Economic Regulation Authority

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

Decision overview

9 September 2023

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Overview

Western Power's fifth access arrangement is being determined during a period of significant change in the energy sector. At the same time, financial conditions are uncertain with high inflation and rapidly rising interest rates.

Customers and businesses are changing their behaviour and demanding energy from cheaper, greener sources, as well as generating their own electricity from roof-top solar systems. Government and corporate policies to reduce carbon emissions are encouraging the development and ongoing increase in the number of storage systems and large-scale wind and solar farms looking to join the network. With the electricity supply chain traditionally designed around thermal baseload generation, the consequence is an electricity industry undergoing a once in a century transformation. The electricity network - the mechanism needed to transport a reliable supply of electricity between suppliers and customers – is caught in the middle of this disruption and needs to respond. Western Power faces the challenge of planning, costing and implementing rapidly evolving technologies and responding to more frequent and severe weather events from our changing climate. The scale of the changes underway require fundamental shifts in investment and the ongoing operation of the network.

Uncertainty in current financial and economic conditions influences the costs of financing and delivery of the essential investment needed in the network. Western Power's proposal was costed over a year ago. Since then, changing economic and financial conditions have seen significant increases in inflation and interest rates. Increases in interest rates are outside of the control of both Western Power and the ERA, yet these increases determine the Western Power's cost of capital and drive most of the change in revenue. If Western Power costed its proposal today, the revenue required over the regulatory period to 2027 to deliver its proposed projects, would be considerably higher ($942 million or just under 12 per cent in nominal terms). Without smoothing, this is equivalent to a 19 per cent increase in network prices in 2023/24 after which prices remain flat. This contrasts with Western Power's initial submission for a one-off increase of 3.7 per cent in network prices in 2023/24.

The challenge to the ERA in considering Western Power's access arrangement is to ensure that customers are not exposed to excessive costs and risks from the ongoing uncertain conditions, while also enabling Western Power to fulfil its role in supporting the energy sector's transformation over the next few years.

This draft decision enables Western Power to deliver energy transformation programs at a realistic pace, and ensures customers only pay for the network enhancements Western Power delivers.

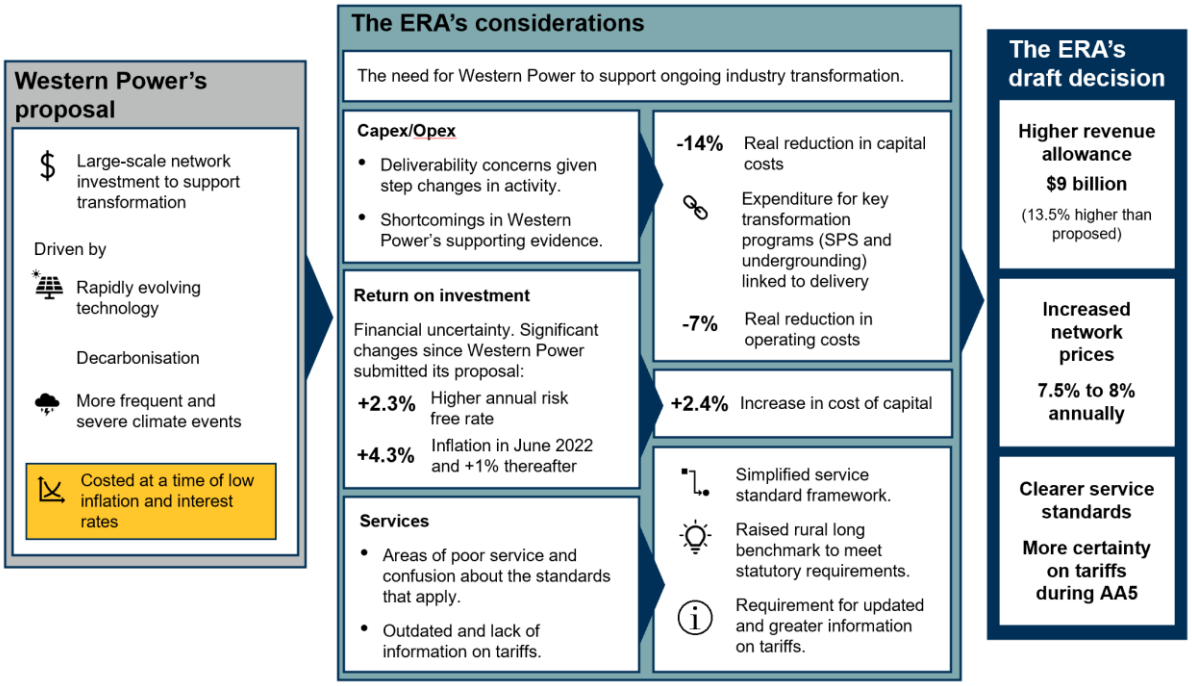
In making its draft decision, the ERA has:

- Carefully considered Western Power's proposal and advice from the ERA's technical consultant on the proposal.
- Independently sought stakeholders' feedback on Western Power's proposal and Western Power's performance in providing reliable electricity to customers, particularly in the regions.
- Been mindful of the State Government's decarbonisation goals and projects such as advanced metering and standalone power systems, established to help achieve these goals.
- Incorporated current market interest rates and forecast inflation.

- Embedded in its draft decision recognition of the expanded Access Code objective that requires consideration of the environmental consequences of energy supply and consumption.

The draft decision results in target revenue of $9 billion and forecast annual increases in network prices of between 7.5 to 8 per cent for the years 2023/24 to 2026/27. Key elements in the draft decision are summarised in Figure 1 below.

Figure 1: Draft decision summary



Overall, Western Power's proposal outlines project initiatives that are consistent with the transformation and ongoing care and maintenance of the network.

The ERA has approved increases to operating costs compared to the last access arrangement period (AA4) for the transformational change required over this access arrangement period (AA5).[1] However, to encourage Western Power to seek efficiencies the ERA has included a 2 per cent productivity factor that requires Western Power to deliver operating efficiencies consistent with other network operators in Australia.

Western Power's advanced metering program is a key enabler of the transformation and the ERA has approved Western Power's proposed expenditure to complete the roll-out of the program over AA5.[2] Approval of this expenditure in full in the ERA's final decision will require Western Power to fully detail and quantify the benefits of accelerating the advanced metering program and demonstrating it can be delivered in AA5.

The size of other capital programs and projects, such as undergrounding overhead power lines in urban areas and installing standalone power systems in regional areas, show large step-changes in the quantity of work Western Power expects to undertake in AA5. The activity proposed is well above the levels delivered in AA4 and the ERA has concerns about the scale

1 AA4 covered the period from 2017/18 to 2021/22 and AA5 covers the period from 2022/23 to 2026/27.

2 Under a business-as-usual approach, the program would be completed in AA6. Western Power has proposed to accelerate the program to complete it in AA5.

and deliverability of these programs. Instead of approving the proposed expenditure in full, the ERA has included proposed costs for both programs in the Investment Adjustment Mechanism. This provides flexibility so that if Western Power over or under delivers against the activity and approved expenditure, the expenditure variation can be adjusted at the next access arrangement. This ensures that customers are protected by only paying for what Western Power delivers, and also that Western Power is funded if it delivers the programs efficiently and more quickly.

Western Power's evidence supporting its proposed asset replacement costs and IT expenditure does not demonstrate that these costs are reasonable and efficient. The ERA has approved lower capital expenditure for these programs in the draft decision. However, the ERA has acknowledged the importance of Western Power's expenditure in cyber security which is necessary to protect the integrity of the network and consumers. Western Power will need to provide additional information to the ERA in support of any higher expenditure for cyber security in its response to the draft decision.

Further transmission investment may be required during AA5 so more renewable generation and new loads can connect to support decarbonisation and electrification of the economy. Western Power can reopen the access arrangement at any point during AA5 to request an increase in revenue to fund such investment.

The draft decision is made at a time when there is considerable uncertainty in financial markets. The ERA has accepted most of Western Power's proposed approach to calculating return on capital. The ERA's cost of capital calculation for the draft decision (7.1 per cent) reflects the current inflation forecasts and interest rates. The return on capital will change again for the final decision based on the market data sampled at the time.

The ERA opts to maintain the current approach to calculating the cost of debt. When compared to Western Power's proposed approach to debt, the current debt approach results in a higher cost of capital and raises the revenue requirement. The benefits of maintaining the current approach are that it accounts for efficient forward-looking financing costs and helps ensure more certain debt costs, and resulting network prices, over AA5. The ERA is open to stakeholder views on the value they place on price certainty in an environment of rapidly tightening financial conditions and highly volatile financial markets.

Historically, Western Power has provided a reliable supply of electricity to most customers but recent prolonged supply interruptions have focussed attention on outages. This focus, highlighted by the Independent Review of Christmas 2021 Power Outages shows that customers in some regions are receiving a poor level of service.

The ERA has spoken directly with regional customers experiencing poor service and what this means to them. Customers said, "Extended power outages for regional communities have multiple impacts, [including] heating and cooling of homes, schools, and businesses."

This engagement has also shown that the service standard incentive mechanism in the Access Code is difficult for customers to understand and is a blunt tool to address pockets of poor service.

The draft decision has addressed this and simplified the reliability benchmarks. The benchmark for rural long feeders has been raised to align with the standard prescribed in the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005*. The ERA will also require Western Power to provide more detailed reports on its reliability performance in the regions and identify and cost options to improve reliability for those customers. Outside the

access arrangement, the ERA will discuss other policy options to improve reliability with Energy Policy WA.

Next steps

The ERA invites submissions on the draft decision from interested stakeholders by 16 December 2022.

Western Power now has the opportunity to consider the draft decision and submit revisions to its proposal and supporting material by 14 November 2022.

The ERA anticipates it will publish its final decision by 31 March 2023.

Detailed explanations of the matters informing the draft decision can be found in this overview document and attachments comprising the draft decision.

Invitation to make submissions

Submissions are due by 4:00 pm WST, Friday, 16 December 2022.

The ERA invites comment on this draft decision and encourages all interested parties to provide comment on the matters discussed in this paper and any other issues or concerns not already raised in this paper.

