



Economic Regulation Authority

Draft decision on proposed revisions to the access arrangement for the Western Power Network 2022/23 – 2026/27

Attachment 7: Other components of target revenue

9 September 2022

Economic Regulation Authority

Level 4, Albert Facey House

469 Wellington Street, Perth WA 6000

Telephone 08 6557 7900

Email info@erawa.com.au

Website www.erawa.com.au

This document can also be made available in alternative formats on request.

National Relay Service TTY: 13 36 77

© 2022 Economic Regulation Authority. All rights reserved. This material may be reproduced in whole or in part provided the source is acknowledged

Contents

Note iii

1.	Summary	1
2.	Taxation	3
2.1	Western Power’s proposal	3
2.2	Submissions	5
2.3	Considerations of the ERA	5
3.	Return on working capital	6
3.1	Western Power’s proposal	6
3.2	Submissions	7
3.3	Considerations of the ERA	7
4.	Tariff Equalisation Contribution (TEC)	8
4.1	Western Power’s proposal	8
4.2	Submissions	9
4.3	Considerations of the ERA	9
5.	Investment adjustment mechanism	10
5.1	Western Power’s proposal	10
5.2	Submissions	12
5.3	Considerations of the ERA	12
6.	Gain sharing mechanism	13
6.1	Western Power’s proposal	13
6.2	Submissions	14
6.3	Considerations of the ERA	14
7.	D- factor	16
7.1	Western Power’s proposal	16
7.2	Submissions	17
7.3	Considerations of the ERA	17
8.	Deferred revenue	18
8.1	Western Power’s proposal	19
8.2	Submissions	20
8.3	Considerations of the ERA	20
9.	Demand management innovation allowance	22
9.1	Western Power’s proposal	22
9.2	Submissions	22
9.3	Considerations of the ERA	22
10.	Advanced metering communications infrastructure expenditure	23
10.1	Western Power’s proposal	23
10.2	Submissions	23
10.3	Considerations of the ERA	23

11. Access reform costs	24
11.1 Western Power’s proposal	24
11.2 Submissions	24
11.3 Considerations of the ERA	24

List of appendices

Appendix 1 Code Extract – Advanced metering communications infrastructure expenditure	25
Appendix 2 Code Extract – Access reform costs	26

Note

This attachment forms part of the ERA's draft decision on proposed revisions to the access arrangement for the Western Power Network for the fifth access arrangement period (AA5). It should be read with all other parts of the draft decision.

The draft decision comprises all of the following attachments:

Draft decision on proposed revisions to the access arrangement for the Western Power network 2022/23 – 2026/27 – Decision Overview

Attachment 1 – Price control and target revenue

Attachment 2 – Regulated asset base

Attachment 3A – AA4 capital expenditure

Attachment 3B – AA5 capital expenditure

Attachment 4 – Depreciation

Attachment 5 – Return on regulated asset base

Attachment 6 – Operating expenditure

Attachment 7 – Other components of target revenue (this document)

Attachment 8 – Services

Attachment 9 – Service standard benchmarks and adjustment mechanism

Attachment 10 – Expenditure incentives and other adjustment mechanisms

Attachment 11 – Network tariffs

Attachment 12 – Policies and contracts

1. Summary

This attachment deals with the following components of target revenue:

- Forecast taxation for AA5.
- Forecast return on working capital for AA5.
- Forecast tariff equalisation contributions that will be payable to Horizon Power in AA5.
- Investment adjustment mechanism adjustment from AA4.
- Gain sharing mechanism adjustment from AA4.
- Network control service costs incurred during AA4 that can be recovered under the “D-factor”.
- AA2 deferred revenue that is proposed to be recovered in AA5.
- Demand management innovation allowance that can be used in AA5.
- AA4 expenditure on advanced metering communications infrastructure that can be recovered in AA5.
- AA4 expenditure on access reform costs that can be recovered in AA5.

Summary of draft decision

- The ERA has reviewed the proposed other components of target revenue to ensure they have been calculated in accordance with the relevant provisions in the access arrangement or Access Code.
- Some minor data and modelling errors have been identified.
- The values will be updated in the final decision to reflect actual expenditure in 2021/22 and the CPI and WACC approved as part of the final decision.

A summary of Western Power’s proposal and the ERA’s draft decision on the components of target revenue addressed in this attachment is set out in Table 1 below.

Table 1 Draft decision on other components of target revenue for AA5 (\$ million real at June 2022)

	Draft decision	Western Power proposal
Taxation	156.1	122.4
Return on working capital	56.9	35.3
Tariff equalisation contribution	873.6	897.4
AA4 investment adjustment mechanism adjustment	(41.3)	(39.2)
AA4 gain sharing mechanism adjustment	52.3	48.1
AA4 network control service costs (D-factor)	43.9	42.2
Deferred revenue	229.5	182.9
Demand management innovation allowance	6.4	5.9

	Draft decision	Western Power proposal
AMI metering expenditure	71.2	66.6
AA4 access reform costs	2.7	2.6

Source: ERA and Western Power target revenue models

The reasons for the ERA's draft decision in respect of matters relevant to the other components of revenue addressed in this attachment and details of required amendments are set out in this attachment.

