



Economic Regulation Authority

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

Attachment 3A: AA4 Capital Expenditure

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Note

This attachment forms part of the ERA's final 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 final decision.

The final decision comprises all of the following attachments:

Final 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 (this document)

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

1. Summary

This attachment deals with capital expenditure incurred by Western Power during AA4.

At each access arrangement review, the ERA is required to assess actual capital expenditure incurred in the previous access arrangement period to determine whether it can be added to the regulated asset base.

In the draft decision, the ERA approved the actual AA4 capital expenditure for inclusion in the opening regulated asset base subject to:

- Amending input errors to ensure the capital expenditure for 2017/18 to 2020/21 in the revenue model is consistent with the audited regulatory accounts.
- Updating forecast expenditure for the 2021/22 year to actuals as reported in the 2021/22 audited regulatory accounts.
- Western Power providing evidence that efficiency savings equal to the expenditure of \$24.9 million on the Customer Management System have been incorporated in the proposed efficient base operating expenditure or forecast operating expenditure.

In its revised proposal, Western Power:

- Amended the input errors to ensure the capital expenditure for 2017/18 to 2020/21 in the revenue model was consistent with the audited regulatory accounts.
- Updated forecast expenditure for the 2021/22 year to actuals as reported in the 2021/22 audited regulatory accounts.
- Provided additional evidence on the efficiency savings attributable to the Customer Management System.

Summary of final decision on AA4 capital expenditure

The ERA has approved the actual AA4 capital expenditure for inclusion in the opening regulated asset base.

The reasons for the ERA's final decision on AA4 capital expenditure are set out in this attachment.

2. Regulatory requirements

To include the actual capital expenditure incurred during AA4 in the regulated asset base, Western Power must satisfy the ERA that the expenditure meets the new facilities investment test (NFIT) and associated provisions that are set out in section 6.52 to section 6.56 of the Access Code.

The new facilities investment test considers both the efficiency and purpose of an investment. The test ensures that prices increase only to the extent necessary to maintain the safety of the network and the reliability of provision of contracted covered services or, otherwise, there is a benefit to users that justifies an increase in prices.

In the case of augmentations to the network for new demand, expenditure will meet the new facilities investment test when the investment is the efficiently delivered lowest cost option and the forecast additional revenue from the augmentation does not require an increase in prices.

As required under section 6.56 of the Access Code, the ERA published a guideline on factors that will be considered in new facilities investment test determinations.¹

An extract of the Access Code provisions relevant to the AA4 capital expenditure is included in Appendix 1.

¹ The guideline can be found [here](#).

3. Western Power's initial proposal

In its initial proposal, Western Power provided analysis of differences between actual expenditure during AA4 with the forecast capital expenditure included in the AA4 access arrangement decision. As the initial proposal was submitted in February 2022, the expenditure of the final year of AA4 (2021/22) included forecast values.

A comparison of Western Power's actual capital expenditure with the forecast expenditure included in the AA4 access arrangement decision is set out in Table 1.

Table 1: Initial proposal AA4 actual and forecast net capital expenditure (real \$ million at June 2022)

Expenditure category	AA4 Actual	AA4 Forecast	Over/(under) spend
Transmission network:			
Asset replacement and renewal	234.5	265.2	(30.7)
Growth	129.9	114.6	15.3
Compliance	122.0	183.4	(61.4)
Improvement in service	1.5	0.0	1.5
Total transmission network	487.9	563.2	(75.3)
Distribution network:			
Asset replacement and renewal	1,339.9	1,381.0	(41.1)
Growth	252.1	524.2	(272.1)
Compliance	199.0	201.6	(2.6)
Improvement in service	21.7	11.4	10.3
Total distribution network	1,812.7	2,118.2	(305.5)
SCADA and communications	213.1	99.7	113.4
Corporate support	535.4	470.2	65.1
Total net capital expenditure	3,049.1	3,251.3	(208.2)
Less advanced metering communications expenditure recovered under section 6.5G of the Access Code ²	(113.8)	-	(113.8)
Adjusted net capital expenditure	2,935.3	3,251.3	(316.0)

Source: ERA analysis of Western Power data

Western Power's reasons for differences between forecast and actual expenditure are set out below.

Transmission asset replacement and renewal

Transmission asset replacement and renewal expenditure was \$30.7 million less than forecast. The variances at a program level that contributed to this difference in expenditure were:

² This expenditure has been included in the amount shown for distribution network asset replacement and renewal.