We would prefer to receive your comments via our online submission form https://www.erawa.com.au/consultation

You can also send comments to:

Email: publicsubmissions@erawa.com.au
Post: Level 4, Albert Facey House, 469 Wellington Street, Perth WA 6000

Please note that submissions provided electronically do not need to be provided separately in hard copy.

All submissions will be made available on our website unless arrangements are made in advance between the author and the ERA. This is because it is preferable that all submissions be publicly available to facilitate an informed and transparent consultative process. Parties wishing to submit confidential information are requested to contact us at info@erawa.com.au.

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1. Draft decision

The ERA's draft decision is to not approve Western Power's proposed revisions to its access arrangement. A summary of the draft decision is contained in section 2 of this document.

The process the ERA has followed is included in section 3 of this document and the detailed reasons for the ERA's draft decision are set out in the following attachments which comprise the draft decision:

- 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
- 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

The amendments the ERA requires to the proposed revisions are included in the attachments where each relevant element of the proposed revised access arrangement is considered.

Western Power must submit a revised proposed access arrangement by 14 November 2022.

The ERA invites submissions on this draft decision. The closing date for submissions is 16 December 2022. This is so stakeholders can provide comment on the ERA's draft decision and Western Power's response.

Before making its final decision in March next year, the ERA must consider Western Power's revised proposed access arrangement, any submissions received on the draft decision and any further access arrangement information submitted by Western Power.

2. Summary of draft decision

This section provides an overview of some of the key matters addressed in the ERA's draft decision. This summary is not intended as a comprehensive statement of the ERA's reasons. The ERA's detailed reasons are set out in the attachments comprising this draft decision.

2.1 Target revenue

The ERA's draft decision on target revenue is higher than initially proposed by Western Power. This is due to changed economic conditions since Western Power submitted its proposal on 1 February 2022.

Western Power's proposal was developed in 2021 in a low interest rate environment. These market conditions resulted in a weighted average cost of capital (WACC) that was forecast to be lower than during AA4.[3] In addition, Western Power's proposal was based on forecast inflation of 1.84 per cent for June 2022 and annual inflation of 2.03 per cent during AA5.

Actual inflation for June 2022 was 6.1 per cent (4.3 percentage points higher than forecast in the proposal) and the June 2022 market data indicates the risk-free rate, a major component of the WACC, has increased by 2.3 percentage points. Inflation expectations for the AA5 period (based on the June 2022 market data) have increased to 2.96 per cent (0.93 percentage points higher than forecast in the proposal).

Table 1 below reflects the ERA's draft decision and includes an update of Western Power's proposal to reflect the current economic conditions to compare with the draft decision.

For the final decision, the market parameters and inflation forecasts will be updated with the most current values available at the time.

[3] Western Power's proposal for AA5 was based on a nominal WACC of 4.73 per cent compared with 5.7 per cent during AA4.

Table 1 Draft decision on target revenue for AA5 ($ million nominal)

	(Column A) Draft decision	(Column B) Western Power proposal updated for WACC and inflation	(Column C) Western Power proposal
Operating costs	2,218.6	2,386.2	2,320.5
Depreciation	2,707.8	2,827.8	2,660.1
Return (including working capital and taxation)	2,749.5	2,378.0	1,746.7
Tariff Equalisation Contribution (TEC)	953.0	953.0	953.0
Deferred Revenue recovery	250.7	229.9	194.1
Other components of target revenue	96.7	135.7	86.5
Target revenue unsmoothed	**8,976.2**	**8,910.5**	**7,960.9**

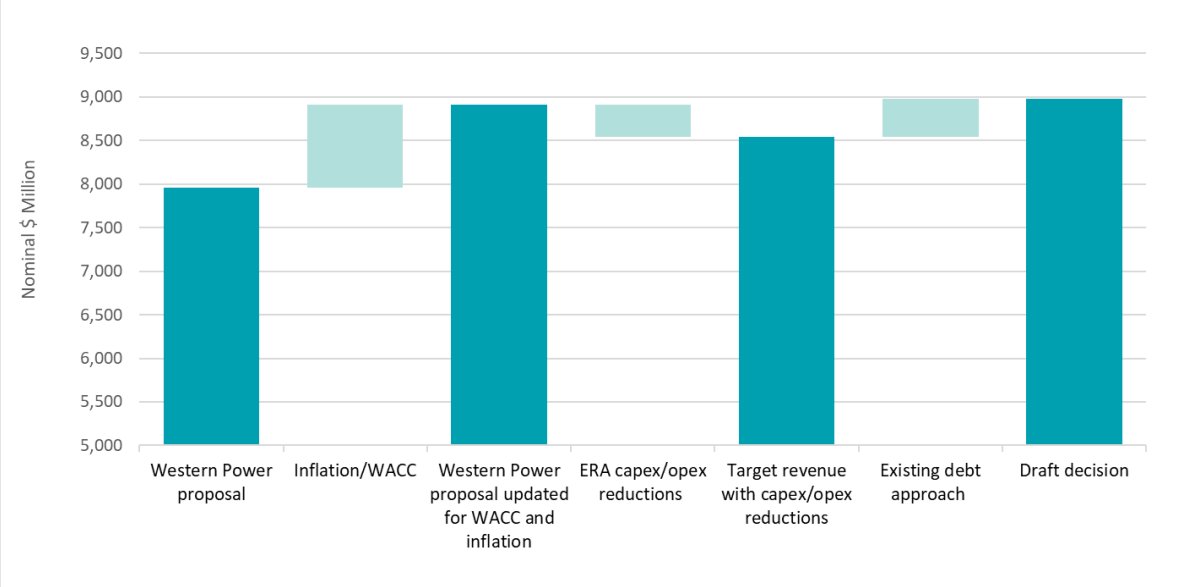
Source: ERA analysis; Western Power and ERA target revenue models

Column B in Table 1 updates Western Power's proposal (column C) to account for current financial and economic conditions. Changing economic and financial conditions have seen significant increases in inflation and interest rates. This update results in a large increase to target revenue from Western Power's proposal and is responsible for the majority of the increase of the draft decision. These changes are outside of the control of both Western Power and the ERA, yet are important factors in determining Western Power's cost of capital and inflation escalation of the capital base and drive most of the change in revenue.

The draft decision on target revenue (column A) is higher than Western Power's proposal as updated for WACC and inflation (column B). The ERA has reduced Western Power's proposed operating and capital expenditure to ensure that it meets the efficiency requirements under the Access Code, including that forecast expenditure can be delivered efficiently during the AA5 period. The ERA has also adjusted some asset lives, which reduces forecast depreciation. These reductions are offset by a higher return based on the continuation of the current cost of debt approach for the AA5 period. In the current market conditions this results in a higher return compared with the full trailing average approach Western Power proposed. This is discussed in section 2.4.3.

Figure 2 below compares the ERA's draft decision on target revenue with Western Power's proposal.

Figure 2: Target revenue – comparison of draft decision with proposal



Other elements of target revenue

The Tariff Equalisation Contribution (TEC) is an amount collected from users of the Western Power network to subsidise the operations of Horizon Power. The amount is set by Government. The draft decision is based on the forecast Western Power included in its proposal. The actual amount payable is gazetted each year by Government and may change over the AA5 period.

The deferred revenue recovery relates to target revenue that was deferred in the second access arrangement period for recovery at a future date. Historically the deferred revenue has been recovered over the life of the assets to which it relates.[4] Western Power's proposal was based on continuing to recover the deferred revenue over the life of the assets but indicated that it would seek to accelerate the recovery of deferred revenue, if the ERA's decision resulted in prices not increasing in nominal terms.[5] The ERA supports accelerated recovery of deferred revenue as a means of avoiding the cost of accumulated inflation incurred when recovering revenue over a longer period. However, network prices are rising in nominal terms given current financial conditions and so the ERA's draft decision has maintained the approach of recovering the deferred revenue over the life of the assets to which it relates.

2.2 Indicative effect of draft decision on electricity bills

Typically, summing the building block components for each year creates a 'lumpy' profile of annual revenue. Annual target revenue can be smoothed over the access arrangement period if the net present value of the total smoothed revenue is equal to the net present value of the total unsmoothed revenue.

4 The deferred revenue is being recovered over a 50 year period for transmission and 42 year period for distribution commencing from 1 July 2012.

5 An amendment to the Access Code in September 2020 permits the recovery of deferred revenue to be accelerated providing prices do not increase in nominal terms. In the current economic conditions, it is unlikely this will be the case for AA5. Consideration can be given to acceleration in future access arrangements.

Western Power proposed that prices would increase in 2023/24 and then would stay flat for the rest of the period. Given the magnitude of network price increases required because of the WACC and inflation changes, the ERA has smoothed the change in average network prices over the access arrangement period.

Consistent with how Western Power forecasts average network prices (total target revenue divided by total volume of energy), the ERA has estimated how the draft decision translates into average network prices as shown in Table 2 below.[6]

Table 2: Draft decision smoothed target revenue and indicative effect on network prices for AA5 (nominal prices)

		2022/23	2023/24	2024/25	2025/26	2026/27
Draft decision						
Unsmoothed target revenue	$ million	1,648.4	1,701.0	1,787.4	1,876.4	1,962.9
Smoothed target revenue	$ million	1,576.4	1,678.8	1,790.1	1,911.5	2,044.2
Change in average prices based on forecast demand	%	0%	7.5%	7.7%	7.8%	7.9%
Western Power proposal updated for WACC and inflation forecasts						
Unsmoothed target revenue	$ million	1,619.2	1,637.8	1,759.5	1,879.7	2,014.4
Smoothed target revenue	$ million	1,576.4	1,839.2	1,829.5	1,819.8	1,810.2
Change in average prices based on forecast demand	%	0%	18.8%	0%	0%	0%
Western Power proposal						
Unsmoothed target revenue	$ million	1,494.6	1,512.8	1,582.9	1,644.0	1,726.8
Smoothed target revenue	$ million	1,576.4	1,601.9	1,593.5	1,585.0	1,576.6
Change in average prices based on forecast demand	%	0%	3.7%	0%	0%	0%

Source: ERA analysis; Western Power and ERA target revenue models

The forecast price changes in the table above are based on annual forecast inflation of 2.9 per cent. Network prices are updated annually during the access arrangement period. The annual update of network prices is based on the latest forecast of inflation at the time of the price list update. The higher forecasts for inflation in June 2023 will feed directly into the calculation of the first tariff variation in 2023/24, thus creating additional upwards pressure on tariffs (over and above the forecast AA5 price path).

