing contractual rights to contracted capacity, the ERA determined that Western Power’s proposed amendments should not be made.

**Final Decision Required Amendment 57**

Western Power’s proposed amendments to clauses 3.8 and 14.5 of the applications and queuing policy must be deleted.

317. Western Power has deleted its proposed amendments to clauses 3.8 and 14.5 and amended clause 3.8 as follows:

Each connection point must be included in one and only one electricity transfer access contract to allow the transfer of electricity at that connection point except ~~where multiple trading relationships at~~ to the extent necessary to facilitate a capacity allocation same connection point ~~are permitted by law and all necessary approvals have been given for such an arrangement~~ decrease service or capacity allocation same connection point increase service.

318. The ERA is satisfied that Western Power has complied with Final Decision Required Amendment 57.

## Relationship with transfer and relocation policy

319. Western Power considered there was a misconception among users that the applications and queuing policy enabled capacity currently contracted to one user being temporarily made available to another user. Western Power considered this was not the purpose of the policy and it had no mechanism to achieve this because capacity transfers and relocations are dealt with under the transfer and relocations policy. As such, Western Power proposed to insert a new clause (12A) into the policy and also added a note to clause 10.2.

320. In the final decision, the ERA agreed with the points raised by Synergy on this matter. By definition, the applications and queuing policy is intended to deal with new or modified services. Western Power’s proposed new clause (12A) ignored this distinction and for this reason was not accepted.

**Final Decision Required Amendment 58**

Western Power’s proposed amendments to clauses 10.2(a), 16.2(a), 16.3 and 16.4 (as set out in paragraph 2639 [of the final decision], must be deleted.

321. Western Power has deleted “including in relation to a relocation” from clauses 10.2(a), 16.2(a), 16.3 and 16.4.

322. The ERA is satisfied that the amendments made to the applications and queuing policy as set out above implement Final Decision Required Amendment 58.

## Confidentiality

323. In its initial proposal, Western Power noted that, although applicants considered project-specific information to be confidential as a matter of course, the application and queuing policy’s definition of confidential information required the applicant to specify which of the information it provided was confidential. From time to time Western Power has been requested to disclose certain project information to third

parties. Western Power proposed to make clearer what project information was not confidential.

324. In the final decision, the ERA considered it unnecessary to include the market operator and system management in clause 6.2 as clause 6.2(d) already provided for where the disclosure was required or allowed by law (including the Market Rules).

**Final Decision Required Amendment 59**

Western Power's proposed amendments to clause 6.2(a) to add the market operator and system management must be deleted.

325. The ERA determined that Western Power must not make known confidential information under clause 24.9(d) if it is possible from the anonymised information to determine the identity of the competing connection applicant.

**Final Decision Required Amendment 60**

Clause 24.9(d) of the applications and queuing policy must be amended in accordance with paragraph 2683 [325] above of this final decision to provide that Western Power must not make known confidential information under the clause if it is possible from the anonymised information to determine the identity of the competing connection applicant

326. Western Power has deleted the market operator and system management from clause 6.2.

327. Western Power has added the following to clause 24.9:

[Western Power must not provide confidential information in an anonymised format under this clause 24.9\(d\) if Western Power determines, acting as a reasonable and prudent person, that it is possible from the anonymised information to determine the identity of the associated competing applicant.](#)

328. The ERA is satisfied that Western Power has complied with Final Decision Required Amendments 59 and 60.

## Process overview

329. The current applications and queuing policy includes a figure in clause 1.1 that illustrates how the policy operates. Western Power proposed to amend the clause to remove the figure and replace clause 1.1 with new drafting that refers to the appendices of the policy.

330. In the final decision, the ERA considered that accurate flow charts and tables setting out the timelines and documents for each part of the process are necessary to assist applicants to follow the process.

