

Supplementary Report: Expenditure Review of Essential Water's Services

INDEPENDENT PRICING & REGULATORY TRIBUNAL

13 October 2022

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INDEPENDENT PRICING & REGULATORY TRIBUNAL (IPART)

Client: Independent Pricing & Regulatory Tribunal (IPART)

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Glossary

Term	Definition
AER	Australian Energy Regulator
AECOM Final Report	AECOM's report assessing Essential Water's 2022 Capital and Operating Expenditure to help inform IPART's Draft Report and Determination.
AECOM Supplementary Report	This Report - AECOM's report addressing issues raised in Essential Water's Draft Decision Response.
CAM	Cost Allocation Methodology
Essential Water Draft Decision Response	Essential Water's response to IPART's Draft Report and Determination for the 2022 Determination Period.
FTE	Full Time Equivalent
IPART	Independent Pricing and Regulatory Tribunal
IPART Draft Determination	IPART's Draft Determination on Essential Water's Prices for the 2022 Determination Period
IVMS	In-Vehicle Monitoring Systems
The Pipeline	The Broken Hill Pipeline
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
2019 Determination Period	The pricing period 1 July 2019 to 30 June 2022
2022 Determination Period	The pricing period 1 Jan 2023 to 30 June 2026

Executive Summary

The Independent Pricing and Regulatory Tribunal (IPART) is reviewing the prices Essential Water can charge for water and wastewater services in Broken Hill and the surrounding areas of Menindee, Sunset Strip and Silverton from 1 January 2023 to 30 June 2026. AECOM provided a review of Essential Water's proposed expenditure for this period, and its findings and recommendations are provided in AECOM's Final Report, which helped to inform IPART's Draft Determination.

IPART released its Draft Determination of *Maximum prices for water and wastewater services supplied by Essential Energy in Broken Hill* on 7 June 2022 and sought submissions from stakeholders. Essential Water provided a submission in response to the Draft Determination on 9 September 2022 (Essential Water's Draft Determination Response). AECOM has been asked to review Essential Water's Draft Determination Response and provide a response to several of the issues raised relating to expenditure. Our supplementary findings are presented in this Supplementary Report and summarised below.

Operating Costs - Labour

In our Final Report, we recommended several efficiency adjustments relating to savings derived from capital projects, specifically:

- 4 FTE reduction due to decommissioning the Menindee Pipeline
- 1 FTE reduction due to the Wills St Wastewater Treatment Plant (WWTP) upgrade (and decommissioning of the South WWTP)

Essential Water's submission outlines that the assessment of operational benefits of these projects (as outlined in the Pricing Proposals and Business Case) were made under different circumstances and should not be applied using the top-down approach adopted by AECOM.

Essential Water has stated that efficiencies have already been achieved due to the de-pressurisation of the Menindee pipeline in April 2019. Evidence has not been provided to support this statement, and the commentary provided by Essential Water in the 2022 Pricing Proposal appears to contradict this, suggesting that labour efficiencies related to this project have not been realised yet. Based on this, we consider that a reduction in labour costs resulting from this project should still be expected within the 2022 Determination Period, and do not have sufficient evidence to adjust our findings from the Final Report.

Regarding the other labour costs, there has not been any new information presented that impact our other findings on labour costs for Essential Water.

AECOM has not adjusted its recommendations from its Final Report. The impact of this is that the reduction of four FTEs from FY25 onwards and one FTE from FY26 onwards have still been applied to recommended efficient costs.

Operating Costs - Fleet

In our Final Report, we found that there was no basis for an increased allocation of costs to operating expenditure to occur in FY25 and FY26 and did not consider the forecast expenditure for fleet to be efficient. It was recommended that an average cost for the 2022 Determination Period of \$1.3 million per annum be adopted.

Essential Water has disputed AECOM's finding that investments in fleet over the 2019 Determination Period should drive savings for the 2022 Determination Period, stating the investment during the past period reflected renewals and upgrading of Essential Energy and Essential Water's fleet to include IVMS. Further it has suggested that increased costs in FY25 and FY26 are the result of both increased total fleet costs due to fleet renewals and a change in allocation from capital to operating costs.

These issues were raised and addressed within our Final Report. There has not been any new information presented that will impact our findings on fleet costs for Essential Water.

AECOM has not adjusted its recommendations from its Final Report. The impact of this, is that recommended efficient costs for fleet remain at \$1.3 million per annum.

Operating Costs – Hire Services

Our Final Report recommended that hire services costs be reduced to reflect a regular/base work pattern, and we sought to remove identified one-off costs from this base.

Essential Water has requested that the FY25 proposed hire services costs be reinstated to provide for regulatory support for its Pricing Proposal against an anticipated new regulatory framework.

We found that costs for regulatory submission support demonstrate a clear cost driver and are prudent. These are one off-costs proposed for FY25 and reflect a combination of historical costs and estimated costs to allow for development of the submission in line with a new regulatory framework.

In principle, these costs are efficient, however we note that historical regulatory submission costs have been included in AECOM's Final Report calculation of hire services costs for each year of the 2022 Determination period. These have been removed from this calculation and added as a one-off cost in FY25, to better reflect the nature of these costs as one-off costs.

AECOM has found that including hire services costs to support a regulatory submission is prudent, however note that regulatory support costs were previously included in the AECOM's calculation for ongoing hire services costs in the Final Report, so an adjustment to the calculation has been made. The impact of the adjustment is a minor increase from the Final Report in total recommended hire services costs across the 2022 determination period.

Resource Sharing

In our Final Report, we suggested that there may be potential for Essential Water and Essential Energy to realise benefits of resource sharing. We did not make a specific recommendation for efficiency adjustments.