- Power transformers: \$16.7 million less than forecast on replacement of transmission power transformers. This was due to changes in the long-term strategy to decommission the 66 kV network. Innovative alternative options such as refurbishment, procurement of strategic spares, as well as contingency planning were carried out to manage the risk associated with the deferral of replacements. For example, the Tate Street T1 and T3 replacement was descoped and changed to a decommission project and the 66 kV transformers in the east country have been deferred to allow time for the new DER strategy and 66 kV network rationalisation strategy to be developed. Western Power notes this change in strategy has enabled it to replace and renew power transformers at lower cost than forecast, resulting in a better outcome for the community.
- Protection: \$10.9 million more than forecast due to the complexities with the replacement of protection systems. To comply with new standards and achieve standardisation (which provides benefits in the long term), associated systems needed to be upgraded, resulting in additional costs and volumes compared to forecast.
- Static Var Compensator: \$6.5 million higher than forecast. Due to the more technically complex and bespoke nature of the project than anticipated, significant additional internal work was required to manage the design, construct, and commissioning procurement. The vendor price also exceeded Western Power's initial estimates due to required changes in the design and commissioning scope.
- Switchboards: \$48.8 million less than forecast. This was in part due to a change in approach during the period, which resulted in lower replacement costs. After the AA4 submission, Western Power, supported by the original equipment manufacturer, undertook a detailed investigation to test the viability of refurbishment of the substation pitch filled switchboards at Hay Street and Milligan Street rather than replacement of the switchboards. The primary objective was to identify treatment options that could manage these risks to tolerable levels with a lower capital investment, compared to the previous plan (and the basis for the AA4 cost estimate) which involved replacement of the switchboards. As a result, the investment was completed on schedule and under budget, due to identifying a lower cost alternative to the initial plan to replace the switchboards. Delays to the Osborne Park switchboard replacement due to access constraints and the unexpected failure of the T2 transformer cable box resulted in the subsequent delay of Manning Street and Yokine switchboard replacements to the AA5 period. Due to the configuration of the network, when Western Power works on one of these three substations it needs to transfer load to the other two substations, so works could not happen at these sites in parallel.
- Primary plant: \$8.7 million more than forecast. The proposed expenditure for the AA4 period was developed based on the actual expenditure during the AA3 period. Since the forecast was developed, Western Power states it has improved the robustness of the commercial and compliance processes and outsourced the design process, which has contributed to the increased cost of the program.

Transmission growth

A more detailed breakdown of transmission growth related expenditure is shown in Table 2.

Table 2: Initial proposal AA4 actual and forecast transmission growth capital expenditure (real \$ million at June 2022)

Expenditure category	AA4 actual	AA4 forecast	Over/(under) spend
Capacity expansion	108.0	59.6	48.3
Customer driven	297.7	126.7	171.1
Gross capital expenditure	405.7	186.3	219.4
Contributions	(275.8)	(71.7)	(204.1)
Net capital expenditure	129.9	114.6	15.3

Source: ERA analysis of Western Power data

Actual capital expenditure was higher than forecast due to higher customer-driven transmission access and line relocation investment from increased access for renewable generators and capacity credits, and major transport infrastructure projects (such as Metronet) that were being delivered as part of the economic stimulus in response to the COVID-19 pandemic.

AA4 actual transmission capital investment included:

- Extending the network capacity in the Eastern Goldfield region including:
 - Providing 43 MW of reference-service capacity in the Eastern Goldfield region load area to overcome network constraints and connecting major customer loads and additional generation capacity across the Western Power Network.
 - Developing an Eastern Goldfields Load Permissive Scheme that will allow prospective customers in the Eastern Goldfields to access non-reference power. Western Power notes there are a number of customers progressing connection under this arrangement.
 - Completion of the West Kalgoorlie Static Var Compensator (SVC) Replacement project. The SVC Replacement project ‘maintains’ existing network capacity.
- Establishing four new substations (Yandin Terminal, Badgingarra Wind Farm, Eneabba Terminal, and Leath Road) to connect new, large customers.
- Installation of 350 MVAR of reactors to address reactive power issues across the Western Power Network due to minimum demand.
- Installation of a 490 MVAR transformer at Kemerton terminal to address the asset condition issues and cater for the forecast uplift in customer load.
- Reinforcing the Geraldton Transmission System to address the asset issues related to the deteriorated condition of assets and the risk of explosive failure of the aged and deteriorated pitch-filled switchboard by installing a third 132/22 kV transformer and express feeders.