2. Taxation

A tax building block is included in the annual revenue requirement estimate for each year.

Taxable income is calculated as follows:

- approved revenue (unsmoothed)
- minus forecast operating expenditure and TEC¹
- minus tax depreciation
- minus interest costs (calculated by multiplying the debt portion of the opening capital base by the gearing ratio used for determining the weighted average cost of capital and the cost of debt)
- equals estimated taxable income.

The taxation cost is calculated by multiplying the estimated taxable income by the statutory income tax rate of 30 per cent. The estimated taxation payable is calculated by deducting the value of imputation credits.

Prior to AA3, an allowance for taxation costs was included through the use of a “pre-tax” weighted average cost of capital. For AA3 a “post-tax” weighted average cost of capital was used and the revenue model incorporated a tax module to estimate tax liabilities.

To implement the post-tax method it was necessary to establish the value of the tax asset base at 30 June 2012 (the initial tax asset base) and the corresponding tax depreciation schedule. Capital contributions were excluded from the initial tax asset base to be consistent with the regulatory accounting treatment. The initial tax asset base was depreciated on a straight-line basis.

Since the introduction of the tax building block in AA3, capital expenditure is added to the tax asset base in the year it is forecast to be incurred. Tax depreciation can be claimed from the year the asset is commissioned. An assumption is made that, typically, assets are commissioned the year after the expenditure is incurred. The exception to this is equity raising costs for which depreciation can be claimed from the year the expenditure is incurred.

Tax depreciation for capital expenditure since AA3 has been calculated on a diminishing value basis.

2.1 Western Power’s proposal

Western Power’s proposed taxation costs are set out in Table 2 below.

¹ Tariff Equalisation Contribution.

Table 2 Western Power's estimated cost of taxation for the AA5 period, total business \$ million (nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27
Taxable income	233.0	139.2	128.9	109.7	120.6
Estimated corporate income tax	82.2	49.1	45.5	38.7	42.6
Less value of imputation credits	(41.1)	(24.6)	(22.7)	(19.4)	(21.3)
Tax component for target revenue	41.1	24.6	22.7	19.4	21.3

Source: Western Power regulated revenue model.

The tax asset lives approved for AA3 and AA4 and proposed by Western Power for AA5 are set out in Table 3 below. Western Power has proposed to continue calculating tax depreciation on a diminishing value basis.

Table 3 Tax asset lives

	AA3 and AA4 approved tax lives	AA5 proposed tax lives
Transmission assets		
Cables	47.5	47.5
Steel towers	47.5	47.5
Wood poles	47.5	47.5
Metering	25	25
Transformers	40	40
Reactors	40	40
Capacitors	40	40
Circuit breakers	40	40
SCADA and communications	12.5	12.5
IT	4	4
Other non-network assets	12.5	12.5
Equity raising costs	5	5
Transmission secondary systems	-	30
Distribution assets		
Wooden pole lines	45	45
Underground cables	50	50
Transformers	40	40

	AA3 and AA4 approved tax lives	AA5 proposed tax lives
Switchgear	30	30
Street lighting	15	15
Meters and services	25	25
IT	4	4
SCADA and communications	10	10
Other distribution non-network	10	10
Equity raising costs	5	5
Standalone power systems	-	15
Storage	-	15

Source: ERA and Western Power target revenue models.

2.2 Submissions

Synergy supported the proposed approach for calculating taxation.

2.3 Considerations of the ERA

The ERA has reviewed the assumptions and calculations and is satisfied that the calculations have been carried out consistently with the method and tax lives approved in AA4.

As the ERA has determined different values for the parameters used to calculate taxation (including revenue, operating costs and capital expenditure) the forecast taxation cost must be updated to be consistent with these values.

Required Amendment 1

Forecast taxation costs must be updated to be consistent with the revenue, operating costs and capital expenditure set out elsewhere in this draft decision.

3. Return on working capital

The current access arrangement includes an allowance for a return on working capital.

Working capital refers to a stock of funds that must be maintained by a service provider to pay costs as they fall due. In circumstances where it is the norm for the costs of providing services to be incurred before the revenues from provision of services are received, a stock of working capital may need to be derived from a capital investment in the business. The cost of this stock of working capital (the required return on the capital investment) is a cost to the service provider of operating its business and providing services.

3.1 Western Power's proposal

Western Power's proposed working capital requirements over AA5 are shown in Table 4 and Table 5 below. The cost of working capital has been calculated as the value of working capital at the beginning of each year of the access arrangement period multiplied by the approved real post-tax WACC.