Essential Water has outlined in its submission three main barriers to sharing resources with Essential Energy:

1. Skill sets do not match up – Essential Water require specific skill sets that are not needed in Essential Energy
2. Essential Energy is resource constrained
3. Within its regulatory framework, Essential Energy could only offer services on a full cost-recovery basis.

We found that the barriers to resource sharing identified by Essential Water could be considered transitory in nature, and subject to change over time. Opportunities to share resources should continue to be explored by Essential Water as circumstances change.

AECOM recommends that Essential Water revisit resource sharing at a future date.

Capital Expenditure

It is prudent practice for businesses faced with increased construction costs to examine opportunities to identify efficiencies and reduce costs where possible. Depending on the stage that the project is in, failing to consider opportunities to deliver savings could present a risk of sub-optimal outcomes for customers.

We have provided a high-level summary of options that may be considered by a good practice business when faced with higher-than-expected construction costs.

No recommendations for adjustments to capital costs have been made in this report.

The updated total recommended expenditure over the 2022 Determination Period is presented in Table 1. This reflects the findings in both our Final Report and this Supplementary Report. Total recommended efficient costs over the 2022 Determination Period are \$8.45 million (3.1%) lower than Essential Water's proposed costs. This reduction is marginally lower than what was proposed in our Final Report. We note that the recommended efficient costs are prior to any continuing efficiency adjustment being applied.

Table 1 Recommended Total Expenditure – 2022 Determination Period (\$M, \$FY22)

	FY23	FY24	FY25	FY26	FY27	Total
Essential Water Costs						
Operating expenditure	\$39.96	\$39.13	\$38.95	\$39.07	\$38.31	\$195.42
Capital expenditure	\$22.25	\$22.43	\$16.66	\$6.87	\$6.81	\$75.02
Total	\$62.21	\$61.56	\$55.61	\$45.94	\$45.12	\$270.45
AECOM Recommended Adjustments						
Operating expenditure	-\$0.60	-\$0.63	-\$0.83	-\$2.06	-\$1.75	-\$5.87
Capital expenditure	-\$2.81		\$0.12		\$0.11	-\$2.58
Total	-\$3.41	-\$0.63	-\$0.71	-\$2.06	-\$1.64	-\$8.45
Percentage Change	-5.5%	-1.0%	-1.3%	-4.5%	-3.6%	-3.1%
Recommended Efficient Costs, before continuing efficiency adjustment						
Operating expenditure	\$39.36	\$38.50	\$38.12	\$37.01	\$36.55	\$189.56
Capital expenditure	\$19.44	\$22.43	\$16.78	\$6.87	\$6.93	\$72.44
Total	\$58.80	\$60.93	\$54.90	\$43.88	\$43.48	\$262.00

1.0 Introduction

1.1 Context

Under the *Independent Pricing and Regulatory Tribunal Act 1992*, the Independent Pricing and Regulatory Tribunal (IPART) NSW is charged with regulating the prices for monopoly services such as energy, public transport and water. As part of this, it is required to review and set the maximum prices that public water utilities can charge for supply of their services. Generally, prices charged by utilities will allow recovery of efficient costs.

To assess the efficiency of water utilities' costs, IPART undertakes pricing reviews for each regulated utility at intervals (usually ranging between three and five years). Utilities are required to submit a pricing proposal to IPART outlining its proposed operating and capital costs. Typically, IPART will engage a consultant to review the costs and provide recommendations to IPART in making its determination.

In August 2021, IPART engaged AECOM to undertake a review of Essential Water's water and wastewater services capital and operating expenditure for the 2022 Determination Period. The purpose of this review was to support IPART's determination on establishing the maximum prices it may charge customers from 1 Jan 2023 for a period of up to five years. AECOM's findings are presented in its Final Report, which was published 7 June 2022.

IPART released its Draft Determination of *Maximum prices for water and wastewater services supplied by Essential Energy in Broken Hill* on 7 June 2022 and sought submissions from stakeholders. Essential Water provided a submission in response to the Draft Determination on 9 September 2022. AECOM has been asked to review Essential Water's Draft Determination Response and provide a response to several of the issues raised relating to expenditure. Our findings are presented in this Supplementary Report.

1.2 Essential Water's Response to the 2022 Draft Determination

Essential Water's Submission to IPART on the 2022 Draft Determination outlined its response to each of IPART's draft decisions and recommendations. With regards to the draft decisions on operating and capital expenditure, Essential Water delivered the following responses:

- *Operating Expenditure – Essential Water's total operating expenditure allowance for the 2022 determination period should be adjusted to reflect the updates to expenditure discussed in the submission. These are discussed in more detailed below.*
- *Capital Expenditure – Essential Water accepts IPART's Draft Decision, subject to appropriate adjustments to overheads for 2022.*

1.2.1 Operating Expenditure

Essential Water states in its submission that the Draft Determination compares Essential Water's operating costs against the NSW average when assessing its operating expenditure, but notes that the business has some *'unique characteristics that mean it is difficult to make meaningful comparisons with average water businesses in NSW'*, including

- Essential Water operates in a remote and outer regional area of NSW,
- Essential Water is relatively small compared to water businesses in other areas of NSW, and
- Essential Water's customers are dispersed across a relatively large service area.

Essential Water has highlighted that these factors put upwards pressure on their efficient operating costs and should be considered when setting expenditure targets.

Essential Water has raised concerns that the operating expenditure targets in IPART's Draft Determination are too low and reflect efficiency gains that are not feasible given their remote operation and outlook on costs over the period. Essential Water has stated in its submission that the operating expenditure allowances for the following categories are too low, and should be reconsidered:

- Labour Costs: Essential Water suggest that delivering the proposed labour cost reductions in the later years of the determination period will not be achievable.
- Hire Services Costs: Essential Water is seeking the full proposed expenditure for Hire Services in FY25 only and concedes to IPART's draft decision to reduce costs in other years.
- Fleet Costs: Essential Water is seeking the full proposed expenditure for fleet costs, citing savings as unachievable.