**Final Decision Required Amendment 61**

Western Power must retain Figure 1 ("Access, Connection and Transfer Applications Policy – Process Overview") and the tables headed "Primary Information provided to applicants by Western Power" and "How the Competing Applications Groups (CAGs) will be managed." Western Power must ensure the information in the flowchart and tables is consistent with the relevant clauses of the applications and queuing policy.

331. Western Power has amended the applications and queuing policy by retaining figure 1 and the tables headed "Primary Information provided to applicants by Western Power" and "How the Competing Applications Groups (CAGs) will be managed".

332. Western Power has also ensured that the information in the flowchart and tables is consistent with the relevant clauses of the applications and queuing policy.
333. The ERA is satisfied that the amendments made to the application and queuing policy as set out above implements Final Decision Required Amendment 61.

## More than one change or modification within 12 months

334. Synergy submitted that it experienced operational difficulties with the provisions of clause 10.3(c) and requested the following changes:

If Western Power receives:

- (a) more than 1 application or notice under clause 10.1; or
- (b) more than 1 application or notice under clause 10.2,

seeking to change the covered service, including to decrease or increase the contracted capacity, with respect to a single connection point in any rolling period of 12 months, then in relation to each additional application or notice Western Power:

- (c) ~~must~~may, subject to this clause 10, accept the change of covered service, where ~~Western Power is satisfied, as a reasonable and prudent person, that~~ the new covered service will be sufficient to meet the actual requirements of the applicant, and that it is required by reason of one or more of the following circumstances:
  - (i) a change ...

335. In the final decision, the ERA determined that the amendments proposed by Western Power were not consistent with section 26 of the *Economic Regulation Authority Act 2003* or the Access Code objective, with the exception of Western Power's proposal to reinsert "as a reasonable and prudent person", which the ERA considered was reasonable and consistent with other parts of the access arrangement.

### Final Decision Required Amendment 62

Western Power must comply with draft decision required amendment 81 with the insertion of "as a reasonable person" as set out in paragraph 2771 [335] above.

336. Western Power has amended clause 10.3(c) of the applications and queuing policy as follows:

If Western Power receives:

- (a) more than 1 application or notice under clause 10.1; or
- (b) more than 1 application or notice under clause 10.2,

seeking to change the covered service, including to decrease or increase the contracted capacity, with respect to a single connection point in any rolling period of 12 months, then in relation to each additional application or notice, Western Power:

- (c) ~~must~~must, subject to this clause 40, 10 and acting as a reasonable and prudent person, accept the change of covered service, where ~~Western Power is satisfied, as a reasonable and prudent person, that~~ the new covered service will be sufficient to meet the actual requirements of the applicant, and ~~that~~ it is required by reason of one or more of the following circumstances:
  - (i) ~~a fundamental~~a change in the actual consumption or generation by the applicant in respect of that connection point over the 12 month period prior to the applicant giving notice under clause 10.1(a) or 10.2(a) (as applicable), as recorded by the metering equipment; or

~~(i)~~(ii) a change in the nature of the business or operation conducted at the connection point; or

~~(ii)~~(iii) a shutdown of the business or operation conducted at the connection point (including a shutdown for maintenance purposes) for longer than 1 continuous month; or

(iv) a rapid increase or decline in the business at the connection point; or

~~(iii)~~(v) a decrease in the number of capacity credits (as defined in the Market Rules) allocated to any generating plant at the connection point under the Market Rules; or

(iv)(vi) as part of a relocation,; or

(vii) some other special circumstance,

and

(d) ~~notwithstanding clause 10.3(c)~~, is entitled to refuse the change in covered service where Western Power is satisfied, as a reasonable and prudent person, that the change is sought by reason of the seasonal nature of the business or operation at the connection point.

337. The ERA is satisfied that the amendment made to the applications and queuing policy as set out above implements Final Decision Required Amendment 62.