Table 4 Western Power's proposed cost of working capital – transmission network (nominal \$ million)

	2022/23	2023/24	2024/25	2025/26	2026/27
Receivables (45 days)	60.646	49.702	49.544	49.253	48.964
Creditors (20.0 days)	(18.655)	(20.268)	(19.784)	(18.215)	(18.107)
Inventory (4% of capital expenditure)	9.357	10.400	10.106	8.835	8.625
Working capital requirement	51.348	39.834	39.866	39.873	39.481
Return on working capital	2.785	2.481	1.867	1.821	1.789

Source: Western Power, AA5 Regulatory Revenue Model, 1 February 2022.

Table 5 Western Power's proposed cost of working capital – distribution network (nominal \$ million)

	2022/23	2023/24	2024/25	2025/26	2026/27
Receivables (45 days)	133.707	147.253	146.910	146.162	145.417
Creditors (20.0 days)	(53.670)	(55.681)	(58.088)	(57.894)	(59.162)
Inventory (4% of capital expenditure)	26.139	27.086	28.291	27.646	27.899
Total working capital requirement	106.175	118.658	117.113	115.914	114.154
Return on working capital	5.476	5.130	5.561	5.351	5.201

Source: Western Power, AA5 Regulatory Revenue model, 1 February 2022.

3.2 Submissions

No submissions were received on working capital.

3.3 Considerations of the ERA

The working capital provided for should only reflect the essential items for the conduct of the service provider's business.

The cost of working capital for each year of the access arrangement has been determined as the implicit cost incurred by Western Power by providing credit to users of services and holding inventory offset by the implicit benefit to Western Power of receiving credit from suppliers.

Western Power's proposal is consistent with the method approved by the ERA for AA4. Western Power has used the same assumptions as AA4 except it has reduced creditor days from 26.09 days in AA4 to 20 days.

The ERA has not adjusted Western Power's proposed assumptions in the draft decision but expects Western Power to provide updated information with its response to the draft decision to support the proposed assumptions.

The return on working capital will change as a result of amendments elsewhere in this draft decision to the weighted average cost of capital, smoothed target revenue, forecast capital expenditure and forecast operating expenditure.

Required Amendment 2

The values of the weighted average cost of capital, smoothed target revenue, forecast capital expenditure and forecast operating expenditure used to calculate working capital must be adjusted to be consistent with this draft decision.

4. Tariff Equalisation Contribution (TEC)

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

6.37A If the service provider for the Western Power Network is or will be required, by a notice made under section 129D(2) of the Act, to pay a tariff equalisation contribution into the Tariff Equalisation Fund during an access arrangement period, then an amount may be added to the target revenue for the covered network for the access arrangement period, which amount—

- (a) must not exceed the total of the tariff equalisation contributions which are or will be required to be paid under the notice, including any amount that was payable or paid before the commencement of the access arrangement period; and
- (b) must be separately identified as being under this section 6.37A.

Section 7.12 provides that tariff equalisation contributions be included as a tariff component for distribution network users.

7.12 If an amount is added to the target revenue under section 6.37A and is intended to be recovered from users of reference services through one or more reference tariffs, then the recovery must have the objective of:

- (a) applying only to users of reference services provided in respect of exit points on the distribution system; and
- (b) being equitable in its effect as between the users referred to in section 7.12(a); and
- (c) otherwise being consistent with the Code objective.

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

4.1 Western Power's proposal

Western Power has based the forecast TEC on the 2021 State Budget. It notes that at the time of its submission, the TEC requirement for the entire AA5 period had not been gazetted by the Government.

Table 6 Forecast tariff equalisation contribution for the AA5 period, \$ million (nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27
Tariff equalisation contribution	189.0	188.0	192.0	192.0	192.0

Source: Western Power, Access arrangement information: Access arrangement revisions for the fifth access arrangement period, 1 February 2022, p. 259.

Consistent with the approach approved for the AA4 period, Western Power proposes to recover the TEC from distribution customers with demand less than 7,000 kVA. Customers with demand greater than 7,000 kVA do not pay the TEC as these customers can usually choose between being connected to the transmission or the distribution network. Charging the TEC to distribution-connected users with demand greater than 7,000 kVA may create an

incentive for those users to change to being connected to the transmission network in order to avoid being charged for the TEC. A high number of customers switching from the distribution to the transmission network could result in additional costs that would ultimately be paid for by a narrower customer base.

4.2 Submissions

No submissions were received on the tariff equalisation contribution.

4.3 Considerations of the ERA

Western Power proposes to retain the TEC as a separate factor in the price control formula. The ERA accepts this on the basis that the Access Code provides for these costs to be recovered by Western Power if a notice is made under section 129D(2) of the *Electricity Industry Act 2004* for it to pay a tariff equalisation contribution.

As the price control formula includes a separate factor for the TEC it is not necessary for the ERA to include the cost in its determination of target revenue. However, consistent with the approach taken in the past, the ERA recognises variations in the TEC from year to year will cause variations in customer bills. The ERA has considered this in Attachment 1 of this draft decision.

The values will be updated in the final decision to reflect the latest gazetted values for the TEC.

5. Investment adjustment mechanism

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

The purpose of the investment adjustment mechanism is to adjust Western Power's target revenue in the next access arrangement period in a manner that exactly corrects for the economic loss or gain to Western Power as a result of any investment difference during the access arrangement period in relation to the categories of new facilities investment specified in section 7.3.7 of the access arrangement.