In addition to the responses relating to expenditure adjustments, Essential Water has stated in response to a suggestion in the Draft Decision that it has limited capacity to share resources between Essential Water and Essential Energy.

These issues are explored in more detail, and further findings provided in Section 3.0 of this report.

1.2.2 Capital Expenditure

Essential Water's submission does not respond directly to the Draft Determination on capital expenditure adjustments, however, does comment on the impacts of the extant economic conditions on its costs, citing quoted costs for capital projects that are 100-150% above the estimated cost from its original Pricing Proposal.

Essential Water comments that it expects to experience rises in construction costs which outstrip inflation. It suggests that it is committed to ongoing efficiency gains, however in the current conditions considers that a continuing efficiency factor to operating and capital expenditure allowances is '*out of step with the current economic environment.*'

AECOM has provided commentary on some potential options available to an organisation faced with increased construction costs for a significant capital infrastructure project.

2.0 Scope and Approach

Scope of the Supplementary Report

AECOM has been engaged by IPART to review Essential Water's submission on the Draft Determination and provide comment and/or updated findings on some of the relevant sections. This Supplementary Report responds to the following sections of Essential Water's Draft Determination Response:

- Operating Costs – Labour – Section 3.1
- Operating Costs – Fleet – Section 3.2
- Operating Costs - Hire Services – Section 3.3
- Operating Costs – Resource Sharing – Section 3.4
- Capital Costs – Increasing cost of capital projects – Section 4.0

We have not been asked to comment on the application of a continuing efficiency adjustment within this report, or any other area of our Final Report.

2.1 Approach

AECOM has responded to the comments made within Essential Water's submission, taking the following approach for each issue identified above:

1. Review the Essential Water Draft Decision Response
2. Revisit relevant information, such as AECOM's Final Report, IPART's Draft Report and Determination, Essential Water's 2022 Pricing Proposal and information provided through the request for information (RFI) process.
3. Identify any informational gaps and develop additional requests for information
4. Discussion with Essential Water to introduce requests for information, and follow up written RFIs via email
5. Review responses to RFIs
6. Using the available information, provide supplementary findings and impacts on recommended efficient costs, prior to any continuing efficiency adjustments being applied.

One of the key considerations in developing this supplementary report has been whether new information has been provided to support a change in our findings. Where a new argument has been presented, or new evidence made available for review, we have considered this in our supplementary review. If no new information has been provided to support a new finding, the findings in AECOM's Final Report will apply.

2.1.1 Structure

This report follows the structure as outlined in Table 2.

Table 2 Report Structure – Supplementary Report

Section	Heading	Description
1	Introduction	This section provides introduction and content to this report, including a summary of Essential Water's Draft Determination Response.
2	Scope and Approach	This section presents the scope, approach, structure and limitations of this report.
3	Operating Expenditure	This section provides our discussion and findings on operating costs.

Section	Heading	Description
		For each of the operating cost issues raised in Essential Water's Draft Determination Response, these have been addressed in this report by outlining, in order: <ol style="list-style-type: none"> 1. Our initial finding from our Final Report 2. Essential Water's Response to the Draft Decision 3. Additional discussion around specific matters 4. Findings and Recommendations of this Report
4	Capital Expenditure	This section provides commentary on potential options that could be explored to reduce capital costs on a project.
5	Recommendations	This section summarises the recommendations made in this Supplementary Report.

2.2 Report Limitations

The findings within the Supplementary Report are subject to the following limitations:

- Findings have been made based on the information available at the time. Where information was incomplete or unclear, a judgment has been made based on information available.
- This Report has been produced within short timeframes.

3.0 Operating Expenditure

3.1 Labour

3.1.1 AECOM's Final Report

In our Final Report, we recommended several adjustments to Essential Water's proposed labour costs to reflect efficiency savings:

- A \$0.1M adjustment to each year of the Determination Period to reflect the cost neutrality of an exercise which improved attribution of direct costs.
- A reduction of \$0.4M (four FTEs) from the expected decommissioning date of the Menindee Pipeline, i.e. from FY25 onwards, a saving outlined in Essential Water's 2019 Pricing Proposal.
- An adjustment equal to approximately one FTE (\$0.1M) from FY26 onwards, to reflect two benefits from the Wills St WWTP which relate to improved operating costs outcomes - the introduction of a more efficient plant and the decommissioning of the South WWTP – as noted in the project's Business Case.

These recommendations were adopted in IPART's Draft Determination.

3.1.2 Essential Water's Draft Determination Response

In response to IPART's Draft Determination regarding labour efficiencies, which adopted AECOM's recommendations, Essential Water has maintained the view that FTE reductions identified in the original business cases for the Menindee Pipeline and Wills St WWTP were made under different circumstances and should not be applied using the top-down approach adopted by AECOM. Essential Water has submitted that the relevant business cases were completed when staffing levels were at 72 FTE and the long-term sustainable workforce was planned to be 68 FTE. Currently, Essential Water employs 65 FTEs as a result of natural attrition and further efficiencies, citing further reductions in headcount are unachievable and should be reconsidered.

Essential Water has outlined the reduction as unachievable because:

- Essential Water already faces challenges in maintaining service standards on their aging system while attempting to deliver operating efficiency savings.
- Difficulty attracting and retaining skilled staff given Essential Water's operating constraints. Importantly, Essential Water want to retain core skills in-house and are hesitant to rely on contractors to satisfy resourcing, given their significant costs.
- Essential Water's aging workforce, with 39% of FTEs aged between 56 and 70 poses significant risk in retaining skills in-house and continuing to deliver their services to customers.
- Economic conditions are impacting Essential Water's operating environment and their ability to attract and retain skilled staff. Their capacity to compete for skilled labour is limited by their regulatory allowances and their remote location.