## Contributions policy

338. 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.
339. A “contribution” is defined in section 1.3 of the Access Code as a capital contribution, a non-capital contribution or a headworks charge.
340. Western Power’s contribution policy also comprises of a Distribution Low Voltage Connection Headworks Scheme (DLVCHS) which is detailed in Appendix C.1 of the access arrangement.
341. In the final decision the ERA required three amendments to the proposed contributions policy that are necessary for the ERA to approve the revised proposed access arrangement. The ERA’s required amendments and Western Power’s responses to these amendments are addressed below.

## Provision of security for new revenue

342. In its initial proposal Western Power redrafted the security provisions in the contributions policy (at clause 4.3) to assist connecting customers to better understand when, and for how long, security may be held by Western Power.<sup>31</sup>
343. In the final decision, the ERA was satisfied that Western Power had complied with draft decision required amendment 82. However, the “a” before “security” in clauses 4.3(a) and 4.3(c) was to be deleted.

### **Final Decision Required Amendment 63**

The “a” before “security” in clauses 4.3(a) and 4.3(c) of the Contributions Policy must be deleted.

344. Western Power has deleted the “a” before “security” in clauses 4.3(a) and 4.3(c).
345. Western Power has also amended clause 9.2(e) to cross-reference the correct clause (9.2(a), (b) and (c) rather than 9.1(c)) noting:<sup>32</sup>

During the course of making this amendment and finalising the contributions policy, we identified a further typographical error. Section 9.2(e) of the contributions policy currently states: “The amount of a rebate given to a user or customer under clause 9.1(c)...” However, there is no clause 9.1(c) in the document. Clause 9.2(e) should instead refer to contributions paid under clauses 9.2(a), (b) and (c). We have therefore amended clause 9.2(e) to read: “The amount of a rebate given to a user or customer under clauses 9.2(a), (b) or (c).”

346. The ERA is satisfied that Western Power has complied with Final Decision Required Amendment 63 and that the amendment to clause 9.2(e) is necessary to ensure the correct clauses are referred to.

<sup>31</sup> Western Power, *Access arrangement information: Attachment 12.4*, 2 October 2017, p. 2.

<sup>32</sup> Western Power, *Amended AA4 proposal: Response to the ERA’s final decision*, 16 November 2018, p. 26.

## Distribution low voltage connection headworks scheme

### Section 2.2 and 5.1 – time period for updating prices

347. The ERA identified that section 2.2 of the version of the DLVCHS provided with Western Power’s initial submission for the fourth access arrangement period (AA4) was not consistent with the version approved by the ERA in September 2012. In the version provided with Western Power’s initial AA4 proposal, the time period in the following extract from section 2.2 is shown as 18 months, rather than the 12 months approved by the ERA in September 2012.

... The prices of the *distribution low voltage connection headworks scheme* are to be reviewed not less than once every 12 months to reflect the actual costs of the provision of *distribution low voltage connection headworks scheme works*.

348. Western Power confirmed this was an error and that it should be 12 months to be consistent with the approved version.<sup>33</sup> However, Western Power advised that it considered 18 months is a more appropriate timeframe for the price review as the current wording “not less than once every 12 months” requires reviews more frequently than 12 months.
349. The ERA considered this could be dealt with by amending the words to “at least once every 12 months” to clarify that, as set out in the ERA’s decision in September 2012, prices will be updated at least annually.
350. The final decision also required section 5.1 of the DLVCHS to be amended by deleting “at least”.

#### **Final Decision Required Amendment 64**

Section 2.2 of the DLVCHS must be amended to state prices are reviewed at least once every 12 months.

The proposed insertion of the words “at least” into the first paragraph of section 5.1 of the proposed Contributions Policy Appendix C.2 should be deleted.

351. Western Power has amended section 2.2 and 5.1 of the DLVCHS accordingly.
352. The ERA is satisfied the amendments made to section 2.2 and 5.1 of the DLVCHS comply with Final Decision Required Amendment 64.

### Section 6 – exclusion

353. Western Power proposed to amend some wording in section 6 of the DLVCHS methodology, which outlines the method for determining the exclusion threshold for the scheme.
354. The ERA considered Western Power’s proposal to amend this clause was unnecessary as Western Power is required to review prices every 12 months. Consequently, the ERA required Western Power to retain the current wording in clause 6(a).