The network charge is about 45 per cent of the total retail bill,[7] Most residential customers and business customers who use less than 50 MWh of electricity each year are on a regulated retail tariff set by the State Government. In the most recent State Budget, Government

6 Western Power has forecast annual reductions in energy volumes of between 0.5 to 0.6 per cent.

7 Economic Regulation Authority, https://www.era.com.au/electricity/switched-on-energy-consumers-guide, Accessed 12 July 2021. Network costs include the cost of the Tariff Equalisation Contribution.

indicated electricity tariffs for residential and small business customers will increase in line with forecast inflation over the next three years.[8]

Given the changed economic conditions, the forecast network price increases in the draft decision are significantly higher than Western Power's proposal, which indicated that network price increases during AA5 would be below inflation.

Western Power's customer engagement program indicated that customers are sensitive to price increases and that minimising cost increases is a high priority for them. Western Power noted there was a willingness to pay for increased reliability and accommodate more renewables, provided the cost impacts to their current bill ranged between 1-5 per cent for residential customers and 1-9 per cent for small and medium enterprises.[9]

The amendments the ERA has made to Western Power's forecast operating expenditure, capital expenditure and asset lives has reduced the effect on prices from what it would have been based on Western Power's proposal updated for current economic conditions. Western Power may consider further adjustments could be made to its proposal that would minimise price increases in the current financial environment.[10]

2.3 Operating expenditure

Western Power is proposing an increase in operating expenditure for AA5 compared to AA4.

Figure 3 below compares forecast and actual operating expenditure since AA1 with Western Power's proposal for AA5 and the draft decision. Operating expenditure trended up during AA1 and AA2, then started to drop back down through AA3 and the early parts of AA4. It is now at similar levels to AA1.

During AA2, AA3 and the beginning of AA4, Western Power outperformed the operating expenditure forecasts included in the approved target revenue. Western Power benefitted by retaining the benefit of those savings and customers have benefited from lower costs in subsequent years.

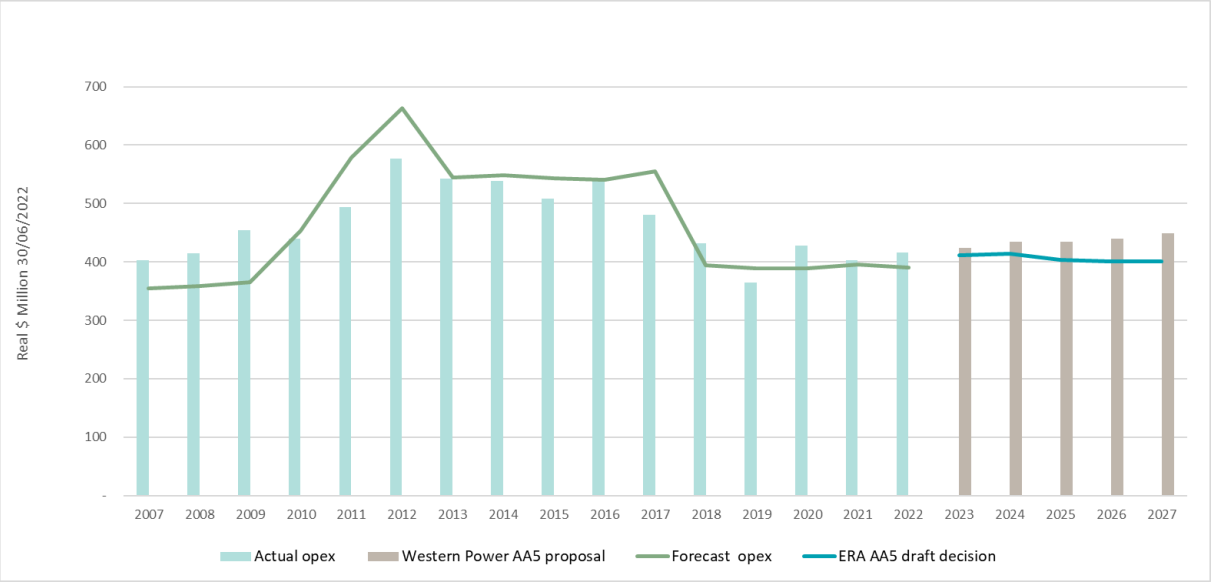
Western Power's proposed operating expenditure for the final year of AA5 is 8 per cent higher (in real terms) than operating expenditure in the final year of AA4. Western Power has assumed annual efficiency savings of 0.25 per cent offset by higher levels of cost increases over the period. The ERA's draft decision is based on annual efficiency savings of 2 per cent and lower cost increases than proposed by Western Power. This results in operating expenditure for the final year of AA5 being 3.4 per cent lower than the final year of AA4.

8 State Budget 2022-23 Budget Paper No. 3 Economic and Fiscal Outlook p. 329. Inflation was forecast at 2.5 per cent.

9 Western Power, Access Arrangement Information, p. 51.

10 The Western Power Chair's covering letter on the proposal noted that its AA5 proposal included greater investment than AA4 but that the price impact on customers would be mitigated by market conditions that reduced the cost of financing the investment.

Figure 3: Forecast and actual operating expenditure (real $ at June 2022)



Source: ERA target revenue model

Western Power has utilised the base-step-trend method to estimate operating expenditure for AA5. The method takes the reported operating expenditure for the most recent year available (2020/21) and adjusts it for:

- any expenditure not reflective of the recurrent cost base
- categories of operating expenditure impacted by discrete step changes
- changes in output and cost input trends over the forecast period.

This approach is almost universally applied for operating expenditure forecasting across Australian network businesses. Under "steady state" operating conditions, where operating expenditure requirements are likely to be relatively consistent from one period to another, the base-step-trend method is an effective and efficient means of forecasting operating expenditure requirements.

Analysis undertaken by the ERA's technical consultant indicated that Western Power benchmarks well against its peers in the National Electricity Market (NEM).

Factors affecting the ERA's assessment of operating expenditure over AA5 include:

- Insufficient information has been provided to demonstrate that all of the proposed step changes and non-recurring costs are efficient and that any offsetting savings have been incorporated.
- Proposed non-recurring costs include $61 million to decommission overhead lines. If this does not go ahead, operating expenditure is overstated.
- Western Power's proposed escalation factors to take account of changes in the size of the network overstate expected growth in the network.
- Efficiencies achieved from the AA4 capital program may not have been fully incorporated in the base year (2020/21).
- Western Power's proposed productivity factor of 0.25 per cent is well below the measured productivity growth rate for other network operators in Australia over the past

10 years (which has continued to improve, with 5.1 per cent annually reported for 2020 and 3.1 per cent annually for 2012-2020).[11]

- Uncertainty around forecast operating expenditure arising from the transformation capital programs. Forecast operating expenditure:
  - May be overestimated as operating efficiencies from the transformation programs may not have been fully identified and included.
  - May be underestimated if new operating expenditure arises while Western Power implements the transformation capital programs.

The ERA's draft decision:

- Accepts most of Western Power's proposed step changes including where the supporting evidence was limited, recognising the uncertainties due to the transformation and that Western Power may have underestimated the operating expenditure arising from the new programs in its proposed capital expenditure for AA5.
- The ERA has not accepted two of Western Power's proposed step changes and so the draft decision has:
  - Removed the proposed increase in costs for the silicone treatment program as they are not required under the Energy Safety Order and industry guidelines recommend alternative approaches.
  - Required that the costs of decommissioning overhead lines are treated as capital expenditure and depreciated over one year. This will leave target revenue unchanged for AA5 but will enable the costs to be included in the investment adjustment mechanism for undergrounding and stand-alone power systems so that any difference between forecast and actual decommissioning can be trued up at the next access arrangement.
- Makes some adjustments to the escalation factors proposed by Western Power to better reflect growth in the network. The ERA has also removed growth escalation from corporate and indirect costs because overhead costs do not vary with the size of the network.
- Applies a productivity factor of 2 per cent per annum to operating expenditure and indirect costs. This requires Western Power to deliver operating expenditure efficiencies more consistent with other network operators in Australia, as well as ensuring that an allowance for efficiencies for the AA4 investment and efficiencies from investment in new and enhanced systems during AA5 are embedded in the forecast.

Accepting most of the proposed step changes in operating costs in the draft decision recognises the uncertainty Western Power faces in undertaking transformation activities over AA5. There are other mechanisms in the code to manage uncertainty. Once approved, Western Power can then prioritise operating expenditure where required as it responds to transformational challenges.

Table 3 below compares the ERA's draft decision with Western Power's proposed operating expenditure.

[11] As measured by the AER in its annual productivity reports.

Table 3: Operating expenditure ($ million real at June 2022)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Western Power proposed	423.9	434.9	434.3	440.1	449.5	2,182.7
ERA draft decision	411.7	414.4	403.9	400.6	401.3	2,032.0

Source: Western Power and ERA target revenue model

Details on the ERA's draft decision on operating expenditure can be found in Attachment 6.