Essential Water has provided these reasons to justify their submission that the proposed reduction in headcount is not feasible and would result in poorer outcomes for their customers. Essential Water has maintained that a staffing level of 65 FTEs represents minimal safe operating levels for the 2022 Determination Period.

The specific issues raised are discussed further in the following sections.

3.1.3 Additional Discussion - Menindee Pipeline Decommissioning

To further clarify Essential Water's response, AECOM issued the following RFI relating to the Menindee Pipeline Decommissioning:

The 2019 Pricing Submission noted a reduction of 4 FTEs as a key benefit from this project. Can Essential Water please comment on whether this specific project is still expected to provide labour benefits, and if so, quantify these?

If savings are no longer expected in these areas, please can Essential Water provide a reason why this is?

In response to this RFI, Essential Water stated that its 2019 Pricing Submission identified a reduction of 4 FTEs as a result of the decommissioning of the Menindee Pipeline, commenting:

'This efficiency has already been achieved, due to the Menindee Pipeline being de-pressurised in April 2019, as a result of the change in our operations associated with the commissioning of the Broken Hill pipeline. Minimal resources are now allocated to maintain and repair the pipeline. Labour that historically would have been required to repair and maintain the pipeline has been reallocated elsewhere in our works program.'

AECOM has reviewed the 2019 Pricing Proposal, the 2022 Pricing Proposal and historical labour costs. There was a step down in FTEs for the water business observed from FY19 to FY20, however overall labour costs for the water business increased across this time frame. In its 2022 Pricing Proposal, Essential Water provided the following commentary about labour costs over the 2019 determination period under the heading 'Operational constraints limited our ability to achieve labour savings:'

'As part of our proposal to IPART's 2019 Determination, we forecast expenditure savings following the decommissioning of the Menindee pipeline and associated pumping stations. However, we are not able to decommission the Menindee pipeline until the graziers' pipeline is completed. As discussed in Chapter 6, heritage issues and further consultation has delayed the completion of the graziers' pipeline. As a result, we do not expect the Menindee pipeline to be decommissioned until June 2022.'

Essential Water's statement in its RFI response that the efficiencies have been realised within the 2019 period appears to contradict its statement in its 2022 Pricing Proposal, which indicated that one reason labour savings were *not* achieved was because the pipeline had not been decommissioned as planned during the 2019 period.

Essential Water's statement that efficiencies have already been achieved due to the de-pressurisation of the Menindee pipeline in April 2019 does not appear to be supported by evidence. We consider that as the pipeline is yet to be decommissioned, and that the commentary provided by Essential Water in the 2022 Pricing Proposal suggests that labour efficiencies related to this project have not been realised yet, a reduction in labour costs resulting from this project should still be expected within the 2022 Determination Period.

As the available information does not support quantification of benefits already realised and those yet to be realised, and we have not observed a step down in labour costs over the 2019 period, we do not have sufficient evidence to adjust our findings from the Final Report.

3.1.4 Additional Discussion - Wills St WWTP

To further clarify Essential Water's response, we issued the following request for information:

The Business Case noted efficiencies as a key benefit for proceeding with the project due to both:

1. *reduced operating costs of decommissioning the South WWTP*
2. *reducing the annual maintenance costs at Wills St WWTP.*

Can EW please comment on whether this project is still expected to deliver savings in accordance with these listed benefits and quantify these?

If savings are no longer expected in these areas, please can EW provide a reason why this is?

Essential Water has provided that the primary objective of the Wills WWTP upgrade project is to meet mandatory standards, and states 'While we expect other benefits, including reduced operating costs at the South WWTP and reduced maintenance costs at the Wills St WWTP these benefits were not quantified. The achievement of these benefits will not influence the outcome of the business case. Any

savings in labour associated with the Wills St WWTP upgrade will be redirected to other areas in our works program.'

In response to Essential Water's submission, we have reviewed the Business Case and Pricing Proposal, and observed that reduced operating costs are noted in both documents as benefits and objectives of the Wills St WWTP upgrade. We appreciate that it may not be the primary driver for the project, however we consider that operating cost benefits are expected of the project, as noted in both documents, particularly given the project involves the decommissioning of the South WWTP.

Essential Water has also made comment that the anticipated construction costs for this project are increasing significantly due to the prevailing economic conditions, particularly given its regional location. We note that this commentary relates to the capital costs associated with the project and should not have bearing on the ongoing operating costs at project completion, in real terms.

We do not consider that any additional evidence has been provided to us to support revising our findings from the Final Report.

3.1.5 Additional Discussion - Maintaining Service Standards

Essential Water has mentioned a number of service-related issues in its submission, for example, blockages at sewer pump stations, scour valve issues etc., stating that they are having to adopt a reactive approach to addressing some of these issues. AECOM has reviewed the Bureau of Meteorology *National Performance Report 2020-21: Urban Water Utilities* which indicates that Essential Water is facing issues with sewer breaks and chokes, with a significantly higher number of breaks and chokes per 1000 properties in comparison to similar, small utilities (61.4 against a median of 5.7). In other areas, Essential Water is performing better or comparably with other utilities in its category.

We appreciate that it is good asset management practice to adopt a more proactive/preventative approach to maintenance, and part of this includes a targeted capital program to maintain assets in a good state of repair and prevent failure of critical assets. Essential Water has proposed in its capital program over \$10M of replacements and repairs to water and sewer reticulation to address identified issues, which AECOM has found to be prudent in its Final Report.

We consider that a significant program of capital works is underway to address service failures. These capital works should be expected to deliver improvements in service delivery and should result in a steady reduction in reactive works as the new assets are installed, which should be reflected in operating costs. We consider that these reductions may be offset by addressing service performance in other areas, such as the areas described.

