February 2024

Goulburn-Murray Water: Review of expenditure forecasts

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Table of Contents

Executive Summary

FTI Consulting has been engaged by the Essential Services Commission (the Commission) to undertake an independent expert review of Goulburn-Murray Water's forecast (controllable) operating and capital expenditure for the 1 July 2024 to 30 June 2028 regulatory period (PS6).

The Commission is required to assess the water businesses' proposals against a legal framework set out in the *Water Industry Regulatory Order 2014* and the Commission's PREMO pricing framework. We have assessed Goulburn-Murray Water's forecast operating and capital expenditure based on the guidelines contained in the Commission's 2*024 Goulburn-Murray Water Price Review: Guidance Paper* (the Guidance Paper).

This report sets out our views as to whether Goulburn-Murray Water's forecasts of capital and operating expenditure over the regulatory period can be reasonably assessed to be prudent and efficient.

Forecast operating expenditure

Goulburn-Murray Water is not proposing to apply a growth factor to its operating expenditure. Rather than include an efficiency factor, it has applied a 'bottom up' approach by identifying and applying step changes for individual productivity and efficiency initiatives.

Its proposed productivity and efficiency savings step changes equates to an average saving of $3.6 million per annum over the PS6 period. This represents a net annual saving of 4.7 per cent per annum on adjusted baseline expenditure. This is higher than any of the net average annual savings in operating expenditure proposed by the water businesses in the 2023 Price Reviews.

Goulburn-Murray Water's forecast operating expenditure reflects:

- baseline 2022-23 expenditure of $76.89 million, which is 0.4 per cent below the expenditure benchmark allowance approved by the Commission in the previous price review
- total net step changes to the baseline of -$1.37 million across the PS6 regulatory period, comprising $13.02 million of additional costs and $14.39 million of specific productivity or efficiency savings.

Based on Goulburn-Murray Water's PS6 proposal, the further information provided and discussions with the business, we have formed the view that its forecast operating

expenditure is consistent with a prudent business operating efficiently. This reflects our view that:

- the expenditure in the baseline year of 2022-23 appears reasonable, and does not appear to include any items that are non-recurring
- the proposed step changes are reasonable and supported by a sound rationale.

Forecast capital expenditure

Goulburn-Murray Water has forecast gross capital expenditure of $114.64 million for the PS6 regulatory period. This is 6.2 per cent more than the actual gross capital expenditure (including the forecast for 2023-24) undertaken over the PS5 regulatory period and is around 15.7 per cent higher than the forecast gross capital expenditure outlook for the PS6 regulatory period included in the Commission's PS5 final decision.

Goulburn-Murray Water's PS6 submission provides a comprehensive breakdown of its forecast capital expenditure for the PS6 regulatory period. The further information provided to us by Goulburn-Murray Water and a workshop conducted at its Tatura offices on 13 November 2023 provide a very strong level of confidence that the proposed capital expenditure program is, overall, consistent with the actions of a prudent business operating efficiently. Our view is that the forecast capital expenditure is justified, robust and is capable of being delivered by Goulburn-Murray Water.

As a result, we do not recommend any adjustments to Goulburn-Murray Water's forecast capital expenditure for the PS6 regulatory period.

1 INTRODUCTION

1.1 Purpose of this report

The Essential Services Commission (the Commission) is reviewing a submission from Goulburn-Murray Water setting out its proposed prices, revenue requirement and key service outcomes to apply to water and sewerage services commencing on 1 July 2024 through to 30 June 2028 (referred to in this report as the PS6 regulatory period).

FTI Consulting has been engaged to undertake an independent expert review of Goulburn-Murray Water's forecast operating expenditure and capital expenditure for the PS6 regulatory period. The scope of our review of operating expenditure is limited to controllable operating expenditure.

This report sets out our independent expert view of the prudency and efficiency of Goulburn-Murray Water's capital expenditure and controllable operating expenditure forecasts for the PS6 regulatory period, in accordance with the requirements of the regulatory framework.

1.2 Water industry regulatory framework

Goulburn-Murray Water's proposal is being assessed against a legal framework set out in the *Water Industry Regulatory Order 2014* (WIRO)[1] and the Commission's PREMO framework for approving prices.[2]

The Commission's regulatory framework places an emphasis on efficient delivery of services. Assessing the prudency and efficiency of a water business's expenditure forecasts is fundamental to achieving this objective.

In 2018, the Commission introduced a new approach called PREMO to regulate the prices charged by Victorian water businesses. As Figure 1.1 describes, the PREMO approach contains both new and conventional elements related to price, risk, engagement, management and outcomes. PREMO provides water businesses with incentives to put forward their best offer to customers and deliver the outcomes its customers value most and to deliver these as efficiently as possible.

[1] The Water Industry Regulatory Order 2014 (WIRO) sits within the broader context of the *Water Industry Act 1994* (Vic) and the *Essential Services Commission Act 2001* (Vic).

[2] Essential Services Commission (2016). Water Pricing Framework and Approach: Implementing PREMO from 2018, October.

Figure 1.1: The Commission's PREMO framework

More conventional elements of PREMO include the retention of the building block approach, which provides reasonable certainty that prudent and efficient costs can be recovered. This includes an expenditure review to determine whether a water business's proposed capital and operating expenditure forecasts are consistent with the requirements of the regulatory framework.

Under the PREMO framework, each submission is expected to reflect the water business's best offer to its customer base. Submissions may be fast tracked through the assessment process based on several factors.