Transmission compliance

Transmission regulatory compliance capital expenditure was \$61.4 million less than forecast. Western Power states this was largely due to a change in delivery strategy during the AA4

period that resulted in a number of programs that were previously stand-alone programs with targeted asset lists being progressed to a zonal treatment approach, therefore reducing targeted volumes. Further, a heavy commitment of resources was required to be diverted to conduct testing and subsequent asset replacement for a particular model of current transformer that experienced an unexpected failure rate.

The main variances at a program level that contributed to this difference in expenditure were:

- Transmission poles and towers: \$19.5 million less than forecast due to numerous delivery challenges associated with scoping and long-term planning as well as various different access constraints, including network access and site access. Changes have been made to the approach to the wood pole replacement and reinforcement program to mitigate these delivery challenges in the future.
- Substation security: \$43.7 million less than forecast due to several factors including:
 - Delays to the completion of the revised Network Facilities Assets strategy that caused some reprioritisation and scope changes to the sites being addressed in the AA4 period.
 - Phase two of the substation fence replacement program has been delayed, with some of this program expected to fall into the AA5 period.
 - Reduced scope for the Edmund Street and O’Connor Substations. These were planned as a full fence replacement, however, after consideration of the design report the works were downgraded to only electronic security which is being delivered under the volumetric Hot Spot Project.
 - The scope for the Western Terminal fence and site security upgrades was significantly reduced due to the site being identified for future decommissioning.

Distribution asset replacement and renewal

A more detailed break-down of the AA4 distribution asset replacement and renewal capital expenditure is shown in Table 3.

Table 3: Initial proposal AA4 actual and forecast distribution asset replacement and renewal capital expenditure (real \$ million at June 2022)

Expenditure category	AA4 actual	AA4 forecast	Over/(under) spend
Pole management	702.5	704.3	(1.8)
Metering	163.3	157.1	6.2
State Underground Power Program	122.3	165.6	(43.4)
Network renewal undergrounding program	22.8	0.0	22.8
Standalone power systems	53.8	0.0	53.8
Other asset replacement and renewal	363.4	462.9	(99.5)
Total gross expenditure	1,428.0	1,489.8	(61.8)

Expenditure category	AA4 actual	AA4 forecast	Over/(under) spend
Capital contributions:			
Metering	(16.5)	(19.3)	2.8
State Underground Power Program	(71.6)	(89.5)	17.9
Total contributions	(88.1)	(108.8)	20.7
Net capital expenditure	1,339.9	1,381.0	(41.1)

Source: ERA analysis of Western Power data

The variances included:

- Pole management: \$1.8 million less than forecast. This was the result of changing the strategy to reinforce poles, where possible, as agreed with the safety regulator after the AA4 final decision. The volume of pole replacements reduced, however, pole reinforcement volumes increased. The reduction in cost of the pole management program as a result of this change in strategy was offset by an increase in pole replacement unit rates (due to a number of factors including contractor rate variations, change in delivery mix, new environmental compliance costs, and work practice changes to implement new safety management requirements under AS5577).
- Metering: \$6.2 million higher than forecast due to the deployment of more AMI than forecast, and the inclusion of communication and ICT infrastructure to support AMI. Only capital expenditure associated with the installation of AMI meters was included in the forecast. Changes to legislation during the AA4 period enabled the recovery of capex relating to communications and ICT incurred during the AA4 period.
- State Underground Power Program: Underspent because Western Power, in collaboration with EPWA, put the development of round 7 on hold while assessing the feasibility of a new undergrounding program and funding arrangement. Western Power noted the intent was that the new program would provide a more equitable outcome and greater benefits for the local governments and ratepayers as well as targeted strategic benefits for the network.
- The network renewal undergrounding program and standalone power systems were not included in the proposed expenditure for AA4.
- Other asset replacement and renewal:
 - Conductor management: \$96 million lower than forecast mainly due to reduction in volumes due to alternate strategies to manage the risk including undergrounding and standalone power systems.
 - Streetlight replacement: \$32.7 million higher than forecast mainly due to the addition of the streetlight luminaires replacement program, and minor increases in streetlight underground cable fault replacements and unit rates.
 - Transformer management: \$22.4 million lower than forecast due to a reduction in the volume of transformers that needed to be replaced based on Western Power's risk-based methodology and a significant reduction in the unit rate driven by a change in transformer suppliers.
 - Cable management: \$9.9 million higher than forecast due to the capitalisation of work that was historically classified as operating expenditure in addition to the replacement of feeder exit cables associated with switchboard replacement and upgrade works at Zone Substations that were not foreseen prior to the AA4 period.