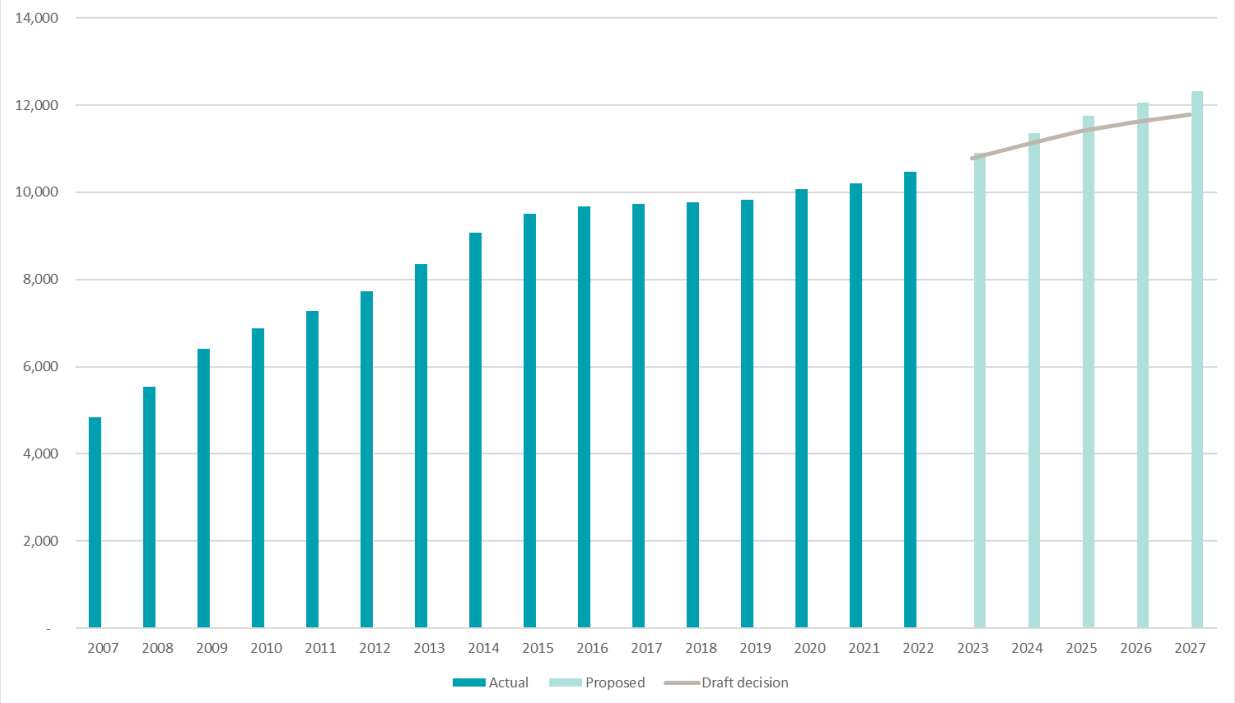
2.4 Capital costs

Capital costs are recovered in target revenue via depreciation and a return on the regulated asset base.

The regulated asset base represents the capital investment in regulated assets and is calculated by adding capital expenditure to and deducting depreciation from the opening regulated asset base.

Figure 4 below compares the regulated asset base since AA1 with Western Power's proposal for AA5 and the draft decision. As can be seen, after a relatively constant value since 2015, Western Power's proposed capital expenditure will increase the regulated asset base over the AA5 period. The ERA's draft decision to reduce capital expenditure will reduce the regulated asset base from the value proposed by Western Power.

Figure 4: Actual and forecast regulated asset base (real $ million June 2022)



Source: ERA target revenue model

Capital expenditure, depreciation and return on the regulated asset based are discussed in turn below.

2.4.1 Capital expenditure

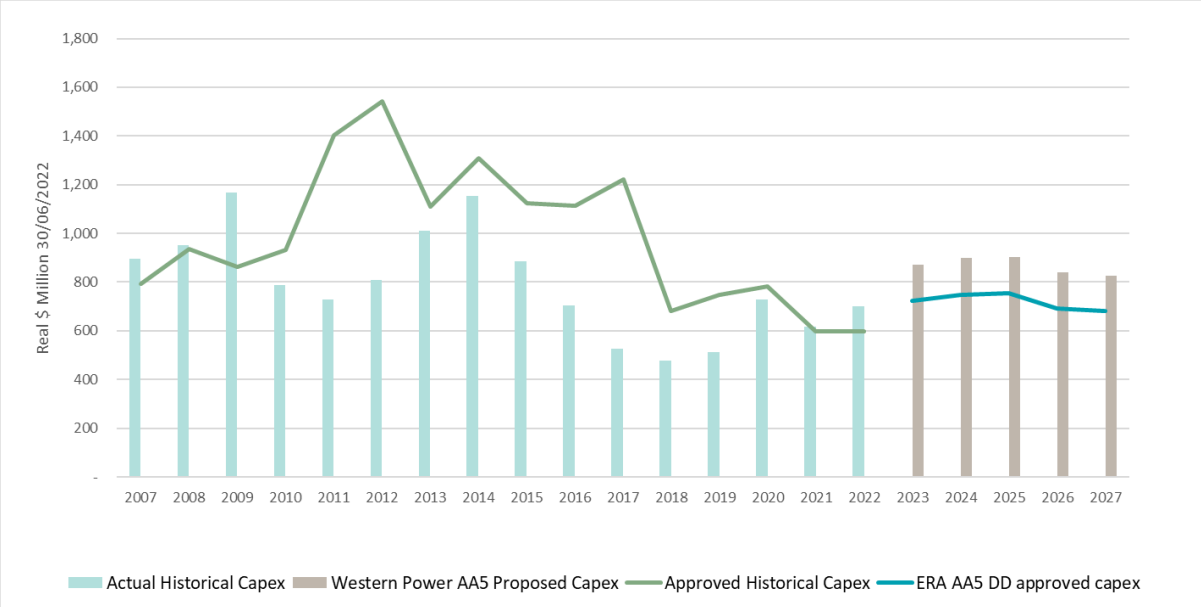
For AA5, Western Power is seeking $4,341 million ($ real) net capital expenditure. This is $1,084 million or 33 per cent more than was approved for AA4 and $1,406 million or 48 per cent more than actual net expenditure in AA4. The increase in AA5 proposed expenditure above AA4 actual, is primarily due to higher asset replacement and SCADA/IT expenditure. The ERA's draft decision has reduced the proposed uplift in asset replacement and SCADA/IT.

Figure 5 below compares forecast and actual net capital expenditure since AA1 with Western Power's proposal for AA5 and the draft decision. During AA1, increasing peak demand was still a feature, which resulted in growth expenditure being high compared to future periods. Actual expenditure was higher than forecast in the ERA's AA1 access arrangement decision. The ERA subsequently determined that some of this expenditure was not efficient and did not allow it to be added to the regulated asset base. The expected expenditure for AA2 anticipated continued growth that did not eventuate, resulting in AA2 actual expenditure being lower than forecast.

Actual expenditure increased in AA3 due to a large uplift in wood pole expenditure to address safety issues and the Mid-West Energy Project, which was the largest transmission growth project Western Power has undertaken. However, growth was not as high as expected, so actual expenditure was less than forecast.

Actual expenditure in AA4 was lower than AA3, as wood pole expenditure returned to more normal levels and there were no significant growth projects. Actual expenditure was broadly in line with forecast expenditure ($322 million or 10 per cent lower) but there were significant differences at the investment category level. Underspends in growth, asset replacement and compliance were offset by overspends in SCADA and IT.

Figure 5: Forecast and actual capital expenditure



Source: ERA target revenue model

The ERA is broadly supportive of the strategic direction and transformation initiatives outlined by Western Power and that drive its proposed capital program. However, the scale of capital expenditure in the program introduces substantial delivery and efficiency risk. Delivery over a longer timeframe would more efficiently minimise cost by capturing greater learnings and

cost benefits without compromising the pace of the transformation to a low carbon electricity system.

Some of the planned investment over the AA5 period appear unachievable based on AA4 performance, and in comparison with other networks.

In several cases, Western Power did not provide robust business cases or quantified options analysis of the benefits and costs to customers for proposed investments. There was also some inconsistency in the underlying assumptions for some of the information provided.

The ERA's adjustments are summarised in Table 4 below.

Table 4: Draft decision reductions to proposed capital expenditure

Program	Reduction	Reason
Network renewal undergrounding program	Reduce by $75m to $365m	This relates to the conversion of overhead areas to underground power where the overhead assets have deteriorated and require replacement. Typically, this will require a contribution from local government to make up the cost difference between overhead and underground assets. The ERA agrees it is a prudent management approach to overhead network renewal but the magnitude of the scale up raises deliverability concerns. There were significant local government and contractor constraints in AA4 that would need to be overcome to deliver the proposed significant uplift in the size of the proposed program.
Standalone power systems	Reduce by $118m to $213m	The ERA agrees standalone power systems are a prudent long term transition strategy for the rural network but considers the proposed number of units is overly ambitious and risks the realisation of cost inefficiencies. Western Power delivered 187 units during AA4 and is proposing 10 times that level (1,861) for AA5. A slower ramp up will enable realisation of learning and technology cost efficiencies in AA6. The adjusted capital expenditure is based on 1,010 installations over AA5 compared with Western Power's proposal of 1,861.
Other asset replacement	Reduce by $165m to $747m	The ERA considers that the proposed replacement investment is not supported by actual asset condition. The ERA's technical consultant considered that the failure forecasts were based on age-risk relationships greater than observed historical performance. It considered this creates an upward bias in forecast failure rates. The adjustment aligns capital expenditure with actual expenditure incurred in AA4.
SCADA/Comms IT and Cyber	Reduce by $256m to $616 m	Western Power is proposing to spend double the amount it spent in AA4. This is significantly higher than comparable companies in the NEM. The need for increased investment is not supported by an increase in failure rates and vendor obsolescence drivers are not justified. The ERA's technical consultant identified concerns about inefficient scale up, deliverability and limited business cases provided. The ERA recognises that ensuring cyber security is essential and that Western Power has new obligations under the

Program	Reduction	Reason
		Security of Critical Infrastructure Act 2018 (Cth). The ERA considers the revised expenditure is sufficient to allow Western Power to comply with these requirements, noting that in addition to the planned capital investment, $17.5 million has been included in indirect costs to establish a new cyber security function.
Corporate real estate	Reduce by $31m to $115m	A significant element of the forecast depot program costs has been allocated to unplanned activities. The ERA has reduced this to reflect a more efficient cost.

As shown in the table above, the ERA has reduced the proposed expenditure for undergrounding and standalone power systems. The adjustments reflect concerns about the deliverability and efficiency of the proposed level of expenditure. However, the ERA recognises these programs are integral to Western Power's strategy to address the transformation. Consequently, the ERA proposes these investment categories will be subject to the Investment Adjustment Mechanism.

The Investment Adjustment Mechanism ensures that, if Western Power can scale up efficiently during AA5, the target revenue for AA6 will be adjusted to reflect the additional investment. It also ensures that if Western Power does not deliver its program, target revenue for AA6 will be adjusted to reflect the underspend. This provides Western Power with the flexibility to focus activity and expenditure during AA5 to meet the challenges of the sector's transformation whilst protecting customers from incurring costs if the programs are reduced during AA5.