The *2024 Goulburn-Murray Water Price Review: Guidance Paper* (the Guidance Paper) explains the Commission's methodology and approach to assessing water businesses' price submissions and making a price determination and sets out the information each business is required to provide in its price submission.[3] The Guidance Paper also identifies the governing criteria for each component of the building block methodology, including forecast operating and capital expenditure.

1.3 Methodology and approach

The scope of our assessment is limited to examining Goulburn-Murray Water's forecast controllable operating expenditure and capital expenditure over the PS6 regulatory period. In undertaking this assessment we have also considered the capital expenditure incurred by Goulburn-Murray Water in the PS5 regulatory period. It does not include examining

[3] Essential Services Commission (2022). 2024 Goulburn-Murray Water price review: Guidance paper, 13 September.

decisions about whether to fast track its PS6 submission, nor does it involve assessing other elements of the PREMO framework such as past performance or engagement.

Our methodology for assessing Goulburn-Murray Water's capital and operating expenditure forecasts for the next regulatory period is consistent with the Commission's Guidance Paper. In summary, the scope of our review includes the following.

- For forecast operating expenditure, our assessment focuses on controllable expenditure only. We have assessed Goulburn-Murray Water's proposal using the base-step-trend approach as set out in the Commission's Guidance Paper and is consistent with the basis on which it has submitted information as part of its Price Review Model templates
- For forecast capital expenditure, our assessment focuses on the Top 10 major projects and major capital expenditure programs that comprise a significant proportion of the Goulburn-Murray Water's total capital expenditure forecast.

Further detail about our assessment framework as it has been applied is set out in Chapter 3 (Operating expenditure assessment) and Chapter 4 (Capital expenditure assessment).

Our process has involved several steps:

- an initial review of the PS6 price submissions, Price Review Model and associated documentation
- a visit and online discussions with Goulburn-Murray Water on key issues related to its proposal
- requests for additional information from Goulburn-Murray Water
- further review and analysis of further information or explanations provided.

1.4 Structure of this report

The structure of this report is as follows:

- Chapter 2 provides a high-level summary of the Goulburn-Murray Water's expenditure proposal
- Chapter 3 sets out our assessment of Goulburn-Murray Water's operating expenditure proposal
- Chapter 4 sets out our assessment of Goulburn-Murray Water's capital expenditure proposal.

Consistent with the Commission's guidance paper and the Price Review Model completed by Goulburn-Murray Water, all forecasts and actuals are expressed in dollars as at 1 January 2024.

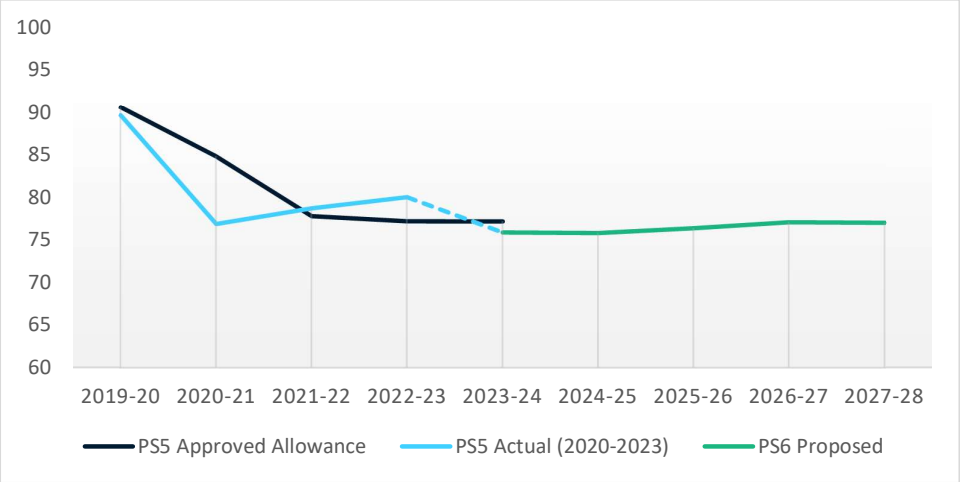
2 SUMMARY OF EXPENDITURE PROPOSAL

2.1 Forecast controllable operating expenditure

For the current regulatory period from 1 July 2020 to 30 June 2024 (PS5), the Commission approved a total controllable operating expenditure benchmark allowance for Goulburn-Murray Water of $316.87 million ($ 1 January 2024).

For the first three years of the PS5 regulatory period, Goulburn-Murray Water's actual controllable operating expenditure was $4.19 million (1.7 per cent) below the benchmark allowance approved by the Commission for those three years. This is shown in Figure 2.1.

Figure 2.1: Goulburn-Murray Water's actual and forecast controllable operating expenditure by year ($ 1 January 2024, millions)



Goulburn-Murray Water's baseline 2022-23 controllable operating expenditure is $0.29 million (or 0.4 per cent) below the benchmark allowance approved by the Commission in the last price review.

Goulburn-Murray Water has proposed net step changes to the baseline of -$1.37 million across the PS6 regulatory period, as outlined in Table 2.1. This comprises $13.02 million of additional costs and $14.39 million of specific productivity or efficiency savings.