- Switchgear management: \$4.2 million lower than forecast due to a change in the works mix, including less complex ring main unit replacements and less switch disconnector replacements than was forecast.

Distribution growth

A more detailed breakdown of distribution growth related expenditure is shown in Table 4.

Table 4: Initial proposal AA4 actual and forecast distribution growth capital expenditure (real \$ million at June 2022)

Expenditure category	AA4 actual	AA4 forecast	Over/(under) spend
Capacity expansion	73.5	190.2	(116.6)
Customer driven	587.8	682.4	(94.6)
Gifted assets	275.9	440.8	(164.9)
Gross capital expenditure	937.3	1,313.4	(376.1)
Less contributions ³	(685.2)	(789.2)	104.0
Net capital expenditure	252.1	524.2	(272.1)

Source: ERA analysis of Western Power data

Western Power stated that over the AA4 period, it had seen a continued slowdown in the growth rate of peak demand. Western Power stated the slowed growth reflected a change in a range of factors including:

- a series of mild summers, resulting in feeder peaks being lower than expected
- the continued take-up of self-generation via solar PV and energy efficiency appliances
- changing consumer behaviour, driven in part by prices and the economic climate.

The reduction in growth rate and load forecasts led Western Power to review the need for proposed growth-related distribution expenditure. This resulted in a number of distribution growth-related projects being postponed.

The increased PV penetration led to a number of challenges for the operation of the transmission and distribution network relating to voltage and power quality. At the time of the AA4 proposal, the focus of capacity expansion expenditure was to mitigate undervoltage risks. Throughout the AA4 period, this has not eventuated, however, the increased PV penetration has shifted focus to overvoltage mitigation. Midway through the AA4 period, significant unexpected transmission expenditure was required to mitigate and manage the overvoltage risk. This work has also had downstream flow on effects, resulting in less expenditure required to manage voltage issues on the distribution network.

Higher investment was also required during the AA4 period to mitigate reactive power issues on the distribution network as a result of minimum demand events. This issue became prevalent midway through the AA4 period, and therefore expenditure was not allocated at the time of the AA4 Final Determination.

³ Includes gifted assets.

Distribution compliance

Distribution regulatory compliance investments were \$2.6 million less than forecast. Western Power stated the main variances at a program level that contributed to this difference in expenditure are:

- Bushfire management costs: \$21.9 million lower due to the introduction of new surveying technology (LiDAR), that has enabled more effective assessment of clashing conductor bays, and introduction of a HV spreader solution which has led to lower costs.
- Pole management compliance program costs: \$29.9 million higher due to an increase in cross arm and insulator replacement volumes in the last two years to manage pole top fire risks resulting from a change in strategy, impacts from pausing the pole top silencing program due to a workforce safety incident and due to the impact from Cyclone Seroja – all of which resulted in close to double the number of volumes replaced. Western Power states the AA4 approved unit rate was based primarily on planned work which was more dispersed (PAR), while actuals replacements included more reactive and clustered (planned) work, which are both cheaper. Cross Arm Replacement contributed to the increase by \$11.69 million and insulator replacement by approximately \$15.36 million.
- Power quality remediation work: \$14.2 million reduction due to high level transmission solutions being implemented that resulted in Medium Voltage and therefore Low Voltage reductions, reducing the need for power quality remediation work on the distribution network.
- Connection management costs: \$9.9 million higher because the AA4 proposal only included the initial stage of the Service Connections Condition Monitoring program. Stage 2 of the program was brought forward into the AA4 period as part of the WA Government's Recovery Plan.