3.1.6 Findings and Recommendations – Supplementary Report

Essential Water maintains that it continues to face challenges in the labour market. It has not nominated the basis upon which it considers 65 FTEs to reflect the minimum staffing level. As stated in our Final Report, we are not able to confirm the contention that these FTEs are required.

Based on our review of available information and the discussion above, we do not have a clear basis to change any of the findings in our Final Report. Our recommendations around labour savings relate specifically to operating cost efficiencies expected from two projects. It is our view that these projects were expected to deliver operating cost savings, and that these savings should be delivered within the 2022 Determination Period as these projects are completed. We do not consider that sufficient evidence has been provided to revise these findings. The recommendations from our Final Report are summarised in Table 3.

Table 3 Labour Recommendations

Labour	FY23	FY24	FY25	FY26	FY27
Water					
Essential Water Proposed	\$6.43	\$6.43	\$6.22	\$6.35	\$6.22
AECOM Adjustment	\$0.00	\$0.00	-\$0.40	-\$0.40	-\$0.40
AECOM Recommended Costs	\$6.43	\$6.43	\$5.82	\$5.95	\$5.82
Sewerage					
Essential Water Proposed	\$1.49	\$1.49	\$1.44	\$1.47	\$1.44
AECOM Adjustment	\$0.00	\$0.00	\$0.00	-\$0.10	-\$0.10
AECOM Recommended Costs	\$1.49	\$1.49	\$1.44	\$1.37	\$1.34

3.2 Fleet Costs

3.2.1 AECOM's Final Report

Essential Water stated in its Pricing Proposal that fleet costs are a function of staff numbers. Despite the ratio of fleet cost to labour cost representing this function and FTEs remaining constant over the Determination Period, there were unexplained fluctuations in fleet costs that did not support Essential Water's claims. AECOM outlined in its Final Report that fleet costs are not varying in line with labour costs. Operating fleet costs observed in FY25 and FY26 of \$1.54 million and \$1.57 million respectively, are substantially higher than the allocated costs in FY21 of \$1.26 million, which includes the cost offset due to direct attribution of support costs to labour.

Essential Water contends that the variance in operating fleet expenditure is due to a shift in labour from capital to operating works. AECOM has refuted this justification because:

- Essential Water advised that majority of capital works are currently being delivered by contractors and not internal resources.
- We have not been informed of capital works which are being delivered by internal resources occurring specifically in years FY23, FY24, FY27 of the 2022 Determination Period and not in these two years (FY25, FY26).
- There are expected to be reductions in operating expenditure (labour effort) associated with the decommissioning of Menindee Pipeline and Wills St WWTP, which should in practice reduce the allocation of fleet costs to Essential Water operating expenditure.
- Investment in newer vehicles should reduce the maintenance requirements for those newer assets.

AECOM recommended in its review that an average cost for the 2022 Determination Period of \$1.3 million per annum be adopted, which excludes the anomalously high costs in FY25 and FY26.

3.2.2 Essential Water's Draft Determination Response

Essential Water has outlined in its submission that fleet costs are not a function of staff numbers per se, rather a function of staff working on projects, and a comparison of fleet costs to FTEs reflected a misunderstanding of cost drivers. Furthermore, Essential Water has disputed AECOM's finding that investments in fleet over the 2019 Determination Period should drive savings for the 2022 Determination Period, stating the investment during the past period reflected renewals and upgrading of Essential Energy and Essential Water's fleet to include In-Vehicle monitoring. The investment to ensure assets are fit-for-purpose was submitted by Essential Water as the cost of doing business in remote and regional locations.

Essential Water has stated on this basis and with future fleet costs increasing as operating expenditure for fleet maintenance outweighs capital expenditure, that there is insufficient evidence to justify the reduction in fleet costs proposed for the 2022 Determination Period.

3.2.3 Additional Discussion - Allocation Methodology

To further support its submission, Essential Water provided some additional information on the allocation methodology adopted for the fleet costs:

'Fleet charges are set by Essential Energy and allocated to each business unit in accordance with the Cost Allocation Methodology (CAM), as approved by the Australian Energy Regulator (AER). The CAM establishes a method for attributing direct costs and allocating indirect costs between various categories of Essential Energy's services. The aim of the CAM is to ensure direct and shared costs are allocated efficiently between business units, promoting efficient resource use and enabling efficient pricing signals to be sent to customers. A key principle of the CAM is that costs are allocated based on transactions or activities.'

AECOM reviewed the CAM as part of the Final Report, and we did not take issue with the allocation methodology as described. AECOM's findings in the Final Report were mostly related to the increased fleet costs projected over the period, and particularly within FY25 and FY26, which were not commensurate with the surrounding years.

3.2.4 Additional Discussion - FY25 and FY26 Fleet Costs

Essential Water reiterated in a response to an RFI that the major drivers for the cost increase in FY25 and FY26 are the reduction in capex person hours, given a greater proportion of cap ex will be outsourced, and a planned fleet renewal program, which increases the value of the total allocation pool. We note that the planned capital projects are to be largely outsourced and can see no specific reason why there would be a shift in FY25 and FY26. In addition, we understand that a fleet renewal program beginning in the 2019 Determination Period is ongoing, and this should result in reduced ongoing operating costs associated with a lower age profile of the fleet.

3.2.5 Findings and Recommendations – Supplementary Report

While AECOM did review the fleet costs in comparison to staff numbers, our recommendation was based on maintaining average historic costs over the determination period. Evidence has not been provided to support the increasing cost of fleet, and we maintain that investments in reducing the average age of the fleet should deliver savings in fleet maintenance.