Table 2-1: Goulburn-Murray Water's proposed step changes (in $ 1 January 2024, millions)

Step change	Value
Additional costs	
General insurance increases	1.11
Materials increases	4.21
IT Cloud and security systems	4.05
Cyclical costs: dam safety reviews, spillway works, consultants	3.65
Productivity savings	
Regionalisation	-0.27
Communications	-0.28
Electricity (from solar)	-0.10
Training	-0.20
Efficiency savings	
Removal of early payment discounts	-3.76
Overtime/contract labour reduction	-2.47
Labour efficiencies within forecast 2% saving and removal of weekend work	-7.30
Total	**-1.37**

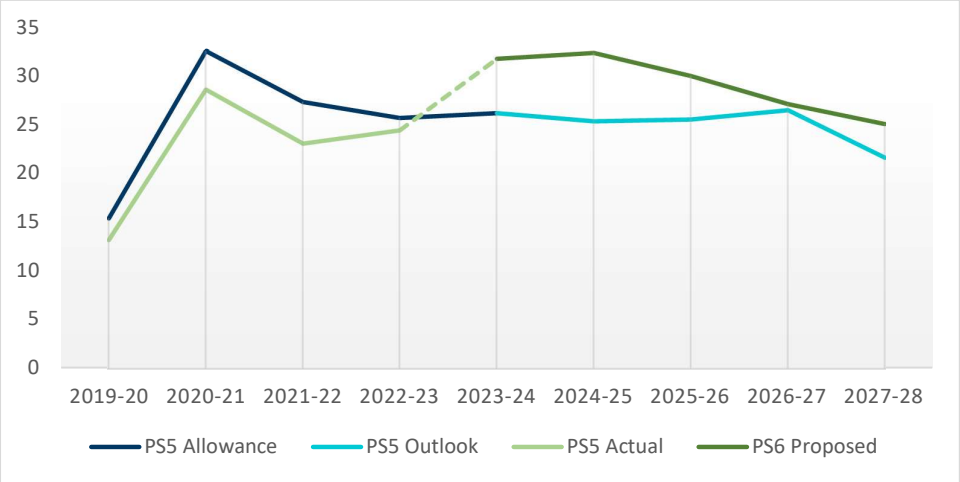
Source: Goulburn-Murray Water (2023), GMW Price Submission 2024, 30 September, p.54.

Goulburn-Murray Water has not included an allowance for growth. Given it has taken a 'bottom up' approach to identifying efficiency savings via step changes (as outlined above), it has not proposed an efficiency factor. Goulburn-Murray Water's proposed efficiency adjustments equates to an average implied efficiency improvement rate of 1.9 per cent per annum across the PS6 period.

2.2 Forecast capital expenditure

Goulburn-Murray Water has forecast gross capital expenditure of $114.64 million for the PS6 regulatory period. This is 6.2 per cent more than the actual gross capital expenditure (including the forecast for 2023-24) undertaken over the PS5 regulatory period and is around 15.7 per cent higher than the forecast gross capital expenditure outlook for the PS6 regulatory period included in its PS5 final decision, as shown in Figure 2-1.

Figure 2-1: Goulburn-Murray Water's actual and forecast gross capital expenditure by year ($ 1 January 2024, millions)



Source: Goulburn-Murray Water, G MW_2024 Price Review Model CLEAN_Squads.xlsm, 29 September 2023; Essential Services Commission 2020, Goulburn-Murray Water Determination Price Review Model: 1 July 2020 – 30 June 2024, 30 June 2020.

The key drivers, projects and programs are:

- renewals - 74.8 per cent of the program (including some components of its meter replacement program that are offset by $5.95 million of external funding)
- improvement/compliance - 25.2 per cent of the program (including forecast expenditure on office and depot site consolidation to be offset by expected revenue of $3.13 million generated from divestment of surplus land assets)

There are six major programs that total $64.4 million (outlined in Table 2-2), six major projects which appear appropriately defined and costed at $13.0 million (outlined in Table 2.3) and multiple other smaller capital projects and program allocations across a range of service, asset and driver categories that add to $37.2 million.

Goulburn-Murray Water has forecast zero growth-driven capital expenditure for both the PS6 and PS7 regulatory periods. This is as would be expected given the lack of current and anticipated future growth in its irrigation and water supply services.

Table 2-2: Goulburn-Murray Water's Six Major Capital Program Allocations ($ 1 January 2024)

Program Allocation Description	Total Expenditure ($ million)
Irrigation and Drainage Linear (Channels) Renewals Program	24.6
Irrigation and Drainage Structures Renewals Program	15.5
Irrigation and Diversions Services Meter Replacement Program	12.1
IT Equipment and Systems Refresh Upgrades Program	4.5
IT Systems Security Upgrades Program	1.7
Field and Mechanical & Electrical Services Plant and Equipment Replacement Program	6.0
Total	**64.4**

Source: Goulburn-Murray Water, 2024-28 Price Submission and associated Financial Model, 29 September 2023.

Goulburn-Murray Water 's six major capital expenditure projects, shown in Table 2-3, account for around 11.3 cent of its proposed capital expenditure for the PS6 regulatory period.

Table 2-3: Goulburn-Murray Water's six major capital expenditure projects ($ 1 January 2024, millions)

Major capital expenditure project	Forecast Capex Included for PS6 Regulatory Period ($ million)	Total Proposed cost over PS6 and PS7 Periods ($ million)
Tullaroop Upgrade Works – Secondary Embankment Filters	2.8	5.7
Laanecoorie Weir Spillway – End of Life Asset Replacements	3.8	3.8
Goulburn Weir Spillway – Replacement of Radial Gates Protective Coatings	1.5	1.5
Lake Buffalo Irrigation Outlets and Trash Screen Upgrade	1.4	1.4
Purchase of New Land, Building of New Office, Shedding and Fixtures	3.1 [1]	3.1
Nillahcootie Dam Safety Works (spillway walls stabilisation and construction of filters)	0.4 [2]	4.3

Source: Goulburn-Murray Water, 2024-28 Price Submission and associated Financial Model, 29 September 2023.