Western Power has proposed to accelerate its advanced metering program so that most customers will have an advanced meter by the end of AA5. Under business as usual (i.e. installing advanced meters in new properties, meter replacements and meter exchanges initiated by customers) most properties would have an advanced meter by the end of AA6 (2032). Western Power has proposed $108 million to install an additional 240,000 advanced meters during AA5.

Western Power's business case for the accelerated advanced metering program indicated the difference in net present cost when comparing full deployment by 2027 (based on the accelerated program) and 2032 (based on business as usual) is $21 million. The business case described benefits that would arise from acceleration but did not include quantification of such benefits.

The ERA's technical consultant considered Western Power had not justified the benefits of accelerating the advanced metering program and that it had included contingency allowances in its cost estimate. The consultant was also concerned that Western Power would not be able to deliver the full program during AA5.

Unlike the network renewal undergrounding program and standalone power systems, the scope of the advanced metering program is very clear. It is just a question of how quickly it is rolled out. Given the relatively small difference in net present cost terms and time-period, the ERA's draft decision has included the accelerated metering costs. However, accepting the proposed expenditure in full in the final decision is contingent on Western Power quantifying and demonstrating the benefit of the acceleration in its response to the draft decision. Western Power is also required to demonstrate that the proposed expenditure does not include a contingency allowance and that the program can be delivered in AA5.

Table 5 below provides a comparison by investment category for AA5 and AA4. The draft decision is $455 million or 14 per cent more than was approved for AA4 and $777 million or 26 per cent more than actual net expenditure in AA4.

Table 5: Draft decision capital expenditure (real $ million at June 2022)

	AA5 Draft decision $m	AA5 Western Power proposal $m	AA4 Actual $m	AA4 approved $m
Growth	441	436	385	641
Compliance (including reliability driven)	443	440	335	397
Asset replacement (includes undergrounding, standalone power systems and metering)	2,091	2,441	1,534	1,649
SCADA and IT	616	872	438	322
Corporate support	121	152	243	249
Total net capex	3,712	4,341	2,935	3,257

Source: ERA Analysis: Western Power and ERA target revenue model

Based on the advice of its technical consultant and stakeholder submissions, the ERA considers the demand forecasts in Western Power's proposal need updating. In particular, the forecasts are based on historical data and do not adequately consider structural changes in demand, including the adoption of new technologies like electric vehicles and battery storage. The ERA requires Western Power to provide an updated demand forecast with its response to the draft decision.

In relation to the proposed compliance expenditure, the ERA considers that meeting compliance and reliability requirements is essential and it is incumbent on Western Power to ensure that it has adequately identified the expenditure needed to do so.

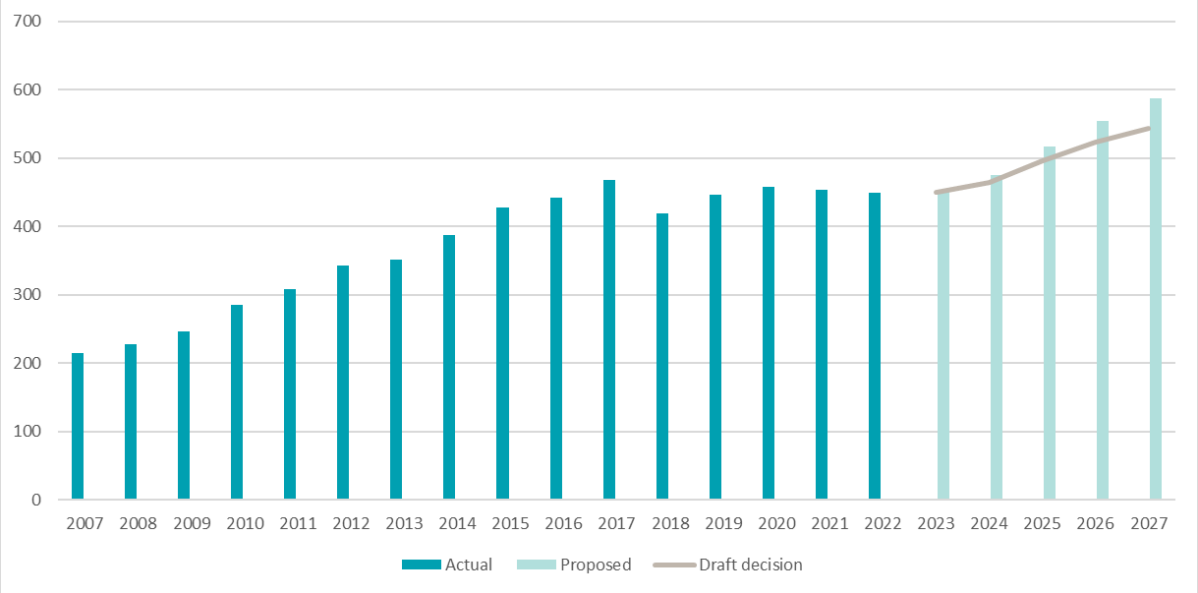
Similarly, as set out in Table 5 above, the ERA recognises that ensuring cyber security is essential and that Western Power has new obligations under the *Security of Critical Infrastructure Act 2018 (Cth).* The ERA considers the draft decision includes sufficient expenditure to allow Western Power to comply with these requirements. If Western Power considers additional funds are needed to ensure cyber security, it can provide details and evidence to support this in its response to the draft decision.

Details on the ERA's draft decision on forecast capital expenditure can be found in Attachment 3B.

2.4.2 Depreciation

Figure 6 below compares depreciation since AA1 with Western Power's proposal for AA5 and the draft decision. Depreciation is forecast to increase during AA5 due to the increase in capital expenditure compared with AA4. The ERA's draft decision to reduce capital expenditure and amend some asset lives reduces the level of forecast depreciation.

Figure 6: Depreciation



Source: ERA target revenue model

As proposed by Western Power, the ERA has approved the continued use of straight-line depreciation. The current straight-line depreciation method ensures Western Power's target revenue only includes a regulatory depreciation allowance equal to (in real terms) the value of its initial capital investment and that assets are fully depreciated by the end of their economic lives. This approach is consistent with the roll-forward method used for the regulated asset base and is the approach also adopted by the AER in its electricity network and gas pipeline determinations.

Some stakeholders suggested adopting a real annuity method of depreciation.[12] Under such an approach, depreciation would be lower when the asset is first acquired, compared with straight line depreciation, but increases over the life of the asset. This may result in lower network prices initially but would lead to higher network prices in future years, compared with the current approach. The ERA does not consider this would be in the long-term interests of consumers.

The ERA has amended some asset lives proposed by Western Power to ensure that they reflect the economic life of the relevant assets as shown in Table 6 below.

[12] This was described as: Deprecation = annuity minus return on the regulated capital base.

Table 6: Draft decision economic asset life for depreciation purposes

Asset group	Draft decision	Western Power proposal
Distribution underground cables	60	50
Distribution switchgear	35	30
Stand-alone power systems	20	15
Storage	20	10

Source: ERA analysis; Western Power and ERA target revenue model

Further details on the ERA's draft decision on depreciation can be found in Attachment 4.

2.4.3 Return on regulated asset base

2.4.3.1 Access Code requirements

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

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

2.4.3.2 Western Power's proposal and ERA's consideration

Western Power broadly maintained the approach used for AA4 to determine most WACC parameters for AA5. Western Power proposed to apply a rate of return method broadly consistent with the methodology in the ERA's 2018 Rate of Return Guidelines.[13]

Western Power proposed the following changes to the approach applied in AA4 and the ERA's 2018 Rate of Return Guidelines:

- an increase in the term of the risk free rate to 10 years, up from a term of five years
- an alternative approach to calculating the cost of debt.

The ERA adopts a standard rate of return approach for its heavily regulated energy networks, which means general WACC approaches and parameters are the same across energy networks. These WACC parameters include:

- the market risk premium
- debt issuing costs
- inflation

[13] Western Power, *Access Arrangement Information: Access Arrangement revisions for the fifth access arrangement period*, 1 February 2022, p. 230.

- the value of dividend imputation credits (known as gamma).

By adopting a standard rate of return method for regulated energy networks, the ERA's consideration of WACC approaches and parameters are largely similar across regulated gas pipelines and covered electricity networks.

As required by the National Gas Law, the ERA is currently undertaking a periodic review of the Rate of Return Guidelines and a new instrument is required to be published by December 2022. A draft version of the new instrument, the 2022 Draft Gas Rate of Return Instrument (Draft 2022 Rate of Return Instrument) and explanatory statement have been published by the ERA.

In developing the Draft 2022 Rate of Return Instrument, the ERA has considered a range of information, including stakeholder submissions, academic literature, market data and developments and stakeholder feedback.[14]

The ERA's considerations in the Draft 2022 Rate of Return Instrument are relevant for its determination for Western Power's AA5. As the ERA is currently reviewing the 2022 Rate of Return Instrument, any further information and considerations for the 2022 Instrument may also be relevant for the ERA when finalising the final decision on Western Power's AA5.

Western Power's proposal and the ERA's considerations are detailed in Attachment 5 of this draft decision.

In summary, the ERA accepts the following parameters of Western Power's proposed rate of return:

- credit rating
- gearing ratio
- term of debt
- term for equity
- equity beta
- forecast inflation, updated for current data
- value of imputation credits (gamma).

The ERA has made changes to the following parameters of Western Power's proposed rate of return to ensure that it is based on current data:

- the market risk premium
- debt raising and hedging costs.

The ERA has considered Western Power's proposal to change the term for equity from five years to 10 years. The ERA has accepted Western Power's proposed 10 year term for equity. This change aligns the assumed term for equity with common investor practice, where investors in long-lived assets consider cash flows over a long time horizon exceeding the access arrangement period. The ERA considers a 10 year term for equity allows for efficient rates of return, is consistent with private market practice and the change supports the delivery of efficient forward-looking rates.

[14] ERA, *Explanatory statement for the 2022 draft gas rate of return instrument*, 17 June 2022.

The ERA has considered Western Power's proposed change to the cost of debt approach to a 10 year trailing average approach. The ERA does not approve Western Power's alternative approach to calculating the cost of debt and instead requires the continuation of the current hybrid trailing average approach to estimate the cost of debt for the AA5 period.