Distribution improvement in service

Western Power stated the \$10.3 million increase compared with forecast was due to:

- The integration of storage projects in response to emerging minimum demand issues, which realised a step change to the network's energy topology and are expected to result in improvements to reliability performance. These investment options were not considered at the time of the AA4 proposal as the technology was not widely used due to the economics of the technology.
- Expenditure on the Kalbarri microgrid was higher than forecast at the time of the AA4 proposal. Western Power stated this was due to the initial cost estimate being based on a feasibility assessment in the context of it being a new technological solution for the network. Further scoping and design of the delivery solution (as capability matured) resulted in costs that were higher than the initial feasibility estimates.

SCADA and communications

Total SCADA and communications expenditure was \$113.4 million higher than forecast.

Western Power noted that in the AA4 final determination, the ERA acknowledged that Western Power needed to address a large number of obsolete (unsupportable and aged) distribution and transmission SCADA and Telecommunications assets. However due to concerns about Western Power's ability to deliver a large SCADA investment program, the ERA approved a level of expenditure consistent with the AA3 actual expenditure. During the AA4 period Western Power was able to deliver more than the forecast expenditure.

Corporate support

A more detailed break-down of corporate support capital expenditure is shown in Table 5.

Table 5: Initial proposal AA4 actual and forecast corporate support capital expenditure (real \$ million at June 2022)

Expenditure category	AA4 actual	AA4 forecast	Over/(under) spend
Business support	241.9	248.7	(6.8)
IT	293.5	221.5	72.0
Total corporate support	535.4	470.2	65.1

Source: ERA analysis of Western Power data

Western Power stated that the following IT projects, not specifically detailed in the AA4 proposal, had been undertaken during AA4:

- Cyber Security Strategy: implementation of the response to cyber security risks in alignment with the Australian Energy Sector Cyber Security Framework developed by AEMO and applicable to Western Power as an electricity utility classified as critical infrastructure.
- Grid Transformation Engine (GTEng): design and implementation of the Enterprise GTEng which is a new capability that models the long-term planning of the network and enables its modernising and the embedding of new technologies and energy transformation scenarios.
- Customer Management System: implementation of a fit for purpose enterprise customer management system and internal processes for managing all relationships and interactions with customers and potential customers to improve customers' experience and improve Western Power's productivity.
- ICT solutions to support regulatory reforms and policy changes.

4. Draft decision

Submissions did not have any specific comments on AA4 actual expenditure.

In the draft decision, the ERA considered whether the capital expenditure Western Power had incurred during AA4 was consistent with the requirements of the Access Code. These considerations are documented below in the following order:

- Verification that the expenditure was actually incurred.
- An assessment of the expenditure against the new facilities investment test in section 6.51A of the Access Code.

4.1 Verification of claimed new facilities investment

In accordance with the ERA's guidelines for access arrangement information, Western Power provided regulatory accounts that reconcile the costs of regulated activities with a set of base accounts for the business.

The adjustments in the regulatory accounts include:

- Removing capitalised borrowing costs that are not properly recorded as capital expenditure in the regulatory accounts.
- Restating capital contributions to be on a cash received basis.
- Removing intellectual property, capital provisions and other expenditure that does not meet the new facilities investment test.

The regulatory accounts are audited by the Office of the Auditor General.

The ERA reviewed the adjustments made in the regulatory accounts and considered them to be appropriate and consistent with previous practice.

The ERA identified small discrepancies between the capital expenditure values input to Western Power's regulated revenue model and the values reported in the regulatory accounts. The ERA corrected these errors in its draft decision. In addition, it was noted the forecast values for the 2021/22 year needed to be updated to reflect actual expenditure.

Draft decision required amendment 1

The AA4 actual capital expenditure included in the regulatory revenue model must be amended to be consistent with the regulatory accounts. Forecast expenditure for 2021/22 must be updated to actuals.

4.2 Application of the new facilities investment test to actual capital expenditure

As set out in section 3 above, overall actual expenditure was broadly in line with the total forecast expenditure for AA4 although there were some significant reallocations between investment categories.

This is permitted under the regulatory framework at each access arrangement review, the ERA approves a target revenue that is based on forecast expenditure. During the access arrangement period, Western Power must manage its business to meet its obligations and is

incentivised to minimise its costs as it generally keeps the benefit of any out-performance of cost forecasts and incurs the cost of any under-performance. This is the basis of incentive regulation, whereby the service provider is faced with an incentive to minimise costs.