<sup>33</sup> Western Power response to ERA074 Query received by email on 11 September 2018.

**Final Decision Required Amendment 65**

The proposed insertion of the words “over the same period over which connections are modelled under clause 5.1” into subclause 6(a) of the proposed Contributions Policy Appendix C.2 should be deleted and the words “in the last twelve months” must be retained..

- 355. Western Power has amended clause 6(a) in line with the required amendment.
- 356. The ERA is satisfied Western Power has complied with Final Decision Required Amendment 65.

## Transfer and relocation policy

357. Section 5.1(i) of the Access Code requires that an access arrangement include a transfer and relocation policy, which is a policy that:

specifies a user's rights to transfer its access rights to another person and relocate capacity from one connection point in its access contract to another connection point in its access contract.

### New clause 6.4

358. The final decision required amendments to Western Power's proposed new clause 6.4 which sets out the circumstances and conditions for the consent of relocations.

#### Final Decision Required Amendment 66

The proposed insertion of the words "or continue to provide an existing covered service to an existing user" in clause 6.4 (a)(i) and "by Western Power to withhold its consent or impose conditions" in clause 6.4 (c) must be deleted from clause 6.4 of the Transfer and Relocation Policy.

359. Western Power has amended clause 6.4 of the transfer and relocation policy as follows:

- ~~a.~~(a) A relocation is conditional upon the user obtaining the consent of Western Power. Western Power:
- ~~i.~~(i) must withhold its consent to a relocation where it would impede the ability of Western Power to provide a covered service sought in an access application ~~or continue to provide an existing covered service to an existing user;~~;
  - ~~ii.~~(ii) may withhold its consent to a relocation on reasonable commercial or technical grounds; and
  - ~~iii.~~(iii) may consent to a relocation subject to conditions provided that the conditions are required on reasonable commercial and technical grounds.
- ~~b.~~(b) Without limitation, a condition of consent under clause 6.4(a)(iii) may include that Western Power must receive at least the same amount of revenue as it would have received before the relocation or more revenue if the tariffs at the destination point are higher.
- ~~c.~~(c) If Western Power withholds its consent to a relocation, or imposes a condition in respect of a relocation, Western Power must provide the user, on the user's written request, with an explanation of the grounds relied upon ~~by Western Power to withhold its consent or impose conditions.~~

360. The ERA is satisfied that the amendments made to the transfer and relocation policy as set out above implements Final Decision Required Amendment 66.

## APPENDICES

|                   |                 |           |
|-------------------|-----------------|-----------|
| <b>Appendix 1</b> | <b>Glossary</b> | <b>71</b> |
|-------------------|-----------------|-----------|

## Appendix 1 Glossary

|        |  |
|--------|--|
| AA1    | First Access Arrangement Period                      |
| AA2    | Second Access Arrangement Period                     |
| AA3    | Third Access Arrangement Period                      |
| AA4    | Fourth Access Arrangement Period                     |
| AA5    | Fifth Access Arrangement Period                      |
| AAI    | Access Arrangement Information                       |
| AASB   | Australian Accounting Standards Board                |
| AEC    | Australian Energy Council                            |
| AEMC   | Australian Energy Market Commission                  |
| AEMO   | Australian Energy Market Operator                    |
| AER    | Australian Energy Regulator                          |
| AIC    | Akaike Information Criterion                         |
| AMI    | Advanced Metering Infrastructure                     |
| AOD    | Average Outage Duration                              |
| AQP    | Applications And Queuing Policy                      |
| ATMD   | Any Time Maximum Demand                              |
| ATO    | Australian Tax Office                                |
| AWOTE  | Average Weekly Ordinary Time Earnings                |
| BTM    | Behind The Meter                                     |
| CAG    | Competing Applications Group                         |
| CBD    | Central Business District                            |
| CESS   | Capital Expenditure Sharing Scheme                   |
| CMD    | Contract Maximum Demand                              |
| CPI    | Consumer Price Index                                 |
| DLVCHS | Distribution Low Voltage Connection Headworks Scheme |
| DMIA   | Demand Management Innovation Allowance               |
| DMIS   | Demand Management Incentive Scheme                   |
| DNSPs  | Distribution Service Network Providers               |