The ERA considers that the hybrid trailing average approach is efficient and implementable, and has the benefit of incorporating forward-looking rates. In addition, the current hybrid trailing average approach better reflects the variable nature of Western Power's debt portfolio.

The ERA recognises that both the current hybrid trailing average and proposed trailing average approaches to the cost of debt have pros and cons, which are detailed more fully in Attachment 5. The ERA notes that in the current market conditions, the hybrid trailing average approach does result in a higher return on debt allowance compared to the proposed trailing average approach. With the rapid tightening in financial conditions[15] coupled with volatile financial markets, the ERA is interested in stakeholder views on:

- Supporting possibly higher, but relatively more certain, debt costs over the AA5 period as afforded by the current hybrid trailing average approach
- Supporting possibly lower, but more uncertain, debt costs over the AA5 period (with the higher costs carried over to AA6) as afforded by the proposed trailing average approach.

The ERA cautions against an approach that would actively swap between debt methods depending on market conditions, which could be to the long-term detriment of both consumers and network providers. Actively swapping methods would reduce regulatory certainty and the ability of network providers to manage debt portfolio costs so as to match allowed revenue. Over time debt returns are not averaged and service providers would likely be under or over-compensated.

Western Power proposed an average nominal post-tax WACC of 4.73 per cent for the AA5 period, compared with 5.87 per cent approved in AA4.

Western Power's proposed WACC for AA5 was developed in 2021 in a low interest rate environment and these market conditions resulted in a WACC that was forecast to be lower than during AA4. The reduction in returns from the low interest rate environment contemplated by Western Power is partially offset by increases resulting from Western Power's proposed changes to the WACC approach used to calculate the WACC.

Western Power used placeholder values as of 30 June 2021 in its proposal to calculate the average nominal post-tax WACC of 4.73 per cent. These placeholder values are intended to be replaced with the most current values at the time of the ERA's final decision.

Market conditions have changed significantly since 2021 when Western Power developed its AA5 proposal. The ERA's consideration and estimates of the WACC parameters in this draft decision reflect the current market conditions. Increases in interest rates drive most of the change in the WACC estimate and are not due to regulatory discretion. The significant change in market conditions is illustrated by the 2.3 percentage point increase of the risk free rate between June 2021 and June 2022. It is proposed that in the ERA's final decision, these will be replaced with the most current values at that time.

[15] Specifically referring to rising interest rates across the yield curve in response to unexpected acceleration in inflation.

The ERA's draft decision is set out in Table 7 below, with detailed reasoning for its decision set out in Attachment 5 – Return on Regulatory Asset Base.

Table 7: ERA's draft decision rate of return estimate for AA5

Component	Western Power proposed	Draft decision
Averaging period	*30 June 2021*	*30 June 2022*
Return on debt (%)		
5-year interest rate swap (effective yield) (%)	N/A	4.070
Debt risk premium (10-year average) (%)	N/A	1.883
Debt issuing cost (%)	0.100	0.165
Debt hedging cost (%)	N/A	0.123
Return on debt (10-year bond yield) (%)	3.80*	N/A
Nominal return on debt (%)	*3.90**	*6.241*
Return on equity		
Nominal risk free rate (%)	1.53	3.82
Market risk premium (%)	6.0	6.2
Equity beta	0.7	0.7
Nominal return on equity (%)	*5.73*	*8.16*
Other parameters		
Debt proportion (%)	55	55
Inflation (%)	2.03	2.96
Corporate tax (%)	30	30
Franking credit (%)	50	50
Nominal after-tax WACC (%)	**4.73***	**7.10**
Real after-tax WACC(%)	2.64*	4.03

Source: ERA analysis; Western Power, Access Arrangement Information: Access Arrangement revisions for thefifth access arrangement period, 1 February 2022, pp. 236-237.

**Five-year average over the AA5.*

2.5 Other components of target revenue

The ERA's draft decision on other components of target revenue specified in the Access Code is set out in Table 8 below.

Table 8 Draft decision on other components of revenue for AA5 ($ million nominal)

	Draft decision	Western Power proposal updated for WACC and inflation	Western Power proposal
Investment adjustment mechanism	(42.5)	(42.2)	(40.0)
Service standard adjustment mechanism	(47.4)	(47.8)	(45.1)
D-factor	45.2	44.9	43.0
Gain sharing mechanism	53.8	95.9	49.1
Demand management innovation allowance	7.0	7.0	6.3
Advanced meter infrastructure recovery	77.8	75.2	70.7
Regulatory reform costs	2.8	2.7	2.6
Total	**96.7**	**135.7**	**86.5**

Source: ERA analysis; Western Power and ERA target revenue model

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 WACC approved as part of the final decision.

Further details of the ERA's draft decision can be found in Attachment 9 (service standard and adjustment mechanism) and Attachment 7 (other components).

2.6 Services

Section 5.2(b) of the Access Code requires the access arrangement to specify a reference service for each covered service that is likely to be sought by a significant number of network services customers or a substantial proportion of the network services market.

The list of reference services was considered in the framework and approach. Western Power's proposed revised access arrangement includes the new reference services and generally reflects the amended reference services that the ERA required including:

- New reference services for transmission connected storage, distribution connected storage and electric vehicle charging stations.
- Amended time of use periods to reflect forecast demand patterns for AA5 as follows:
  - Super off-peak – 9am to 3pm
  - Peak – 3pm to 9pm
  - Shoulder – 6am to 9am and 9pm to 11pm

- Off–peak – 11pm to 6am

Western Power's proposal included amendments to service descriptions and eligibility criteria. Taking account of stakeholder feedback, the ERA has identified some modifications and improvements that are required to Western Power's proposal including:

- Reinstate residential and business exit and bi-directional super off-peak demand services.
- Amend the business energy-based reference services so they are available to high voltage connected customers rather than only low voltage connected customers.
- Make clearer the storage and electric vehicle charging reference services may be used for purposes ancillary to those services.
- Allow the low voltage storage and electric vehicle charging reference services to apply to inverter systems rated up to 3 MVA (rather than 1 MVA).
- Allow users to choose either a five-minute or 30-minute interval data service.
- Amend the streetlighting reference service so that it is clear Western Power must ensure that if it replaces an existing luminaire with a different type of luminaire it must ensure that it complies with current public lighting standards.
- Amend the remote load/inverter control service so that the activated device has its capability enabled for variable or binary control and allows the user to request variable or binary control.
- Remove the requirement to comply with WEM Rules from the eligibility criteria for entry services.

Further details of the ERA's draft decision on services can be found in Attachment 8.

2.7 Service standards

Power outages over the summer across the electricity system have highlighted the importance of energy security and reliability for the community. Over the last few months, the ERA has engaged directly with regional customers to better understand their customer experience and any concerns they have. It is clear to the ERA that customers in some locations are experiencing a poor level of service.[16] This was also observed in the independent report conducted by Michelle Shepherd for the Minister for Energy.

To address these issues, the ERA's draft decision includes changes to Western Power's proposal to deliver improvements to the service standard requirements in the access arrangement.

The Access Code requires the access arrangement to include "service standard benchmarks" for each reference service. The access arrangement must also include a service standard adjustment mechanism that sets out how the ERA will treat the service provider's performance

[16] Approximately 100,000 customers are on rural long feeders. On average and after excluding planned outages and outages outside Western Power's control, these customers experienced 713 minutes of outages compared with CBD, urban and rural short customers who experienced 14, 118 and 210 minutes, respectively. Furthermore, many customers within the rural long customer group experienced significantly higher outages than the average with around 10% experiencing between double and up to 7 times the average reported performance. The average performance for the approximately 320,000 customers on rural short feeders is significantly better than for rural long feeders, however about 15 per cent experienced outages between double and up to 10 times the average.

during the access arrangement period against the service standard benchmarks at the next access arrangement review.

Western Power also has legislative reliability obligations under the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005* (NQ&R Code). In particular, Section 13 sets out standards for power interruption duration that the network operator must, so far as is reasonably practicable, ensure is not exceeded.

- Perth CBD – 30 minutes
- Urban areas other than Perth CBD – 160 minutes
- Any other area of the State – 290 minutes.

The duration of power interruption in the NQ&R Code applies as the average for each geographic area, not to individual customers, and is measured on average performance over four years.

Since AA3, the access arrangement has included "service standard benchmarks" (based on the 97.5th percentile of performance achieved over the previous five years) and "service standard targets" (based on the average performance over the previous five years).[17] Engagement with stakeholders indicates that including "service standard benchmarks" and "service standard targets" in the access arrangement creates confusion about what standard Western Power is expected to deliver.

The service standard adjustment mechanism in the access arrangement is similar to the service target performance incentive scheme used by the Australian Energy Regulator. It includes financial rewards and penalties based on the value of customer reliability. If Western Power exceeds the service standard target, it receives a financial reward. If it falls below the target, it receives a financial penalty.[18]

The Access Code requires the access arrangement to include service standard benchmarks but does not specify a requirement for service standard targets. Having both benchmarks and targets is causing confusion for customers about what level of service they can expect. The significance of the service standard benchmarks versus service standard targets is that the service standard benchmarks are standards that Western Power must meet.[19]

To remove confusion and make clear what standard Western Power is expected to deliver, the ERA considers it would be better to discontinue the current practice of including both service standard benchmarks and service standard targets in the access arrangement. Instead, only service standard benchmarks should be included in the access arrangement.

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17 The rationale for setting the service standard benchmarks at such a low level of performance was on the basis that they were the minimum standard that should be achieved. The service standard targets were based on average performance achieved on the basis that it was the level of service customers were satisfied with.)

18 Basing the rewards and penalties on the value of customer reliability incentivises Western Power to maintain service standards during the access arrangement period (or pay a penalty) or improve service standards where it is valued by customers (and receive a reward).

Resetting the service performance targets at each access arrangement based on the prior period's performance ensures consumers benefit from sustained increases in service performance. If Western Power receives a financial reward for exceeding a service standard target, the targets for the next period will be reset to the improved reliability level. Consumers will then either benefit from the higher standard of reliability or, if Western Power cannot sustain the higher performance, target revenue at the next access arrangement period will be reduced, reflecting the penalty paid by Western Power.