Notes:

1. The costs included for this project in Goulburn-Murray Water's PS6 regulatory period pricing submission are fully offset by expected revenue to be generated from divestment of surplus land assets (hence not adding to forecast net capital expenditure for the PS6 period).
2. The costs included for this project in Goulburn-Murray Water's PS6 regulatory period pricing submission are for planning and preliminary design, with construction and the bulk of the capital expenditure scheduled for the PS7 period.

3 OPERATING EXPENDITURE ASSESSMENT

3.1 Overview of assessment approach

The Commission's Guidance Paper notes the requirement that forecast operating expenditure is:

> *… operating expenditure which would be incurred by a prudent service provider acting efficiently to achieve the lowest cost of delivering on service outcomes over the regulatory period, taking into account a long-term planning horizon (prudent and efficient forecast operating expenditure).*[4]

The Commission has asked us to provide an independent expert view on whether Goulburn-Murray Water's controllable operating expenditure is prudent and efficient having regard to the base-step-trend approach and assessment criteria set out in its Guidance Paper. The Guidance Paper also sets out the Commission's expectations on certain aspects, such as operating expenditure with uncertain outcomes, where it states that:

> *If Goulburn-Murray Water seeks additional operating expenditure for investments where the outcomes are uncertain (for example, pilot or demonstration projects) we expect it to consider how risk is being shared if customers are being asked to cover all additional expenditure. Businesses should also clarify how they will demonstrate the value of these investments to customers.*[5]

Having regard to the Guidance Paper, we have assessed whether forecast operating expenditure is consistent with the actions of a prudent business acting efficiently, including if:

- the established 2022-23 controllable operating expenditure baseline has been appropriately adjusted for any one-off expenditure items and efficiency commitments
- operating costs reflect reasonable cost efficiency/productivity assumptions applied to the 2022-23 baseline operating expenditure, having regard to industry trends
- changes in operating costs are consistent with the timing of major capital projects

[4] Essential Services Commission (2022). p.28.

[5] Essential Services Commission (2022). p.28.

- operating costs can fulfil the business's obligations and meet customer service expectations as efficiently as possible
- any forecast divergence from historical trends in operating expenditure can be readily explained, for example, by changes in obligations imposed by government, including technical, regulatory and customer service expectations.

The key steps in our approach were as follows:

In assessing proposed increases in expenditure, including step changes, we have had regard to Goulburn-Murray Water's approach to allowing for growth and efficiency. This is relevant to considering its ability to absorb cost increases, including proposed step changes, which has required us to apply judgement in assessing the reasonableness of its proposal.

3.2 Key operating expenditure drivers across water businesses

In undertaking our expenditure reviews of the 14 Victorian water businesses as part of the 2023 Price Review, it was evident that there have been several drivers of increased operating expenditure over the current regulatory period and/or forecast for the next regulatory period. This includes the pervasive impact of COVID-19. Some of the impacts that have continued include increased customer hardship due to the higher cost of living,

changes to work practices and the impact of supply chain pressures on the availability and cost of inputs.

Other key themes identified in 2023 Price Review include:

- the continued impacts of climate change on the frequency and severity of major weather events, including drought, bushfires and floods
- the continued evolution in climate change and environmental policy, including emission reduction strategies and targets, and associated compliance and reporting obligations
- a continued hardening of the insurance market, which also (at least partly) reflects the impacts of major climate-related events domestically and globally
- a ramping up of the need to do more to mitigate cyber security risks, including mandated obligations.

These themes remain relevant to Goulburn-Murray Water.

3.3 Assessment of the baseline

After adjusting for non-recurring items, Goulburn-Murray Water's adjusted controllable operating expenditure in 2022-23 was $76.89 million, compared to the $77.18 million benchmark allowance approved by the Commission. This is $0.29 million (or 0.4 per cent) below the benchmark allowance approved by the Commission in the last price review.

We reviewed Goulburn-Murray Water's proposed adjustments for non-recurring items. The most material of these was for flood costs, where Goulburn-Murray Water:

- deducted the full amount of the additional expenditure incurred in responding to the flood event in 2022 ($6.55 million)
- added back $5.7 million in costs that would normally have been incurred in that year but were not incurred due to that flood event.

Goulburn-Murray Water provided further details on the flood cost adjustment, including an itemised list (with associated costings) of the areas or activities comprising the $5.7 million in costs that were added back into the baseline. As would be expected, labour accounted for most of the costs of the flood response ($4.14 million) that were removed from the baseline. $3.64 million of these costs were then added back in, as they reflected budgeted labour resources that were redirected to the flood response from operations and maintenance.

Goulburn-Murray Water also deducted cyclical expenditure for dam safety reviews, consultancy costs (for the price review), externally funded works and expenditure for cloud-based solutions that are not in the next price submission.[6]

Overall, the adjustments appear reasonable and we were able to confirm that the costs added back into the baseline are recurrent.

Goulburn-Murray Water also provided additional information on the other amounts that were removed from the baseline.

As a result, we do not propose any adjustments to Goulburn-Murray Water's proposed baseline.