---

|        |  |
|--------|--|
| EBSS   | Efficiency Benchmark Service Standard            |
| EGWWS  | Electricity, Gas, Water And Wastewater Services  |
| EIB    | Efficiency Innovation Benchmark                  |
| EMR    | Electricity Market Review                        |
| ENUC   | Excess Network Usage Charges                     |
| ERA    | Economic Regulation Authority                    |
| ESC    | Essential Service Commission Victoria            |
| ETAC   | Electricity Transfer Access Contract             |
| EV     | Electric Vehicles                                |
| GIA    | Generator Interim Access                         |
| GSM    | Gain Sharing Mechanism                           |
| GST    | Goods and Services Tax                           |
| GWh    | Giga Watt Hours                                  |
| HR     | Human Resources                                  |
| HV     | High Voltage                                     |
| IAM    | Investment Adjustment Mechanism                  |
| ICT    | Information Communications And Technology        |
| IEAust | Institute of Engineers Australia                 |
| IEEE   | Institute of Electrical and Electronic Engineers |
| IMO    | Independent Market Operator                      |
| IT     | Information Technology                           |
| kV     | Kilo Volts                                       |
| kVa    | Kilo Volt Amps                                   |
| kWh    | Kilo Watt Hours                                  |
| LEDs   | Light Emitting Diodes                            |
| MAIFI  | Momentary Average Interruption Frequency Index   |
| MED    | Major Event Days                                 |
| MW     | Mega Watts                                       |
| MWh    | Mega Watt Hours                                  |

---

|        |   |
|--------|---|
| MTR    | Multiple Trading Relationships                  |
| NEM    | National Electricity Market                     |
| NFIT   | New Facilities Investment Test                  |
| NMI    | National Market Identifier                      |
| NOI    | Notice of Intention                             |
| NPV    | Net Present Value                               |
| NQRS   | Network Quality And Reliability Of Supply       |
| NSP    | Network Service Provider                        |
| ODP    | Optimised Deprival Value                        |
| PAO    | Preliminary Access Offer                        |
| POE 10 | Probability of Exceedance 10%                   |
| POE 50 | Probability of Exceedance 50%                   |
| PV     | Photovoltaic                                    |
| PUO    | Public Utilities Office                         |
| Q-Q    | Quantile-Quantile                               |
| RAB    | Regulated Asset Base                            |
| RCM    | Reserve Capacity Mechanism                      |
| RT [x] | Reference Tariff [X]                            |
| SAIDI  | System Average Interruption Duration Index      |
| SAIFI  | System Average Interruption Frequency Index     |
| SCADA  | Supervisory Control and Data Acquisition        |
| SMI    | System Minutes Interrupted                      |
| SSAM   | Service Standard Adjustment Mechanism           |
| SSBs   | Service Standard Benchmarks                     |
| SSD    | Service Standard Difference                     |
| SST    | Standard Service Target                         |
| STPIS  | Service Target and Performance Incentive Scheme |
| SUPP   | State Underground Power Program                 |
| SWIN   | South West Interconnected Network               |

|        |   |
|--------|---|
| SWIS   | South West Interconnected System              |
| TEC    | Tariff Equalisation Contribution              |
| TNSPs  | Transmission Network Service Providers        |
| WA     | Western Australia                             |
| WACC   | Weighted Average Cost of Capital              |
| WACOSS | Western Australian Council of Social Services |
| WALGA  | Western Australian Local Government Authority |
| WEM    | Wholesale Electricity Market                  |
| WP     | Western Power                                 |
| WPI    | Wage Price Index                              |