19 Section 11.1 of the Access Code.

However, rather than setting the benchmarks at the 97.5th percentile of performance over the previous five years as is currently done, they should be based on the average performance over the previous five years (consistent with current service standard targets). In effect, this means renaming the current service standard targets as service standard benchmarks and deleting the measures that are currently named service standard benchmarks. These changes will ensure the standards Western Power must meet are clear and Western Power can be held accountable.

As discussed further below, for AA5 Western Power's performance will continue to be assessed based on the average performance for all customers included in the service standard performance measure. However, the ERA will increase reporting requirements to focus on specific areas of the network where performance is below average and require Western Power to explain the reasons for the under-performance and the measures it is taking to address the under-performance.

The service standard adjustment mechanism will continue to work as it currently does and Western Power will continue to be incentivised to maintain current service standard performance. If it fails to meet current service standard performance (the benchmark) it will be penalised and if it exceeds current service standard performance (the benchmark) it will be rewarded.

Regional customers said the reimbursements provided by Western Power are barely enough to cover the costs of the outage. Further, the penalty that Western Power pays for not meeting service standards could be better targeted to encourage investments in infrastructure for the communities most affected.

The ERA acknowledges the service standard adjustment mechanism is a relatively blunt instrument that is designed to incentivise Western Power to maintain performance. The penalties and rewards from the mechanism are included in overall target revenue and shared equally by all network customers. Customer compensation for poor performance is dealt with under the NQ&R Code that specifies the payments Western Power must make to customers for poor performance.

Aside from the confusion about service standard targets and service standard benchmarks, the service standard adjustment mechanism has generally worked effectively since AA3 to broadly maintain or improve average service standard performance. In addition, the system average interruption duration index (SAIDI), which measures the average number of minutes of outage per customer on the distribution network in a year for CBD, urban and rural short feeders is well within the prescribed limits in section 13 of the NQ&R Code.

The outage performance for rural long feeders is an exception. The rural long service performance has deteriorated over AA3 and AA4 and is much worse than the prescribed limit in the NQ&R Code of 290 minutes. Furthermore, many customers on rural long feeders are experiencing a much lower level of service than the average SAIDI reported for rural long feeders.

As the NQ&R Code is a legislative obligation, the ERA considers the service standard benchmarks in the access arrangement should not be set below the standard of NQ&R Code requirements. Consequently, the ERA proposes the AA5 service standard benchmark for rural long feeders should be set at 290 minutes rather than basing it on actual performance during AA4. As with any legislative obligation related to providing covered services, Western Power can seek funding for those costs in its access arrangement. It will likely need to review its cost estimates in its response to the draft decision.

Tightening the requirement for average performance will also better incentivise Western Power to target those poor performing areas. The ERA considers there would be merit in disaggregating the benchmarks for poor performing areas. However, as the NQ&R Code standards are specified at an aggregate level (rather than applying to individual customers) and the disaggregated data that the ERA has been able to obtain is not robust, it is not proposed to do so for AA5. This is a policy matter and the ERA will take it up with Energy Policy WA.

Although the service standard benchmarks cannot be disaggregated in this access arrangement, the ERA will implement requirements in the annual service standard reports prepared by Western Power under the access arrangement to provide greater transparency of service standard performance across individual feeders or geographic areas. The ERA will require Western Power to explain the reasons for any under-performance and the measures it is taking to address the underperformance.

Further details of the ERA's draft decision can be found in Attachment 9.

2.8 Expenditure incentives and other adjustment mechanisms

Most of the expenditure incentives and other adjustment mechanisms were addressed in the framework and approach. The draft decision includes two substantive changes:

- As discussed under forecast capital expenditure, the proposed Investment adjustment mechanism must be amended to include investment relating to the network renewal undergrounding program and standalone power systems.
- The proposed D-Factor scheme must be amended to remove the costs of non-co-optimised essential system services as any such costs related to the provision of covered network services are captured in the current D-Factor scheme.

Details of the ERA's draft decision on expenditure incentives and other adjustment mechanisms can be found in Attachment 10.

2.9 Network tariffs

Western Power has proposed changes to its tariff structures. These changes include reducing variable charges and increasing fixed charges for existing tariffs. Western Power has also proposed introducing new tariffs for grid-connected batteries and electric vehicle charging stations and introducing a very low super off-peak rate for energy between 9am and 3pm for time of use services.

Western Power provided additional tariff information (including an indicative price list for 2023/24). The ERA invited submissions on the additional information. The eight submissions received raised concerns about Western Power's proposed new tariffs for EV charging stations and rebalancing between fixed and variable charges. There was general support from stakeholders for the new time of use periods. However, further engagement and consultation is needed to refine the tariff structure statement and provide clarity to stakeholders on the proposed tariffs over the AA5 period.

To progress the development of the network tariffs the ERA requires Western Power to:

- Update the cost allocation and forecast revenue for each reference tariff to reflect the most recent actual and forecast energy and customer numbers and revised target revenue.
- Take account of stakeholder concerns about the effect of rebalancing between fixed and variable charges to develop a more gradual transition.
- Provide at least the same level of information on the cost allocation, charging structures and indicative prices that was included in the price list information and price list provided for previous access arrangement reviews.
- Include sufficient detail in the reference tariff change forecast so that customers can understand how much individual components of the tariff are forecast to change and the likely effect on customers with a range of consumption profiles. The reference tariff change forecast must include all reference tariffs (including the proposed new tariffs) and the forecast overall change in reference tariffs.
- Include demand-based tariffs for the super off-peak time of use reference services for residential and commercial connections.
- Modify the proposed tariffs for the storage and electric vehicle charging reference services to take account of the matters raised in the stakeholder submissions received by the ERA.

Details of the ERA's draft decision on network tariffs can be found in Attachment 11.

2.10 Policies and contracts

The ERA's draft decision includes minor amendments to the standard access contract, applications and queuing policy and multi-function asset policy.

The ERA notes that some customers are currently experiencing extended waiting periods for applications to connect and this is likely to worsen as increased applications are received in response to decarbonisation initiatives.

The new constrained market design's implementation in October 2023 should assist in the short term to enable generators to connect more quickly as they will no longer be queuing for spare capacity. The ERA has also proposed changes that tighten the timeframes that Western Power must respond within to better encourage it to optimise its operational processes and resources for managing customer applications.

However, the applications and queuing policy framework under the Access Code will not be able to deal with the scale of change required for decarbonisation. A more strategic approach across industry and policy agencies will be needed to ensure transmission infrastructure is ready so that new generation and loads can be connected in a timely manner. The ERA will take this up with Energy Policy WA.

Details of the ERA's draft decision on policies and contracts can be found in Attachment 12.

3. Review process

On 1 February 2022, Western Power submitted its proposed revisions to its access arrangement (proposed revised access arrangement) to the Economic Regulation Authority in accordance with the requirements of section 4.82 of the *Electricity Networks Access Code 2004.*

The current access arrangement approved by the ERA for AA4 required Western Power to submit proposed revisions for the AA5 period by 26 February 2021 with the revised access arrangement targeted to commence on 1 July 2022.

To facilitate the Energy Transformation Strategy, the State Government made amendments to the Access Code in September 2020. This included deferring the revisions submission date for Western Power's AA5 proposal to 1 February 2022 and the target revisions commencement date for AA5 to 1 July 2023. Although the proposed revised access arrangement is not intended to come into effect until 1 July 2023, the proposal includes target revenue for a five-year period commencing 1 July 2022 and ending on 30 June 2027 as approved by the ERA in AA4.[20]

The proposed revised access arrangement and access arrangement information are available on the ERA's website.[21]

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

- meets the Access Code objective.
- complies with the specific requirements of the Access Code.

As required under section 4.A1 of the Access Code, the ERA published a framework and approach document on 9 August 2021. This document set out the ERA's decisions on the following matters:

- A list of standard services that must be offered (reference services).
- How the target revenue Western Power can collect from customers will be calculated (price control).
- How differences between forecast and actual capital expenditure will be treated (investment adjustment mechanism).
- How operating cost efficiencies will be shared between Western Power and its customers (gain sharing mechanism).
- How service standard benchmarks will be set.
- How differences between actual service standard performance and the service standard benchmarks will be rewarded or penalised (service standard adjustment mechanism).

[20] As the final decision will be made in March 2023, the 2022/23 revenue will not reflect the ERA's determination of target revenue for AA5. The ERA will account for this in its final decision by subtracting the latest forecast of revenue for the 2022/23 financial year from the approved total target revenue for the AA5 period to determine the amounts of target revenue that will need to be recovered over the remaining four years of the access arrangement period.

[21] See: https://www.erawa.com.au/electricity/electricity-access/western-power-network/access-arrangement/access-arrangement-period-2017-2022.

- An allowance that can be spent on innovative research and development in demand management projects that have the potential to reduce long term network costs (demand management innovation allowance).

Section 4.A11 of the Access Code requires Western Power's proposal to be consistent with the framework and approach document published by the ERA unless there has been a material change in circumstances.

The ERA published an issues paper on 4 March 2022 to assist interested parties in understanding Western Power's proposal, the review process and some of the issues to be addressed by the ERA in determining whether or not to approve the proposed revised access arrangement. On 25 March 2022, the ERA held an online public forum on Western Power's proposal and the ERA's issues paper.

Public submissions were received from 18 interested parties and published on the ERA's website. A list of parties who made a submission is included in Appendix 3.

As permitted under section 4.11A of the Access Code, Western Power submitted further access arrangement information on 20 May 2022.

On 30 June 2022, Western Power submitted additional information on its proposed network tariffs. The ERA published the additional information and invited submissions by 26 July 2022. Public submissions were received from 8 parties and published on the ERA's website. A list of parties who made a submission is included in Appendix 3.

Under section 4.12 of the Access Code, the ERA must consider any submissions made (before the submission closing date) on the proposed revised access arrangement and any further access arrangement information submitted by Western Power, and must make a draft decision to either:

- approve the proposed revised access arrangement.
- not approve the proposed revised access arrangement, in which case the ERA must in its reasons provide details of the amendments required before the ERA will approve it.

Western Power's current access arrangement applies until a new proposed access arrangement is approved by the ERA.