The issues raised within Essential Water's submission were raised and addressed within our Final Report. There has not been any new information presented that will impact our findings on fleet costs for Essential Water. We conclude that the recommended fleet costs should not be adjusted from our Final Report finding, and this is reflected in Table 4.

Table 4 Fleet Cost Recommendations

Fleet	FY23	FY24	FY25	FY26	FY27
Water					
Essential Water Proposed	\$1.11	\$1.05	\$1.27	\$1.30	\$1.16
AECOM Adjustment	\$0.00	\$0.06	-\$0.16	-\$0.19	-\$0.05
AECOM Recommended Costs	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11
Sewerage					
Essential Water Proposed	\$0.23	\$0.22	\$0.27	\$0.27	\$0.25
AECOM Adjustment	-\$0.01	\$0.00	-\$0.04	-\$0.05	-\$0.02
AECOM Recommended Costs	\$0.23	\$0.23	\$0.23	\$0.23	\$0.23

3.3 Hire Services

3.3.1 AECOM's Final Report

AECOM recommended an annual hire services expenditure of \$0.84 million (with allocations between water and sewerage services specified by Essential Water), with an additional cost of \$0.50 million in FY23 associated with the comprehensive Water Storages Strategy. This recommendation was based on a projection of average historical costs where we excluded an outlier year (FY18) and removed one-off expenditures to identify a regular/base work pattern for contractors, assuming regular contract work will continue over the Determination Period.

3.3.2 Essential Water's Draft Determination Response

Responding to IPART's Draft Determination, Essential Water has conceded to IPART's Draft Decision, except in the case of FY25 where it expects to incur additional expenditure to support the preparation of its next pricing proposal to IPART, and therefore has requested to be allowed its full proposed expenditure amount. The additional expenditure to be incurred in FY25 reflects the equivalent costs incurred for the same activities in FY21 and has also taken into account IPART's expectations under its new water regulatory framework. Essential Water expects that the proposed hire service costs will be in order of \$0.4M in FY25 and will benefit customers through efficiencies and enhanced service levels.

3.3.3 Additional Discussion - Regulatory Submission Costs

It is reasonable to allow for costs to support the delivery of a regulatory submission, as there is a clear cost driver for these costs, in that it will allow Essential Water to meet a regulatory obligation. Regarding the basis for the quantum of costs, AECOM issued the following clarification to Essential Water to evaluate the regulatory submission costs:

We understand that \$400,000 in regulatory submission costs (hire services) are proposed for FY25, and that the basis for this number is as follows:

- \$300,000 is based on historical consultant costs for regulatory submission support
- \$100,000 is an estimate for the additional cost required to deliver a pricing proposal under the new regulatory framework

Can Essential Water please provide build-up of scope for the additional \$100,000?

While there is a clear basis for the \$0.3M, and this is relatively commensurate with the general rule of thumb that regulatory support costs should be approximately 1% of revenue, the additional \$0.1M appears to be a newly proposed cost. Essential Water provided additional information regarding the delivery of additional customer engagement to respond to the anticipated new regulatory framework with a focus on customer value¹.

'We developed our 2022 Essential Water pricing proposal consistent with the "consult" stage of the customer engagement spectrum. To move our engagement to the "involve" stage of the customer engagement spectrum we would propose to undertake two customer forums (at a cost of around \$70,000) and a deep dive session (at a cost of around \$27,000). These cost estimates are in FY22 dollars and would be expected to increase by CPI each year.'

We consider that given the customer value focus of the proposed new regulatory framework, an additional cost to support further customer engagement may be considered prudent. In addition, adapting to a new regulatory framework could result in additional costs due to the learning curve associated with it.

3.3.4 Findings and Recommendations – Supplementary Report

Costs for development of a regulatory submission have a clear driver and are considered prudent, and the costs proposed by Essential Water appear reasonable based on the discussion in the previous section.

In its Final Report analysis, AECOM used the actual hire services costs from FY21 in its calculation to of the recommended hire services costs for the 2022 Determination Period. We understand that these actuals are inclusive of the \$0.3M to support a regulatory submission.

As we now understand the \$0.3M to be a one-off cost for regulatory support, we have removed this value from the FY21 actual costs and updated the recommended costs over the period and included the additional \$0.4M as one-off costs within FY25. The impacts of these findings are presented in Table 5.

Table 5 Hire Services Recommendations

Hire Services (contractors)	FY23	FY24	FY25	FY26	FY27
Water					
Essential Water Proposed	\$1.37	\$0.88	\$0.90	\$0.91	\$0.83
AECOM Adjustment	-\$0.30	-\$0.41	-\$0.04	-\$0.35	-\$0.26
AECOM Recommended Costs	\$1.06	\$0.47	\$0.85	\$0.56	\$0.56
Sewerage					
Essential Water Proposed	\$0.35	\$0.34	\$0.35	\$0.36	\$0.32
AECOM Adjustment	-\$0.13	-\$0.12	-\$0.02	-\$0.14	-\$0.10
AECOM Recommended Costs	\$0.22	\$0.22	\$0.33	\$0.22	\$0.22

3.4 Resource Sharing

3.4.1 AECOM's Final Report

Sharing resources between Essential Energy and Essential Water was recommended in the Draft Determination by AECOM to overcome resourcing constraints and address barriers in attracting and

¹ https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Draft-Report-Delivering-customer-value-Draft-Water-Regulatory-Framework-May-2022.PDF

retaining skilled staff. AECOM recommended that Essential Energy and Essential Water explore opportunities to share resources, shifting its reliance on contractors to using existing staff with an increase in training to enable a multi-skilled workforce.