The investment adjustment mechanism takes account of:

- The effects of inflation.
- The time value of money as reflected by Western Power's weighted average cost of capital for the Western Power Network.
- The capital-related costs due to any investment difference in the access arrangement period.

The approach to calculating the capital-related costs due to any investment difference is to calculate the difference in present value terms between:

- The target revenue that would have been calculated for this access arrangement period if the investment difference had been zero (i.e. there was no forecasting error in relation to the capital expenditure categories that are subject to the investment adjustment mechanism.
- The target revenue that actually applied in this access arrangement period.

As specified in section 7.3.7, the categories that are used in calculating the investment difference are new facilities investments:

- Arising from the connection of new generation capacity to the transmission system or distribution system from 1 July 2017.
- Arising from the connection of new load to the transmission system or distribution system from 1 July 2017.
- In relation to all augmentations to provide additional capacity to the transmission system or distribution system for the provision of covered services from 1 July 2017.
- Undertaken for augmentation of the distribution system under the state underground power program.

5.1 Western Power's proposal

Western Power has calculated adjustments of \$9.6 million for transmission and \$29.6 million for distribution that will be returned to customers due to actual expenditure being lower than approved. These calculations are summarised in Table 7 and Table 8 below.

Table 7 Western Power's proposed adjustments to target revenue under the investment adjustment mechanism – transmission network, \$ million real June 2022

	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Forecast IAM capital expenditure						
Total IAM capital expenditure	39.0	35.5	13.7	15.0	11.7	
Revenue – return on and return of	0.0	2.1	3.9	4.5	5.2	
Actual IAM capital expenditure						
Total IAM capital expenditure	(19.9)	(18.4)	94.3	19.9	56.9	
Revenue – return on and return of	0.0	(0.2)	(0.4)	3.3	4.2	
Revenue adjustment under IAM	0.0	(2.3)	(4.2)	(1.2)	(1.0)	(8.7)
Adjustment for inflation and time value of money						(0.9)
Adjustment to AA5 target revenue						(9.6)

Source: Western Power, Regulated revenue model.

Table 8 Western Power's proposed adjustments to target revenue under the investment adjustment mechanism – distribution network, \$ million real June 2022

	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Forecast IAM capital expenditure						
Total IAM capital expenditure	135.1	137.2	120.0	101.0	108.9	
Revenue – return on and return of	0.0	8.5	16.5	23.4	29.3	
Actual IAM capital expenditure						
Total IAM capital expenditure	43.1	50.2	79.6	71.6	58.9	
Revenue – return on and return of	0.0	4.9	9.8	15.3	20.1	
Revenue adjustment under IAM	0.0	(3.6)	(6.7)	(8.1)	(9.2)	(27.6)
Adjustment for inflation and time value of money						(2.0)

	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Adjustment to AA5 target revenue						(29.6)

Source: Western Power, Regulated revenue model.

5.2 Submissions

No submissions were received on the investment adjustment mechanism.

5.3 Considerations of the ERA

In its assessment of the amounts proposed by Western Power under the investment adjustment mechanism, the ERA has addressed whether the:

- Amounts to be added to the target revenue have been calculated correctly and consistently with the methods of financial modelling applied for the determination of target revenue.
- Above-forecast new facilities investment is able to be added to the capital base for the network under section 6.51A of the Access Code, allowing Western Power to earn a return on the investment.

Consistency of the calculation of amounts to be added to target revenue with the methods of financial modelling applied for the determination of target revenue requires consistency with the implicit timing assumptions for costs and revenues and with the methods applied in calculating the capital base. The ERA has verified the Western Power's calculations and is satisfied that the calculation method has been undertaken appropriately.

The ERA has identified some discrepancies between the capital expenditure and capital contributions reported in the annual regulatory accounts and the values included in the revenue model. The 2021/22 forecast expenditure will need to be updated to reflect actual expenditure.

Required Amendment 3

Amend the amount included in target revenue for the investment adjustment mechanism to reflect the capital expenditure reported in the annual regulatory accounts and update the 2021/22 capital expenditure to reflect actual expenditure.

6. Gain sharing mechanism

The gain sharing mechanism provides an additional incentive to Western Power to achieve operating cost efficiencies during an access arrangement period as it ensures Western Power retains the efficiency saving for five years from when the efficiency is achieved. For example, without this mechanism, efficiency savings made in year 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.

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.

The mechanism includes forecast scale factors to derive the efficiency and innovation benchmark. The scale factors are:

- customer numbers
- line length
- ratcheted maximum demand
- energy delivered.

The forecast scale factors used to derive the efficiency and innovation benchmark for AA4 are replaced with the actual scale factors when calculating the above-benchmark surplus at the end of AA4. This ensures Western Power will not be rewarded or penalised for variations from forecast operating expenditure that are attributable to differences in the scale factors driving expenditure and that, conversely, customers do not pay more under the gain sharing mechanism because of slower growth.