3.1 Review timeline

The key milestones for the ERA's decision in respect of Western Power's proposed revisions to its access arrangement for the fifth access arrangement period are set out below:

	Date
ERA published framework and approach	9 August 2021
Western Power submitted its proposal	1 February 2022
ERA issues paper published	4 March 2022
Online public forum on Western Power's proposal held	25 March 2022
Submissions on Western Power's proposal closed	20 April 2022

	Date
Western Power submitted further access arrangement information	20 May 2022
Western Power submitted additional information on tariffs	30 June 2022
Submissions on Western Power's additional information on tariffs closed	26 July 2022
ERA draft decision published	9 September 2022
Public forum on draft decision	27 September 2022
Western Power revised proposal due	14 November 2022
Submissions on ERA's draft decision due	16 December 2022
Western Power may submit further access arrangement information	January 2023
ERA final decision	31 March 2023

Appendix 1 Regulatory framework

Western Power's transmission and distribution network is a covered network under the *Electricity Networks Access Code 2004* and is required to have an approved access arrangement in place.

Section 5.1 of the Access Code specifies the required content of an access arrangement.

> 5.1 An *access arrangement* must:
>
> (a) specify one or more *reference services* under section 5.2; and
>
> (b) include a *standard access contract* under sections 5.3 to 5.5 for each *reference service*; and
>
> {Note: An *access arrangement* may contain a single *standard access contract* in which the majority of terms and conditions apply to all *reference services* and the other terms and conditions apply only to *specified reference services*.}
>
> (c) include *service standard benchmarks* under section 5.6 for each *reference service*; and
>
> (d) include *price control* under Chapter 6; and
>
> (e) include a *tariff structure statement* and *reference tariff change forecast* under Chapter 7; and
>
> (f) include a description of the *pricing years* for the *access arrangement*; and
>
> (g) include an *applications and queuing policy* under sections 5.7 to 5.11; and
>
> (h) include a *contributions policy* under sections 5.12 to 5.17D; and
>
> (i) [not used]
>
> (j) if required under section 5.25, include *efficiency and innovation benchmarks* under section 5.26; and
>
> (k) include provisions dealing with *supplementary matters* under sections 5.27 and 5.28; and
>
> (l) include provisions dealing with:
>
> (i) the submission of *proposed revisions* under sections 5.29 to 5.33; and
>
> (ii) *trigger events* under sections 5.34 to 5.36; and
>
> {Note: At the same time as an *access arrangement* is submitted, *access arrangement information* must be submitted under section 4.1 and *technical rules* must be submitted under section 12.10. Neither the *access arrangement information* nor the *technical rules* are part of the *access arrangement*.}
>
> (m) include a *multi-function asset policy* under section 5.37.

Western Power is required to submit proposed revisions to the access arrangement and revised access arrangement information to the ERA by the revisions submission date specified in the access arrangement. However, this requirement was modified in respect of the access arrangement period for AA5 by transitional provisions in section 15.15 of the Access Code. The transitional provisions required Western Power to submit proposed revisions and revised access arrangement information no later than 1 February 2022.

As set out in chapter 4 of the Access Code, the ERA must consider the proposed revised access arrangement and make a decision to either approve or not approve the proposed revisions. The criteria for approval are set out in sections 4.28 and 4.29 of the Access Code:

4.28 Subject to section 4.32, when making a *draft decision* or *final decision*, the *Authority* must determine whether a *proposed access arrangement* meets the *Code objective* and the requirements set out in Chapter 5 (and Chapter 9, if applicable) and:

(a) if the *Authority* considers that:

(i) the *Code objective* and the requirements set out in Chapter 5 (and Chapter 9, if applicable) are satisfied — it must approve the *proposed access arrangement*; and

(ii) the *Code objective* or a requirement set out in Chapter 5 (or Chapter 9, if applicable) is not satisfied — it must not approve the *proposed access arrangement*; and

(b) to avoid doubt, if the *Authority* considers that the *Code objective* and the requirements set out in Chapter 5 (and Chapter 9, if applicable) are satisfied, it must not refuse to approve the *proposed access arrangement* on the ground that another form of *access arrangement* might better or more effectively satisfy the *Code objective* and the requirements set out in Chapter 5 (and Chapter 9, if applicable).

{Note: The effect of section 4.28 is to make the *Authority's* decision in relation to a *proposed access arrangement* a "pass or fail" assessment. The intention is that, if a *proposed access arrangement* meets the *Code objective* and the requirements set out in Chapter 5 (and Chapter 9, if applicable), the *Authority* should not refuse to approve it simply because the *Authority* considers that some other form of *access arrangement* might be even better, or more effective, at meeting the *Code objective* and the requirements set out in Chapter 5 (and Chapter 9, if applicable).}

4.29 The *Authority*:

(a) must not approve a *proposed access arrangement* which omits something listed in section 5.1; and

(b) may in its discretion approve a *proposed access arrangement* containing something not listed in section 5.1; and

(c) must not refuse to approve a *proposed access arrangement* on the ground that it omits something not listed in section 5.1.

The objective of the Access Code or 'Code objective' is set out in section 2.1 of the Access Code:

2.1 The objective of this Code ("**Code objective**") is to promote efficient investment in, and efficient operation and use of, *services* of *networks* in Western Australia for the long-term interests of *consumers* in relation to:

(a) price, quality, safety, reliability and security of supply of electricity;

(b) the safety, reliability and security of *covered networks*; and

(c) the environmental consequences of energy supply and consumption, including reducing greenhouse gas emissions, considering land use and biodiversity impacts, and encouraging energy efficiency and demand management.

{Note: *Consumers* in the context of the *Code objective* has the meaning in this Code being "a person who consumes electricity".}

Sections 2.3 and 2.4 of the Access Code sets out how the Access Code objective interacts with other objectives, requirements and factors specified in the Access Code:

2.3 Where this Code specifies one or more *specific criteria* in relation to a thing (including the making of any decision or the doing, or not doing, of any act), then:

(a) subject to section 2.3(b), the *specific criteria* and the *Code objective* all apply in relation to the thing; and

(b) subject to section 2.4, to the extent that a *specific criterion* and the *Code objective* conflict in relation to the thing, then:

(i) the *specific criterion* prevails over the *Code objective* in relation to the thing; and

(ii) to the extent that the *specific criterion* conflicts with one or more other *specific criteria* in relation to the thing, the *Code objective* applies in determining how the *specific criteria* can best be reconciled and which of them should prevail.

2.4 If the *Code objective* is specified in a provision of this Code as a *specific criterion*, then the *Code objective* is to be treated as being also a *specific criterion* for the purposes of section 2.3, but to the extent that the *Code objective* conflicts with one or more other *specific criteria* the *Code objective* prevails.

Factors the ERA must have regard to when deciding whether to approve an access arrangement are set out in sections 4.30 to 4.32 of the Access Code:

4.30 In determining whether to approve a *proposed access arrangement*, the *Authority* must have regard to following:

(a) the geographical location of the network and the extent (if any) to which the network is interconnected with other networks; and

(b) contractual obligations of the *service provider* or other persons (or both) already using the network; and

(c) the operational and technical requirements necessary for the safe and reliable operation of the network; and

(d) to the extent relevant — *written laws* and *statutory instruments*.

4.31 Section 4.30 does not limit the factors the *Authority* may have regard to.

4.32 The *Authority* must not approve a *proposed access arrangement* which would, if approved, require the *service provider* or another person to engage in an act or omit to engage in an act which would contravene a *written law* or a *statutory instrument*.

The process the ERA must follow for the review is set out in chapter 4 of the Access Code. Sections 4.12 to 4.14 of the Access Code set out the procedural requirements for making the draft decision:

4.12 The *Authority* must consider any submissions made under section 4.11 and any further *access arrangement information* submitted under section 4.11A on a *proposed access arrangement* and must make a *draft decision* either:

(a) to *approve* the *proposed access arrangement*; or

(b) to not *approve* the *proposed access arrangement*, in which case the *Authority* must in its *reasons* provide details of the amendments required to the *proposed access arrangement* before the *Authority* will approve it.

4.13 The *Authority* must, as soon as practicable after the due date for submission of further *access arrangement information* under section 4.11A, *publish*:

(a) the *draft decision*;

(b) *reasons* for the *draft decision*;

(c) an invitation for submissions on a *draft decision*; and

(d) notice of a predetermination conference, which must include the time, date and place of the predetermination conference.

4.14 The *Authority* must hold the predetermination conference at the time, date and place specified in the notice under section 4.13 and in any event, within 15 *business days* of the notice for the purpose of explaining the *draft decision*.

Appendix 2 Submissions received

Public submissions received are listed below.

Submissions on issues paper	Date received
Director of Energy Safety	11 July 2022
Australian Energy Council supplementary submission	10 May 2022
WA Expert Consumer Panel	29 April 2022
RAC	27 April 2022
Shire of Mingenew	27 April 2022
Chamber of Minerals and Energy	27 April 2022
Alinta Energy	20 April 2022
Australian Energy Council	20 April 2022
Chamber of Commerce and Industry WA	20 April 2022
Change Energy	20 April 2022
Collgar Windfarm	20 April 2022
Craig Hosking	20 April 2022
Evie	20 April 2022
Noel Schubert	20 April 2022
Perth Energy	20 April 2022
Synergy	20 April 2022
WA Local Government Association	20 April 2022
Western Australian Council of Social Service	20 April 2022
Australia Microgrid Centre of Excellence	19 April 2022

Submissions on additional tariff structure and reference service information	Date received
Evie	27 July 2022
Collgar Windfarm	27 July 2022
Electric Vehicle Council	26 July 2022
Australian Energy Council	26 July 2022
Noel Schubert	26 July 2022

Submissions on additional tariff structure and reference service information	Date received
Synergy	26 July 2022
WA Council of Social Service	26 July 2022
WA Expert Consumer Panel	26 July 2022

Engagement with regional communities	Date
Goldfields Voluntary Regional Organisation of Councils (WALGA)	27 May 2022
Regional CCI Power Outage Survey Kalgoorlie-Boulder Chamber of Commerce and Industry	3 June 2022
Northern Country Zone (WALGA)	9 June 2022
Shire of Morawa	16 June 2022
Central Country Zone (WALGA)	24 June 2022
Shire of Chapman Valley	21 June 2022
Shire of West Arthur	1 July 2022