However, for some investment categories where the incentive structure would fail to operate as normally expected, an investment adjustment mechanism can be applied. If the investment adjustment mechanism applies, target revenue is adjusted at the next access arrangement to remove any economic gain or loss.⁴

During the AA4 period, growth expenditure and expenditure relating to the State Underground Power Program was subject to the investment adjustment mechanism. As these investment categories were underspent against forecast, the AA5 target revenue included an adjustment of approximately \$40 million that returns the economic gain to customers.

The ERA sought advice from its technical consultant Engevity on whether Western Power's AA4 expenditure was consistent with the requirements of the new facilities investment test.

Engevity conducted a structured assessment of a sample of projects and programs for each of the major investment categories.

From its review, Engevity observed that Western Power benchmarked well against similar networks in the NEM and had robust capital expenditure governance and asset management processes that align with good industry practices.

Engevity performed a structured assessment on material issues for each major project and its programs. Engevity concluded that Western Power's capital expenditure over AA4 was prudent and efficient except for \$24.9 million spent on a customer management system.

Engevity noted that although the business case for the customer management system highlighted a range of benefits to justify the expenditure, Engevity had been unable to establish whether the cost savings had been incorporated in the operating expenditure forecasts. On that basis, Engevity recommended the capital expenditure of \$24.9 million should be excluded from the regulated asset base.

Based on the technical consultant's advice, and subject to Western Power providing evidence that the cost savings from the customer management system have been incorporated in the operating expenditure forecasts, the ERA was satisfied that the actual expenditure incurred in AA4 was consistent with the new facilities investment test and can be included in the opening capital base for AA5.

Draft decision required amendment 2

Western Power must provide evidence that efficiency savings equal to the expenditure of \$24.9 million on the Customer Management System have been incorporated in the proposed efficient base operating expenditure or forecast operating expenditure.

⁴ The economic gain is the difference between the approved target revenue and the target revenue that would have been calculated for the period if there had been no forecasting error.

5. Western Power's revised proposal

In its revised proposal, Western Power states that it has:

- Updated its regulatory revenue model to reflect the AA4 capital expenditure reported in the annual regulatory accounts and the actual capital expenditure for 2021/22.
- Provided further information to demonstrate that its Customer Management System meets the requirements of the new facilities investment test.

6. Submissions on the revised proposal and draft decision

Synergy and the Australian Energy Council noted that assertions made by Western Power about efficiency savings from its Customer Management System were based on confidential information that was only provided to the ERA. They requested that the ERA should critically assess the information provided by Western Power before allowing the investment in the Customer Management System to be added to the regulated asset base.

Synergy also noted that there did not appear to have been any material improvement in call centre performance.

7. Considerations of the ERA

The ERA has reviewed Western Power's revised regulatory revenue model and is satisfied it is consistent with the AA4 capital expenditure reported in the annual regulatory accounts and actual capital expenditure for 2021/22 as required by draft decision required amendment 1.

The ERA has reviewed the further information provided by Western Power in relation to its Customer Management System in response to draft decision required amendment 2.

In its advice for the final decision, Engevity noted that it had not been provided with sufficient information to confirm that the benefits for the Customer Management System project were reflected in the base year operating expenditure or the net step change component of Western Power's operating expenditure forecast. Therefore, to ensure that customers were not paying for capital expenditure that had already been recovered by Western Power through operating expenditure benefits and incentive arrangements, Engevity recommended that the value of the project should be excluded from the opening regulated asset base for the AA5 period.

Consequently, draft decision amendment 2 required Western Power to provide evidence that efficiency savings equal to the expenditure of \$24.9 million on the Customer Management System had been incorporated in the proposed efficient base operating expenditure or forecast operating expenditure.

In response to the required amendment, Western Power submits that the Customer Management System, commissioned in 2019, was designed and delivered in two phases:

- Phase 1: \$10.7 million (nominal) to replace its obsolete customer information system (NetCIS) that was no longer fit for purpose.
- Phase 2 had two objectives:
 - \$4.1 million (nominal) to maintain service levels by undertaking initiatives that enable compliance, maintain safety, and replace remnant obsolete components.
 - \$10.1 million to improve service levels by undertaking initiatives designed to respond to:
 - customer feedback about issues with its current service offering
 - Energy Policy Western Australia feedback on the applications and queuing policy process
 - enable better communications with customers and reduce costs.