The forecast scale escalation assumptions and formula for updating the efficiency and innovation benchmarks are set out in section 7.4.9 of the access arrangement. Section 7.4.10 includes requirements for the actual scale escalation factors to be independently audited.

Section 7.4.4 sets out the provisions that apply if Western Power fails to provide reference services at a service standard at least equivalent to the service standard benchmark that applies to those services. An adjustment is made to reduce the gain sharing mechanism reward based on an assessment of the extent that Western Power achieved the reward by failing to provide reference services at the service standard benchmark.

Section 7.4.5 sets out the information Western Power must provide if it fails to meet a service standard benchmark.

6.1 Western Power’s proposal

Western Power has calculated a total reward payable of \$48.1 million for AA4 as set out in Table 9.

Table 9 Western Power's proposed gain sharing mechanism inputs and output, \$ million real June 2022

	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Input calculations						
Efficiency and innovation benchmark (EIB _t)	386.9	393.0	392.8	403.9	401.6	
Actual costs (A _t)	424.8	358.1	422.2	397.5	409.7	
Benchmark less actual (current year)	(37.9)	34.9	(29.4)	6.4	(8.1)	
Benchmark less actual (prior year)		37.9	(34.9)	29.4	(6.4)	
Above benchmark surplus (A-B)	(37.9)	72.8	(64.3)	35.8	(14.5)	
Output						
Total annual GSMAt	0.0	29.8	0.0	21.3	0.0	51.1
Adjustment for service standard failures						(3.0)
Revenue adjustment for GSM						48.1

Source: Western Power regulated revenue model

6.2 Submissions

No submissions were received on the gain sharing mechanism.

6.3 Considerations of the ERA

In reviewing the adjustment amounts proposed by Western Power under the gain sharing mechanism as a component of target revenue for AA5, the ERA has considered whether:

- The proposed adjustment amounts were calculated in accordance with the gain sharing mechanism contained in the current access arrangement and using correct network growth escalation factors and appropriate assumptions.
- The proposed adjustment amounts have been calculated correctly and consistently with the methods of financial modelling applied for the determination of target revenue.
- The proposed inputs for the gain sharing mechanism adjustment calculation for AA5 contained in Table 9 are accurate.
- The network growth escalation factors are accurate and have been audited in accordance with the current access arrangement.
- The required information in relation to any service standard benchmark has been provided in accordance with the requirement in section 7.4.4 of the current access arrangement.
- The proposed service standard benchmark deficiency proportion calculation is accurate.

- The adjustment amounts meet any requirements in the Access Code and are consistent with the Access Code objective.

The ERA is satisfied the proposed adjustment meets the requirements listed above except in relation to:

- Input errors in some of the operating cost information included in the revenue model.
- The 2021/22 adjustment is based on forecast costs and will need to be updated to actual costs.

Required Amendment 4

Amend input errors in the calculation of the gain sharing mechanism adjustment and update 2021/22 costs to actual costs.

7. D-factor

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

Many non-network options (including demand management programs) involve substituting non-capital costs for capital investment in a network to resolve network constraints. However, the Access Code does not include a mechanism for the retrospective recovery of non-capital costs. The inability to recover these costs could result in Western Power not choosing the overall least cost option. The D-factor scheme was approved in AA2 to remove the apparent disincentive.

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

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

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

7.6.4 In relation to 7.6.3(a), the new facilities investment project that has been deferred must have been included in the forecast new facilities investment for this access arrangement period.

7.6.5 In relation to 7.6.3(a) and 7.6.3(b), an amount will only be added to target revenue for the next access arrangement period if there is an approved business case for the relevant expenditure, and this business case is made available to the Authority. The business case must demonstrate to the Authority's satisfaction that the proposed non-capital costs satisfy the requirements of sections 6.40 and 6.41 of the Code, as relevant.

7.6.6 In relation to 7.6.3(a) and 7.6.3(b), the adjustment to the target revenue for the next access arrangement period must leave Western Power financially neutral by taking account of:

- a) the effects of inflation; and
- b) the time value of money as reflected by Western Power's weighted average cost of capital for the Western Power network.

7.1 Western Power's proposal

Western Power is seeking an adjustment to target revenue to recover costs incurred during AA4 for network control services in Ravensthorpe, Bremer Bay, North Country, Eastern Goldfields and Meadow Springs.

Table 10 Western Power proposed AA5 D-factor revenue adjustment, \$ million real June 2022

	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Ravensthorpe	0.6	0.6	0.6	0.6	0.6	3.0
North Country	-	2.7	4.2	6.1	4.8	17.8
Eastern Goldfields	-	2.5	3.2	4.6	5.0	15.3
Bremer Bay	0.2	0.5	0.3	0.3	0.4	1.7
Meadow Springs	-	-	0.3	0.1	-	0.4
Total	0.8	6.3	8.6	11.7	10.8	38.2
Adjustment for inflation and time value of money.						3.9
Adjustment to AA5 target revenue						42.2

Source: Derived from Western Power AAI and regulated revenue model.