3.4 Assessment of the step changes

Goulburn-Murray Water has proposed net step changes to the baseline of -$1.37 million across the PS6 regulatory period, as outlined in Table 2.1. This comprises $13.02 million of additional costs and $14.39 million of specific productivity or efficiency savings. Table 3-1 summarises the information provided by GWM in its PS6 submission.

Table 3-1: Goulburn-Murray Water's proposed step changes ($ 1 January 2024, millions)

Step change	Total value	Explanation
General insurance increases	1.11	Insurance costs are increasing above inflation, reflecting conditions in the global insurance market.
Materials increases	4.21	Reflects the need for continued investment in modernised assets as they age. This is driven by increase asset failure rates for electrical and mechanical assets.
IT Cloud and security systems	4.05	Represents increased expenditure on cyber security.
Cyclical costs: dam safety reviews, spillway works, consultants	3.65	GWM removed cyclical costs incurred in the current period from the baseline. This includes forecast expenditure on key consultancies and ANCOLD-prescribed dam safety reviews.
Productivity: Regionalisation	-0.27	Annual cost savings associated with the consolidation of operations at Shepparton, Cobram and Kyabram to a new site from 2025-26.
Productivity: Communications	-0.28	Reflects credits (or savings) from prior years. We note that this could have also been reflected in an adjustment (reduction) in the baseline.

[6] Goulburn-Murray Water (2023a). 2024 Price Review Model.

Step change	Total value	Explanation
Productivity: Electricity (from solar)	-0.10	Represents savings in electricity costs for Goulburn-Murray Water's Casey Street solar project.
Productivity: Training	-0.20	Represents annual forecast savings in training compared to the base year (after adding back in typically incurred costs that were not incurred in that year due to flood).
Efficiency: Removal of early payment discounts	-3.76	Represents removal of the 2 per cent discount currently offered to customers for early payment. This is attributed to ensuring that all customers benefit from savings, not just those who have the capacity to pay early.
Efficiency: Overtime/contract labour reduction	-2.47	Represents efficiencies from a reduction in the use of labour hire and contract labour.
Efficiency: Labour efficiencies within forecast 2% saving and removal of weekend work	-7.30	Represents labour efficiencies from: (1) removing the costs attributed to the average 2 per cent vacancy rate; (2) the removal of weekend work; (3) other minor initiatives and agreement under the EA to an annual growth of less than 2022-23 CPI (including payroll tax increases).
Total	**-1.37**	

Source: Goulburn-Murray Water (2023). GMW Price Submission 2024, 30 September, pp.54-55; supplementary information provided by Goulburn-Murray Water.

We have focused our assessment on step change increases on the basis that these increases are likely to be reflected in the baseline controllable operating expenditure in the next regulatory period. We assessed the reasonableness of those step change increases by examining whether the proposed step changes meet one or more of the following criteria:

- comply with new, or changed, legislative or regulatory obligations
- achieve an outcome or implement an initiative that is endorsed by customers or broadly meets accepted changes in community expectations
- recategorisation of expenditure between capital and operating expenditure, where the business can demonstrate that it is necessary or appropriate to do so
- incremental operating expenditure associated with a new prudent and efficient capital project
- sufficiently material that the costs are not able to be met by an efficient business operating within its approved budget (including the growth allowance) or be otherwise mitigated.

It is noted that the proposed increases have been more than offset by the adjustments for productivity and efficiency, resulting in a net reduction in baseline expenditure of $1.37

million over PS6. We also reviewed the derivation of the productivity and efficiency adjustments.

We met with key staff at Goulburn-Murray Water, who provided additional information. Our assessment of the step changes is outlined below.

3.4.1 Insurance increases – $1.11 million

Increasing insurance costs was a common theme across the sector in the 2023 price reviews as a consequence of the global hardening of the insurance market. This has had a number of drivers, including natural disasters and climate-related events. For example, Aon reports that in the first half of 2023, across the globe, economic losses from natural disasters reached $194 billion, compared to the first-half average of $128 billion for the 21st century.[7]

The effect on the general insurance market because of the factors outlined above, means that the businesses also have limited ability to control or influence this expenditure. It is also extremely difficult to forecast likely insurance premiums over the PS6 period given the complex factors influencing demand and supply, including the frequency and severity of major catastrophes.

Goulburn-Murray Water has calculated the average annual increase in its total insurance costs for the five years to 2022-23, which is 10.2 per cent after inflation. It is then proposing to assume that these costs will increase by five per cent per annum after inflation, which on the expectation that similar trends will continue over PS6, means that it is sharing the risk of these future premium increases with customers.[8] It has calculated the step change by taking its actual prescribed controllable insurance cost for 2022-23 and then increased this by five per cent per annum to 2027-28.

While we recognise that there is significant uncertainty as to future premium outcomes, including whether they are higher or lower than Goulburn-Murray Water's forecast, we consider that this approach is reasonable. We consider that this step change meets the criteria of being sufficiently material that the costs are not able to be met by an efficient business operating within its approved budget (noting that Goulburn-Murray Water is not proposing an allowance for growth) or be otherwise mitigated.

[7] Aon (2023). Global Market Insights Report Q2 2023, https://publications.aon.com/q2-2023-global-market-insights/intro. {Accessed 8 December 2023}

[8] Goulburn-Murray Water (2023b). Baseline and Step Changes – LIVE VERSION – A4705499.