Western Power considers the expenditure incurred for phase 1 and the first objective for phase 2 was necessary to maintain the safety of the network and the reliability of provision of contracted covered services and consequently satisfies the reliability limb of the new facilities investment test in section 6.52(a)(iii) of the Access Code. Consequently, the investment does not need to be matched by efficiency savings.

However, Western Power provided information on the annual savings it had achieved through the implementation of phase 1. Western Power calculated the net present value of those savings over 10 years was \$2.7 million. As the savings commenced in 2019 and base operating expenditure has been derived from the 2020/21 financial year, these savings have been incorporated in the forecast base operating expenditure.

In relation to the \$10.1 million that was intended to improve service levels, Western Power acknowledges it needs to demonstrate that there is a net benefit in order for it to satisfy the new facilities investment test.

Over a 10-year period, Western Power has calculated a net present value benefit of minus \$1.9 million (based on tangible, realised and realisable benefits of \$7.3 million). Western Power notes the net present value over 15 years is positive.

The quantified benefits include:

- Reduced IT licence fees and external survey costs from bringing systems in-house.
- Reduced customer service, metering and planning and development manpower costs due to improved automated processes.
- Avoidance of postage due to ability to contact customers via email and SMS.

In addition to the quantified benefits, Western Power submits there are benefits that could not be quantified including:

- Providing the foundational technology to enable improvements to customer and stakeholder communications in the lead up to, and during outage events, aligned with the requirements of the Shepherd Report.
- Enabling Western Power to improve the connection process and to respond to a requirement from the ERA to enable monitoring of connection process timing and improve transparency of the applications process.
- Introducing a virtual assistant to enable customer online self-reporting of faults (power and streetlight) and respond to metering and vegetation agent queries.
- Reducing the costs of future ICT projects due to the investment in foundational technology as part of the CMS project.
- Addressing metering non-compliance by enabling a mobile friendly self-read app.

Western Power submits that the ERA should take into account the quantified and unquantified benefits for the “service improvement” component of the investment along with the fact that \$14.8 million of the investment meets the reliability limb of the new facilities investment test.

In its advice provided for the draft decision, Engevity noted it accepted the need, timing, delivery efficiency and strategic alignment. On that basis, the ERA is satisfied that the investment relating to phase 1 and the first objective for phase 2 satisfies the reliability limb of the new facilities investment test.

The ERA has reviewed Western Power’s net benefit calculations in relation to the second objective of phase 2 (to improve service levels). Factors that the ERA considers when assessing net benefits are described in the guideline that the ERA is required to publish under section 6.56 of the Access Code.⁵ In relation to the analysis timeframe the guideline published by the ERA states that:

The time period should generally be the shorter of the expected economic life of the principal assets of the new facility or the period over which the benefit will be available.

The expected economic life of Western Power’s Information System assets is six years. As noted above, Western Power has calculated a negative net benefit over a 10-year period. Applying a 6-year time period would reduce the net benefit further.

Nevertheless, the ERA notes the hard to quantify benefits Western Power has identified in relation to the Customer Management System. The capabilities the Customer Management

⁵ [Economic Regulation Authority, 2021, Guideline on factors that will be considered in net facilities investment test determinations and methods to value net benefits](#), page 17.

System provides should also contribute to Western Power's ability to achieve its two per cent productivity improvement during AA5 and will be important for enabling the transformation changes required during AA5 to be implemented, including the need for improved customer communications identified in the Shepherd report.

Taking account of the quantified and unquantified benefits, the ERA is satisfied the investment is consistent with the new facilities investment test.

Appendix 1 Code Extracts relevant to AA4 capital expenditure

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

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

and

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

The provisions in relation to a modified test do not apply as Western Power has not requested a modified test to be approved.

A “priority project” is a project specified as a priority project in a “whole of system plan”. A whole of system plan is 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.

6.54 In making a determination under section 6.52 the Authority must have regard to:

- (a) if the new facilities investment is in respect of a *priority project*, for the purposes of considering the amount invested or recovered under section 6.52(a), the unit costs of the service provider’s actual new facilities investment only; and
- (b) whether the new facilities investment was required by a written law or a statutory instrument.

6.55 Section 6.54 does not limit the matters to which regard must or may be had in making a determination under section 6.52.

6.55A If the Authority makes a determination under section 6.52, it must provide reasons for its determination in its draft decision and final decision, and such reasons must provide detail on how the Authority applied the guidelines referred to in section 6.56 in making its determination.