3.4.2 Essential Water's Draft Determination Response

Responding to the Draft Determination and AECOM's recommendation to undertake resource sharing, Essential Water stated that opportunities to share resources were investigated by Essential Energy to manage costs and overcome resource constraints. Essential Energy found this option was not practicable given the different skill sets, resource shortages and no cost savings. The lack of transferrable skills between the specialist electrical work required for Essential Energy and the water and sewerage work completed for Essential Water highlights the limited overlap to support resource sharing. Resource shortages affecting Essential Energy and its capacity to maintain and improve its energy network reliability and resilience prevents them from allocating spare resource to Essential Water. In any situation where Essential Energy could share resources, operating within the economic regulatory framework overseen by the Australian Energy Regulator, Essential Energy could only offer services on a full cost-recovery basis. This would provide no cost advantage to Essential Water and its customers, with costs equivalent to hire services.

Essential Water concluded that it could not identify any specific opportunities for sharing resources and the associated reduction in costs as suggested by AECOM in the Draft Determination.

3.4.3 Findings and Recommendations – Supplementary Report

Essential Water has cited three key reasons why resource sharing between itself and Essential Energy would not be practicable – different skill sets, resource shortages and full cost recovery by Essential Energy as required by the Australian Energy Regulator. We appreciate the barriers to delivering efficiencies through resource sharing and, as in our Final Report, have not proposed any efficiency adjustments to reflect this.

Two of the reasons cited might be considered transitory in nature, reflecting a current state, being the current skills shortage in Essential Water and resource shortage in Essential Energy. We would recommend that Essential Water revisit the potential for resource sharing at a future date where circumstances may be changed.

3.5 Corporate Overheads

In accordance with Essential Energy's CAM, Essential Water allocates corporate overhead costs via a TOTEX allocator which includes direct operating costs. Changes to direct operating costs will therefore impact the corporate overhead amounts allocated to Essential Water from Essential Energy.

Adjustments to the recommended corporate overhead expenditure have been made in line with the suggested adjustments to operating costs. These adjustments are presented in Table 6.

Table 6 Corporate Overhead adjustments as a result of recommended operating costs

Corporate Overhead	FY23	FY24	FY25	FY26	FY27
Water					
Essential Water Proposed	\$2.08	\$1.92	\$1.84	\$1.74	\$1.60
AECOM Adjustment	-\$0.03	-\$0.03	-\$0.04	-\$0.09	-\$0.07
AECOM Recommended Costs	\$2.05	\$1.89	\$1.80	\$1.65	\$1.53
Sewerage					
Essential Water Proposed	\$0.34	\$0.31	\$0.30	\$0.28	\$0.26
AECOM Adjustment	\$0.00	\$0.00	-\$0.01	-\$0.01	-\$0.01
AECOM Recommended Costs	\$0.33	\$0.31	\$0.29	\$0.27	\$0.25

4.0 Capital Expenditure

In response to IPART's Draft Determination, Essential Water has expressed concern over cost increases for relevant capital expenditure projects, citing tendered quotes for several projects that were 100-150% above project cost estimates. Essential Water has highlighted these capital cost increases as unique cost pressures in the current market that demonstrate the significant costs impacting their business at a faster rate than CPI.

The prevailing economic conditions present significant cost challenges, particularly for remote businesses. It is prudent practice for businesses faced with increased construction costs to examine opportunities to identify efficiencies and reduce costs where possible. Depending on the stage that the project is in, failing to consider opportunities to deliver savings could present a risk of sub-optimal outcomes for customers.

AECOM has been asked to suggest opportunities that a good practice business might consider when faced with significant cost increases (from what was estimated) during the early stages of an infrastructure project, that is, prior to detailed design. A summary of some of these opportunities is presented in Table 7.

Table 7 Capital project opportunities

Opportunity	Description	Comment
Value Engineering	<p>This type of exercise systematically examines and challenges the preferred option for opportunities to reduce costs in certain areas. For example, in a WWTP:</p> <ul style="list-style-type: none"> The potential for a reduction in previously established and relied upon population/flow projections (e.g. that might potentially allow for a lower capacity of treatment plant to be built, or for such a revised capacity to be staged [rather than built now to cater to the ultimate population projection as is currently planned]) The assumed level of equipment redundancy The actual necessity of currently identified provisional items 	<p>Value engineering is common industry practice may have the potential to deliver savings to capital projects. An industry standard provides more guidance - <i>ASTM E1699-14(2020) Standard Practice for Performing Value Engineering (VE)/Value Analysis (VA) of Projects, Products and Processes</i>.</p> <p>Percentage savings can vary depending on the stage of design the project is at, with potential for more significant savings earlier on in design process.</p> <p>Concern remains that after the conduct of such a Value Engineering-type exercise addressing some of the opportunities to reduce costs, inflationary costs since the last 2019 estimate could still far outweigh any potential savings identified or uncovered in a Value Engineering-type exercise.</p>
Revisiting options within the business case	Revisiting the options identified within the business case.	It seems unlikely that any of the other previously non-preferred options considered to date would emerge as being preferred (i.e. revisiting the relative assessment of previous options considered by various professional engineering firms is unlikely to identify a different option to that selected for implementation).
Explore new options	Identifying new options that might be available to address the business need.	Exploring new options not previously looked at in the business case could present new opportunities – for example, adopting a new treatment technology or identifying an alternative location.
Different project delivery model	Reviewing the delivery model, for example, adopting a design and construct (D&C) contract instead of detailed design and then construction.	It also seems unlikely that a different project delivery model (to the recommended Design & Construct model) would yield any significant project delivery efficiencies and/or significant capital cost reductions.
Deferring the project	Deferring the project start	Deferring the project start could be a potential solution to deferring capex for some capital projects, however note that many of Essential Water's capital projects respond to risks to service levels and achieving legislative compliance, so deferring project start for such projects would not be prudent.

5.0 Recommendations

Table 8 presents a summary of our supplementary recommendations.