3.4.2 Increases in materials costs – $4.21 million

Goulburn-Murray Water has submitted a step change for increased materials costs associated with the maintenance of modernised assets. In its submission this is described as:[9]

> *Mechanical components of automated flumegates are beginning to reach a midlife cycle refurbishment in Regulatory Period 6. Telemetry and electronic components are deteriorating at a greater rate with age and require maintenance to extend operational life.*

We explored this step change further with Goulburn-Murray Water.

Maintenance requirements are driven by Goulburn-Murray Water's Service Plans. It advised that based on the Gravity Irrigation Service Plan, while this network was fit for meeting service expectations, Goulburn-Murray Water is seeing evidence of the ageing of modernised assets, which will require more replacement parts.[10] Maintenance expenditure is reviewed monthly by the Infrastructure Delivery (maintenance), Water Delivery Services (operations) and Asset Planning teams. It indicated that analysis is regularly completed to identify risks and opportunities for cost savings.

We reviewed a copy of the Gravity Irrigation Service Plan, which sets out its strategic directions and priorities for this service from 2024-2032 and underpins its capital and operating expenditure forecast for the PS6 period. The plan has been developed in consultation with customers, as well as other external stakeholders. It identifies key service initiatives, including an explanation of the increased investment in maintenance required for modernised assets.

The cost driver underpinning this maintenance step change is the increasing asset failure rates for key materials including gearboxes, motors, radios, solar board drives and sensors. Goulburn-Murray Water provided its forecast profile of asset failure rates for these items.[11]

From our discussions with Goulburn-Murray Water[12], this item relates to maintenance of mechanical, electrical and control asset components contained within pump and automation infrastructure installed as part of its Water Savings Project works. This program focused on modernising and improving water delivery efficiencies in its irrigation transfer systems. It included targeted works to replace inefficient gravity irrigation systems

9 Goulburn-Murray Water (2023c). GMW Price Submission 2024, 30 September, p.55.

10 Goulburn-Murray Water (2023b).

11 Goulburn-Murray Water (2023b).

12 Meeting with Goulburn-Murray Water, 13 November 2023.

with pumped systems and tailored automated control of water levels in delivery channels to minimise water losses.

When the new systems were first installed, assumptions were necessarily made regarding typical failure rates that would be expected for the key components. The expected failure rates, inter alia, were based on assumptions regarding how the automated components of these systems would operate to maintain water levels within desired tolerability limits at offtake points. The maintenance programs initially developed for these assets used these expected failure rates to estimate expected annual materials expenses that would be incurred to replace these components across the modernised system resulting from wear and tear failures.

Now that these systems have been observed in operation, Goulburn-Murray Water's experience is that the automated systems, in practice, have tended to cycle between standby and operating modes more frequently than had been expected, in order to maintain water levels within the desired tolerability limits. This has resulted in higher frequency operating cycles and hence greater wear and tear and associated component failure rates than had initially been expected, resulting in higher than originally predicted materials expenses for replacement of these asset components in the modernised systems.

Based on the explanations and associated information provided by Goulburn-Murray Water, these projected failure rates and associated increased material costs for replacement appear reasonable, with projected percentage increases for each component type beginning to flatten out in the last two years of the PS6 regulatory period - as would be expected. Goulburn-Murray Water advised that it has also worked on revising the programming logic for maintaining automated water level control to better optimise operating cycles and associated component failure rates and material replacement costs.

Goulburn-Murray Water's cost forecast applies these failure rates to the current average replacement cost of these items. Goulburn-Murray Water is therefore bearing the risk that the cost of these items increases by more than CPI.[13]

We are satisfied that Goulburn-Murray Water has substantiated its proposed expenditure and that the costs are prudent and efficient. We consider that this step change meets the criteria of being sufficiently material that the costs are not able to be met by an efficient business operating within its approved budget (noting that Goulburn-Murray Water is not proposing an allowance for growth) or be otherwise mitigated.

[13] Goulburn-Murray Water (2023b).

3.4.3 IT Cloud and security systems - $4.05 million

Goulburn-Murray Water has proposed a step change for IT-related operating expenditure, including on cyber security initiatives. Investment in improving cyber security was a common theme for the 2023 Price Review, as it is for all major utilities, corporations and providers of essential services. Continued migration to Cloud-based Software as a Service (SaaS) was another common theme in the 2023 Price Review.

Goulburn-Murray Water provided copies of two key strategy documents that underpin some of this expenditure, including:

- Goulburn-Murray Water Digital Strategy 2020-2024: this sets out the digital strategy and roadmap and how it aligns with its strategic outcomes. This included a Digital Capability and Maturity Assessment, which informed the development of its digital initiatives.
- Goulburn-Murray Water Cyber Security Strategy 2024: this outlines Goulburn-Murray Water's guiding principles, objective and priorities in managing cyber security, with the strategy based on the Australian Government Information Security Manual. It was also informed by a Cybersecurity Program Assessment conducted by Ernst and Young, which included benchmarking against Australian Government businesses.

Goulburn-Murray Water also provided further information on the costings underpinning the step change. The $4.06 million forecast for the PS6 period comprises:

- $1.8 million for digital initiatives
- $1.52 million for SaaS upgrades
- $0.59 million for system upgrades
- $1.09 million for system security
- -$0.94 million, which represents forecast savings upon the renewal/replacement of existing contracts.