7.2 Submissions

No submissions were received on the D-factor adjustment.

7.3 Considerations of the ERA

The ERA has considered the information provided by Western Power on each of the network control services claimed under the D-factor adjustment.

The ERA is satisfied that the proposed non-capital costs satisfy the requirements set out in the access arrangement, including the requirement to satisfy the requirements of sections 6.40 and 6.41 of the Code, as relevant.

The proposed costs include forecasts for the 2021/22 financial year. In its response to the draft decision, Western Power must update the 2021/22 costs to reflect actual costs incurred. The adjustment will also need to be updated to reflect the weighted average cost of capital approved by the ERA.

Required Amendment 5

The D-factor revenue adjustment must be updated to reflect actual costs for the 2021/22 financial year and the weighted average cost of capital approved by the ERA.

8. Deferred revenue

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

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

Recovery of deferred revenue

- 6.5A In this Chapter, "deferred revenue" means the amounts referred to in paragraphs 5.37A and 5.48A of the Amended Proposed Revisions dated 24 December 2009 to the *Western Power Network access arrangement*, as approved by the *Authority's further final decision* dated 19 January 2010, expressed in present value terms as at 30 June 2009 and in real dollar values as at 30 June 2009, being respectively:
- (a) \$64.5 million; and
 - (b) \$484.2 million.
- 6.5B An amount in respect of *deferred revenue* must be added to the *target revenue* for the *Western Power Network* for one or more *access arrangement periods* until the aggregate amount referred to in section 6.5E has been added.
- 6.5C An amount added to the *target revenue* under section 6.5B must include an adjustment so that the deferral of the *deferred revenue* is financially neutral for the Electricity Networks Corporation, taking into account:
- (a) the time value of money; and
 - (b) inflation.

Prior to July 2021, the Access Code required the ERA to determine the amount that should be recovered for each access arrangement period. In July 2021, section 6.5D of the Access Code was amended, as shown in blue below, so that the ERA was required to approve an amount proposed to be added by Western Power providing it does not result in the forecast weighted average annual price change across all reference tariffs being greater than zero in nominal terms for any pricing year of the access arrangement period.

- 6.5D The *Authority* must determine the amount to be added under section 6.5B in a given *access arrangement period*, provided that the Authority must approve an amount proposed to be added by the Electricity Networks Corporation in its proposed revisions if the amount to be recovered will not result in the forecast weighted average annual price change across all reference tariffs (as determined based on the reference tariff change forecast included in the proposed revisions, in nominal terms) being greater than zero for any pricing year of the access arrangement period.
- 6.5E The total of all amounts added under section 6.5B (aggregated over all *access arrangement periods* for which such amounts are added) must equal:
- (a) the total amount of the *deferred revenue*; plus:
 - (b) the sum of all adjustments under section 6.5C.

8.1 Western Power's proposal

As noted above, the amendments to the Access Code in July 2021 allow Western Power to expedite the recovery of this revenue from network users during the AA5 period, up to a level that results in flat nominal prices for customers.

Western Power considers that the ERA's decision on Western Power's forecast expenditure and return on the regulated asset base will determine the level of AA2 deferred revenue that will be recovered during the AA5 period and, therefore, the proposed value for the deferred revenue recovery is subject to change. It indicated it would be seeking to accelerate the recovery of deferred revenue providing it resulted in flat nominal prices for customers.

In its proposed revisions to the access arrangement, Western Power has used the recovery method approved in prior access arrangement periods that is based on the life of the assets and has not sought any acceleration of recovery.

Western Power has calculated the roll forward of these amounts from the opening of the AA5 period to the closing of the AA5 period as shown in Table 11 and Table 12 (below), along with the revenue proposed to be recovered in the AA5 period.

Table 11 Western Power's proposed transmission deferred revenue roll forward over the AA5 period, \$ million real June 2022

	2022/23	2023/24	2024/25	2025/26	2026/27
Opening deferred revenue value	96.676	95.383	93.987	92.509	90.957
less principal recovered	(1.293)	(1.396)	(1.478)	(1.552)	(1.616)
Closing deferred revenue value	95.383	93.987	92.509	90.957	89.341
Amount included in AA5 target revenue	4.157	4.015	3.925	3.854	3.807

Source: Western Power, AA5 Regulatory Revenue Model, 1 February 2022.

Table 12 Western Power's proposed distribution deferred revenue roll forward over the AA5 period, \$ million real June 2022

	2022/23	2023/24	2024/25	2025/26	2026/27
Opening deferred revenue value	697.195	683.829	669.559	654.559	638.893
less principal recovered	(13,367)	(14,270)	(15,000)	(15,666)	(16,246)
Closing deferred revenue value	683.829	669.559	654.559	638.893	622.647
Amount included in AA5 target revenue	34.020	33.050	32.435	31.954	31.633

Source: Western Power, AA5 Regulatory Revenue Model, 1 February 2022.

8.2 Submissions

Submissions were received from Alinta Energy and Synergy. Both expressed concerns about the effect accelerating the recovery of deferred revenue could have on network charges.