Table 8 Summary of Recommendations

Area of Review	Recommendations
<i>Labour</i>	<p>Essential Water maintains that it continues to face challenges in the labour market. It has not nominated the basis upon which it considers 65 FTEs to reflect the minimum staffing level. As stated in our Final Report, we are not able to confirm the contention that these FTEs are required.</p> <p>Based on our review of available information and the discussion above, we do not have a clear basis to change any of the findings in our Final Report. Our recommendations around labour savings relate specifically to operating cost efficiencies expected from two projects. It is our view that these projects were expected to deliver operating cost savings, and that these savings should be delivered within the 2022 Determination Period as these projects are completed. We do not consider that sufficient evidence has been provided to revise these findings.</p>
<i>Fleet Costs</i>	<p>We have not recommended a change from our Final Report findings. We recommend, in line with our Final Report findings, that an average cost for the 2022 Determination Period of \$1.3 million per annum be adopted, which excludes the anomalously high costs in FY25 and FY26</p>
<i>Hire Services Costs</i>	<p>We make the following recommendations regarding Essential Water's hire services costs in the 2022 Determination Period:</p> <ul style="list-style-type: none"> • \$0.3M be removed from the FY21 year actuals and the recommended costs for the 2022 Determination Period be recalculated • \$0.4M be added as a one-off cost in FY25 to support the delivery of a regulatory submission.
<i>Resource Sharing</i>	<p>We recommend that Essential Water revisit the potential for resource sharing at a future date where circumstances may be changed. No recommendations around costs for this item have been made in this report.</p>
<i>Capital Projects</i>	<p>It is prudent practice for businesses faced with increased construction costs to examine opportunities to identify efficiencies and reduce costs where possible. Depending on the stage that the project is in, failing to consider opportunities to deliver savings could present a risk of sub-optimal outcomes for customers.</p> <p>We have provided a high-level summary of options that may be considered by a good practice business when faced with higher-than-expected construction costs.</p> <p>No recommendations for adjustments to capital costs have been made in this report.</p>

The recommendations that impact our recommended efficient operating costs are reflected in Table 9. Differences in costs from our Final Report are highlighted in green. We note that this table presents the recommended efficient operating costs prior to any continuing efficiency adjustment being applied.

NOTE: As per Essential Energy's CAM, Essential Water allocates corporate overhead costs via a TOTEX allocator which includes direct operating costs. Changes to direct costs will therefore impact the corporate overhead amounts allocated to Essential Water from Essential Energy. These changes are reflected in the table also.

Table 9 Summary of Operating Costs Recommendations

	FY23	FY24	FY25	FY26	FY27	Total
Essential Water Costs						
Bulk water	\$24.48	\$24.47	\$24.46	\$24.45	\$24.45	\$122.30
Labour	\$7.92	\$7.92	\$7.66	\$7.82	\$7.66	\$38.99
Hire services (contractors)	\$1.72	\$1.22	\$1.24	\$1.27	\$1.15	\$6.60
Materials	\$0.93	\$0.90	\$1.03	\$1.05	\$0.96	\$4.87
Energy	\$0.79	\$0.76	\$0.52	\$0.53	\$0.48	\$3.09
Licence fees	\$0.26	\$0.25	\$0.25	\$0.25	\$0.23	\$1.24
Fleet	\$1.34	\$1.27	\$1.54	\$1.57	\$1.41	\$7.13
Other	\$0.10	\$0.10	\$0.10	\$0.10	\$0.11	\$0.52
Corporate Overheads	\$2.42	\$2.23	\$2.14	\$2.02	\$1.86	\$10.68
Total	\$39.96	\$39.13	\$38.95	\$39.07	\$38.31	\$195.42
AECOM Recommended Adjustments						
Labour			-\$0.40	-\$0.50	-\$0.50	-\$1.40
Hire services	-\$0.44	-\$0.53	-\$0.06	-\$0.49	-\$0.37	-\$1.88
Fleet	\$0.00	\$0.06	-\$0.20	-\$0.24	-\$0.07	-\$0.45
Corporate Overheads	-\$0.03	-\$0.03	-\$0.04	-\$0.10	-\$0.08	-\$0.29
Support Cost Allocation	-\$0.12	-\$0.12	-\$0.12	-\$0.12	-\$0.12	-\$0.62
Corporate Transformation				-\$0.61	-\$0.61	-\$1.22
Total	-\$0.60	-\$0.63	-\$0.83	-\$2.06	-\$1.75	-\$5.87
Percentage Change	-1.5%	-1.6%	-2.1%	-5.3%	-4.6%	-3.0%
Recommended Operating Expenditure, before Continuing Efficiency Adjustment						
Bulk water	\$24.48	\$24.47	\$24.46	\$24.45	\$24.45	\$122.30
Labour	\$7.92	\$7.92	\$7.26	\$7.32	\$7.16	\$37.59
Hire services (contractors)	\$1.28	\$0.69	\$1.18	\$0.78	\$0.78	\$4.72
Materials	\$0.93	\$0.90	\$1.03	\$1.05	\$0.96	\$4.87
Energy	\$0.79	\$0.76	\$0.52	\$0.53	\$0.48	\$3.09
Licence fees	\$0.26	\$0.25	\$0.25	\$0.25	\$0.23	\$1.24
Fleet	\$1.34	\$1.34	\$1.34	\$1.34	\$1.34	\$6.68
Other	\$0.10	\$0.10	\$0.10	\$0.10	\$0.11	\$0.52
Corporate Overheads	\$2.39	\$2.20	\$2.10	\$1.92	\$1.78	\$10.39
General Adjustments	-\$0.12	-\$0.12	-\$0.12	-\$0.74	-\$0.74	-\$1.84
Total	\$39.36	\$38.50	\$38.12	\$37.01	\$36.55	\$189.56