The information provided by Goulburn-Murray Water further itemised all of the individual initiatives comprising the expenditure in each category.[14]

We are satisfied that Goulburn-Murray Water has substantiated its proposed expenditure and that the costs are prudent and efficient. We consider that this step change meets the criteria of being sufficiently material that the costs are not able to be met by an efficient business operating within its approved budget (noting that Goulburn-Murray Water is not

[14] Goulburn-Murray Water (2023b).

proposing an allowance for growth) or be otherwise mitigated. Depending on the driver of each element, it can also satisfy one or more of the following criteria:

- comply with new, or changed, legislative or regulatory obligations (cyber security)
- achieve an outcome or implement an initiative that is endorsed by customers or broadly meets accepted changes in community expectations (cyber security, digital initiatives)
- recategorisation of expenditure between capital and operating expenditure, where the business can demonstrate that it is necessary or appropriate to do so (SaaS).

3.4.4 Cyclical expenditure - $3.65 million

Goulburn-Murray Water has included a further step change that groups items of cyclical expenditure that it expects to incur in the PS6 period. It deducted $0.5 million in costs from the 2022-23 base year for cyclical dam safety reviews and consultancies associated with its price submission.

Goulburn-Murray Water provided further information on the costs contained in this step change.[15] The $3.65 million forecast for the PS6 period comprises:

- $2.27 million for dam safety reviews
- $1.39 million for consultancies.

As noted by Goulburn-Murray Water in its submission, dam safety reviews are based on the ANCOLD Guidelines. Under the Statement of Obligations issued in 2015 to Victorian water businesses under the *Water Industry Act 1994*, including Goulburn-Murray Water, the relevant corporations must have regard to the ANCOLD Guidelines in managing dam safety.[16] Goulburn-Murray Water states that it has adopted the outer limit period of 20 years for design reviews.[17] In substantiating the costs included in this step change Goulburn-Murray Water provided its planned schedule of dam safety reviews for the PS6 period, along with costings.

Goulburn-Murray Water also detailed the consultancies included in the step change, and the forecast costs of each. The two largest of these are for assistance with its Service Plans, along with its Pumped Irrigation Future Services Strategy. The latter initiative is aimed at addressing aging infrastructure while having regard to future service needs. It is noted that

15 Goulburn-Murray Water (2023b).

16 Section 5-3

17 Goulburn-Murray Water (2023c). p.55.

Goulburn-Murray Water has been engaging with customers on this strategy, focusing on the Nyah and Tresco service districts.[18]

We are satisfied that Goulburn-Murray Water has substantiated its proposed expenditure and that the costs are prudent and efficient. The costs associated with undertaking dam safety reviews complies with a regulatory obligation. While this obligation has been in place since 2015 (i.e., it is not a new obligation for the PS6 period), we endorse Goulburn-Murray Water's approach in seeking to capture the cyclical nature of this expenditure more accurately. Based on this approach, it would therefore be anticipated that at the end of the PS6 period, the costs that have been incurred in the base year (for the next period) will be removed from the baseline and updated forecasts included as a step change for the PS7 period. This is similarly the case for consultancies.

We also consider that the proposed costs for consultancies are reasonable. This category of costs meets the criteria of being sufficiently material that the costs are not able to be met by an efficient business operating within its approved budget (noting that Goulburn-Murray Water is not proposing an allowance for growth) or be otherwise mitigated.

3.4.5 Productivity and efficiency adjustments

While we apply more scrutiny in examining proposed increases in expenditure, we also reviewed information provided by Goulburn-Murray Water that underpin the productivity and efficiency adjustments that have been put forward as negative step changes (recognising that ultimately, the risk of these efficiencies not being realised sits with Goulburn-Murray Water). It is evident that Goulburn-Murray Water has a clear and targeted basis for forecasting each of the savings it has identified.

GWM's approach to efficiency is discussed further below.

3.4.6 Summary of our step change assessment

Based on Goulburn-Murray Water's PS6 submission and the further information provided to us, and having regard to our step change criteria, we consider that all the proposed step changes are prudent and efficient. We are therefore not proposing any adjustments.

[18] https://yoursay.gmwater.com.au/pricing-submission-2024/pumped-irrigation

3.5 Forecast growth and efficiency factors

Goulburn-Murray Water is not proposing to apply a growth factor to its operating expenditure. Rather than include an efficiency factor, it has applied a 'bottom up' approach by identifying and applying step changes for individual productivity and efficiency initiatives. While Goulburn-Murray Water is bearing the risk as to whether these savings will be achieved, it stated that once the Commission has made its final determination for the PS6 period, it will implement a reporting framework to manage its achievement of these initiatives.

Goulburn-Murray Water's proposed productivity and efficiency savings step changes equates to an average saving of $3.6 million per annum over the PS6 period. This represents an implied net annual saving of 1.9 per cent per annum on adjusted baseline expenditure. This is higher than any of the net average annual savings in operating expenditure proposed by the water businesses in the 2023 Price Review.

3.6 Summary of controllable operating expenditure assessment

Based on Goulburn-Murray Water's proposal and the further information provided and discussions to date, we have formed the view that its forecast operating expenditure is consistent with a prudent business operating efficiently. This reflects our view that:

- the expenditure in the baseline year of 2022-23 appears reasonable, and does not appear to include any items that are non-recurring
- all of the proposed step changes are reasonable and supported by a sound rationale.

This is considered within the context of its proposed nil growth in operating expenditure and efficiencies that have been applied as step change adjustments, equating to an implied average baseline growth in operating expenditure of –1.9 per cent per year.