Matters relevant to deferred revenue were raised in submissions from the Chamber of Minerals and Energy, Alinta Energy, and Perth Energy.

The Chamber of Minerals and Energy recommends utilisation of any deferred revenue, needs to reflect the true and efficient pricing for the period of the AA5, in order to minimise any distortion of the pricing signal across future agreements.²

Alinta Energy noted that the Western Power proposal to accelerate the recovery of the AA2 revenue and use it as a “balancing item” was enabled by EPWA’s 2021 ENAC reforms, despite industry objections. Alinta Energy strongly disagrees with this approach, considering that it would:

- Be a needless and excessive penalty for existing customers while many businesses are recovering from the economic impacts of COVID-19. Under ERA’s original decision, the revenue would have been recovered over a longer timeframe and from a larger pool of customers.
- Present greater risk of price distortion, undermining economic efficiency.
- Circumvent the ERA and its primary objective in assessing the access arrangement: to determine whether the proposal is in consumers’ best interests (according to the ENAC objective). Regardless of the ERA’s decision, if target revenue results in prices decreasing below AA4, Western Power would be permitted to change tariffs as it sees fit, and regardless of the best interest of customers.³

Perth Energy suggests that the \$182.6 million deferred revenue from AA2, that is budgeted to be recovered through AA5, could be rolled forward, in full or in part, to provide room if additional unforeseen expenditure needs to be recovered.⁴

8.3 Considerations of the ERA

Western Power’s proposal is consistent with the provisions set out in the current access arrangement which the ERA has previously accepted as being compliant with the Access Code requirements. The values will need to be amended to reflect the weighted average cost of capital approved by the ERA.

Although Western Power indicated that it may seek to accelerate the recovery of deferred revenue in its response to the draft decision, the forecast increase in prices due to higher inflation and WACC forecasts since Western Power submitted its proposal means it will not be able to. The Access Code amendment only allows the acceleration of deferred revenue up to a level that results in flat nominal prices for customers. Consequently, the concerns raised in the submissions from the Chamber of Minerals and Energy and Alinta will not arise.

Perth Energy suggested reducing the amount of deferred revenue recovered in AA5. This would provide a temporary reduction in prices (compared to what they otherwise would be)

² Chamber of Minerals and Energy submission p. 5.

³ Alinta Energy submission p. 4.

⁴ Perth Energy submission p. 3.

but would increase prices in future periods. The ERA's draft decision has maintained the current approach of recovering the deferred revenue over the life of the assets to which it relates.

Required Amendment 6

The amount of deferred revenue included in target revenue must be updated to reflect the weighted average cost of capital approved by the ERA.

9. Demand management innovation allowance

Amendments to the Access Code in September 2020 included the introduction of a demand management innovation allowance mechanism.

The objective of the demand management innovation allowance mechanism is “to provide service providers with funding for research and development in demand management projects that have the potential to reduce long term network costs”.⁵

The allowance must be an “annual, ex-ante allowance provided to service providers in the form of a fixed amount of additional revenue at the commencement of each pricing year of an access arrangement period.”⁶

As required under section 4.A2(D) of the Access Code, the ERA determined the level of the demand management innovation allowance in the framework and approach document published on 9 August 2021. The allowance was set at 0.08 per cent of target revenue.

9.1 Western Power’s proposal

Consistent with the framework and approach, Western Power has based its proposed demand management innovation allowance on 0.08 per cent of the proposed target revenue for AA5.

Table 13 Western Power’s proposed demand management innovation allowance (real \$ million June 2022)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Demand management innovation allowance	1.1	1.1	1.2	1.2	1.2	5.9

Source: Western Power regulated revenue model

9.2 Submissions

No submissions were received on the demand management innovation allowance.

9.3 Considerations of the ERA

The ERA is satisfied the proposed allowance has been calculated in accordance with the requirements set out in the framework and approach. The amount of the allowance will need to be updated to reflect the target revenue approved by the ERA.

Required Amendment 7

Amend the demand management innovation allowance to reflect the target revenue approved by the ERA.

⁵ Section 6.32C of the Access Code.

⁶ Section 6.32B of the Access Code.

10. Advanced metering communications infrastructure expenditure

Amendments to the Access Code in September 2020 included new provisions that enable Western Power to recover advanced meter infrastructure communications expenditure incurred prior to 30 June 2022, over ten years starting from the commencement date for AA5. The total amount to be recovered is specified to be \$115.36 million (real dollar values at 30 June 2017).

An extract of the relevant Access Code provisions is included in Appendix 1.

10.1 Western Power's proposal

Western Power has proposed to recover \$66.5 million during AA5.

10.2 Submissions

No submissions were received on the recovery of AA4 advanced metering communications infrastructure expenditure.

10.3 Considerations of the ERA

The ERA has assessed Western Power's proposed adjustment against the requirements of section 6.5H of the Access Code. Data input errors were found in the revenue model that have resulted in a small difference between the amount identified as AMI communications expenditure and the value set out in section 6.5F(a) of the Access Code. The weighted average cost of capital will also need to be updated to reflect the ERA's decision.

Required Amendment 8

Amend data errors in the AMI communications expenditure in the revenue model and update the adjustment to reflect the weighted average cost of capital approved by the ERA.

11. Access reform costs

Amendments to the Access Code in September 2020 included new provisions that enable certain access reform costs incurred during AA4 to be added to target revenue for AA5.

Access reform costs are defined in section 1.3 as being costs necessary to complete the development and provision of network constraints information and preparation of the initial whole of system plan.

An extract of the relevant Access Code provisions is included in Appendix 2.

11.1 Western Power's proposal

Whole of system plan

The initial whole of system plan was published in August 2020. It presented four scenarios of how the SWIS may evolve to 2040. Western Power provided network operator guidance and network modelling support to Energy Policy WA to develop the whole of system plan. Western Power is seeking to recover \$0.5 million business overhead operating expenditure it incurred during AA4.

Network constraints information

Western Power is required to provide AEMO with non-thermal limits and 41°C thermal limit advice.

Non-thermal limits are typically related to network voltages and stability, and depend on asset, equipment or network section specifications. The development of non-thermal limit advice is a new capability for Western Power and is required for the introduction of security constrained economic dispatch. The advice will be required on an ongoing basis to account for changes in the transmission network, connections and network outage scenarios.

The 41°C thermal limit advice is required to support the first Network Access Quantity based Reserve Capacity Cycle in early 2022 and will continue on an ongoing basis.

Western Power is seeking to recover \$1.9 million operating expenditure incurred during AA4.

11.2 Submissions

No submissions were received on the proposed access reform costs.

11.3 Considerations of the ERA

The ERA has reviewed the proposed costs and, subject to the 2021/22 costs being updated to reflect actual expenditure, is satisfied that they are efficient and consistent with the Access Code requirements.

Required Amendment 9

Regulatory reform costs must be updated to reflect actual expenditure for 2021/22.

Appendix 1 Code Extract – Advanced metering communications infrastructure expenditure

The Access Code states:

- 6.5G An amount in respect of AMI communications expenditure must be added to the *target revenue* for the *Western Power Network* for each *access arrangement period* in the AMI recovery period until the full amount referred to in section 6.5F(a) (subject to any adjustments under section 6.5H) has been added.
- 6.5H An amount added to the *target revenue* under section 6.5G must include an adjustment so that the deferral of the recovery of the AMI communications expenditure is financially neutral for the Electricity Networks Corporation, taking into account:
- (a) the time value of money; and
 - (b) inflation.
- 6.5I Subject to section 6.5J, the *Authority* must determine the amount to be added under section 6.5G in a given *access arrangement period* in the AMI recovery period.
- 6.5J The total of all amounts added under section 6.5G over the AMI recovery period must equal:
- (a) the total amount of the AMI communications expenditure; plus:
 - (b) the sum of all adjustments under section 6.5H.347

Section 6.5F sets out the relevant definitions:

- (a) “AMI communications expenditure” means all expenditure incurred prior to 30 June 2022 on and in relation to communications equipment (such as communication access points, modems and network interface cards), information technology systems and supporting equipment and services that are required to enable advanced metering functionality. For the purposes of this section, AMI communications expenditure is \$115.36 million (expressed in real dollar values as at 30 June 2017); and
- (b) “AMI recovery period” means a period of 10 years commencing on the next revisions commencement date following the date of the 2020 (No. 2) amendments.

{Note: The 2020 (No. 2) amendments came into effect on 18 September 2020.}

Appendix 2 Code Extract – Access reform costs

Approval for access reform costs

- 6.81 A *service provider* may apply to the *Authority* for the *Authority* to determine the amount that the *service provider* may recover in respect of *access reform costs* incurred by the *service provider*.
- 6.82 The *Authority* must determine that the *service provider* may recover the total *access reform costs* incurred by the *service provider* except to the extent that it considers that any *access reform costs* incurred by the *service provider* have not been incurred by the *service provider* acting efficiently.
- 6.83 Any amount determined by the *Authority* under section 6.81 is deemed to be added to the *non-capital costs* component of *approved total costs* for a *covered network* in the relevant *access arrangement*.

“**access reform costs**” means costs incurred by a *service provider* to undertake and deliver the *access reform work*, including costs incurred prior to the commencement of the 2020 (No. 2) amendments.

“**access reform work**” means the program of work undertaken by a *service provider* necessary to complete:

- (a) the development and provision of *network constraints information*; and
- (b) preparation of the initial *whole of system plan*.

“**network constraints information**” means the information relating to limits of the *Western Power Network* to transfer and/or convey electricity that a *service provider* must establish, maintain and/or provide to *AEMO* in accordance with its functions under sections 1.32, 2.27A, 2.27B and 2.27C of the *WEM Rules*.

“**whole of system plan**” means the document published by the Minister from time to time as the *Whole of System Plan* for the efficient development of the *SWIS* over a 20 year period.