4 CAPITAL EXPENDITURE ASSESSMENT

4.1 Overview of assessment approach

The Commission's Guidance Paper states that forecast capital expenditure is:

> *…. capital expenditure that would be incurred by a prudent service provider acting efficiently to achieve the lowest cost of delivering service outcomes, considering a long-term planning horizon (prudent and efficient forecast capital expenditure).*[19]

We have assessed Goulburn-Murray Water 's proposed capital expenditure program against the criteria set out in Figure 4.1.

Figure 4.1: Capital expenditure assessment criteria

Having regard to these criteria, we have also considered whether any adjustments to the proposed expenditure forecast would be considered appropriate, material and justified.

We have assessed Goulburn-Murray Water 's forecast capital expenditure for the PS6 regulatory period focusing primarily on a review of asset management, capital planning and prioritisation frameworks and processes and how they have been applied. We have also reviewed key supporting documentation for:

- the following four major capital projects:
- Tullaroop Upgrade Works – Secondary Embankment Filters
- Laanecoorie Weir Spillway – End of Life Asset Replacements

[19] Essential Services Commission (2022). p.33.

- Goulburn Weir Spillway – Replacement of Radial Gates Protective Coatings
- Lake Buffalo Irrigation Outlets and Trash Screen Upgrade
- all six major capital expenditure programs.

Goulburn-Murray Water 's PS6 submission supporting its proposed capital expenditure program was well focused and concise, providing very good context and justification for the forecast expenditure program and associated drivers. To further test the infrastructure planning and project/program development basis underpinning the proposed program, we requested additional information and background relating to:

- its capital planning and asset management frameworks and processes and how these have been used to develop, review, assess risk and appropriately prioritise the capital expenditure program
- its approach to cost estimation used for setting project and program budgets (including treatment of escalation, risk, contingencies and incorporation of proposed efficiencies)
- any potential implications of the deferral of some dam safety projects from the PS5 regulatory period, considering evolving asset risk profiles through the PS6 period and beyond
- further insight into the drivers of the forecast increased expenditure in RP6 associated with the improvement/compliance driver (including for corporate and IT services and systems)
- further information on improvements implemented regarding capacity to deliver and how these will assist in delivering the PS6 program (including major dam and IT and cyber security projects).

Goulburn-Murray Water provided comprehensive responses addressing all the additional information requested. Appendix 1 contains a list of all documents provided by Goulburn-Murray Water and reviewed as part of our assessment of its proposed capital expenditure program.

Our assessment is based on a review of the information contained in Goulburn-Murray Water 's PS6 submission and responses to these additional information requests reflecting the above criteria. We also conducted a workshop session with Goulburn-Murray Water on 13 November 2023 at its Tatura offices to explore this information and additional related queries in more detail.

4.2 Assessment of overall capital program

Goulburn-Murray Water's performance in delivering its PS5 regulatory period capital program appears good, with forecast expenditure for the period of $108.0 million compared to the benchmark allowance of $111.9 million approved by the Commission in the last price review. Although there have been some delays associated with deferral of bulk water and dam safety projects into the PS6 period, these have been mostly offset by additional expenditure for fishways projects on Taylors and Tea Garden Creeks that have been externally funded by Catchment Management Authorities.

Goulburn-Murray Water has also forecast a moderate increase in capital expenditure for the PS6 regulatory period. Whilst forecast renewals expenditure for the PS6 period has reduced slightly compared to the benchmark for PS5, this has been offset by greater forecast improvement/compliance driven expenditure relating to IT and digital and cyber security upgrade initiatives.

4.2.1 Link to customer outcomes and obligations

The key drivers, projects and programs appear to be very well linked to and supported by relevant strategies, service plans, customer outcomes and engagement results and include:

- renewals - 74.8 per cent of the program (including some components of its meter replacement program that are offset by $5.95 million of external funding)
- improvement/compliance - 25.2 per cent of the program (including forecast expenditure on office and depot site consolidation to be offset by expected revenue of $3.13 million generated from divestment of surplus land assets)
- six major programs ($64.4 million)
- six major projects, which appear appropriately defined and costed ($13.0 million)
- multiple other smaller capital projects and program allocations across a range of service, asset and driver categories ($37.2 million).

Goulburn-Murray Water 's supporting strategies, service plan and project and program business case documents reviewed provide strong justification for the projects and programs that underpin the overall capital expenditure program and forecast. They also link well to Goulburn-Murray Water 's six key strategic outcomes (as reviewed with its Water Services Committees and customers):

- Reliable Supply – supplying water at the right rates at the right times
- Credible Business – transparent, honest and trustworthy
- Fair Pricing – fairly reflecting the true use of services and infrastructure by all water users

- Efficient Operations – enabling affordable prices that help support farmers to stay on the land
- Responsible Services – efficient delivery of services supported by fast and simple digital information and communication systems
- Socially Responsible – delivering on environmental, cultural and recreational outcomes that matter to customers, Traditional Owners and the community.

4.2.2 Comparison of forecast and actual capital expenditure – PS5

Goulburn-Murray Water's actual capital expenditure for the PS5 regulatory period (including the forecast for 2023-24) is expected to be $108.0 million. This is $3.9 million (or 3.5 per cent) less than the benchmark allowance approved by the Commission in the last price review. Whilst there have been some delays associated with deferral of major bulk water projects including:

- dam safety projects
- Buffalo outlet and trash racks project
- Laanecoorie spillway and outlets project.

These have been partially offset by additional expenditure on externally funded fishway projects.

Deferral of these bulk water projects was mainly due to availability issues for specialist consultants and contractors (related to COVID-19 pandemic issues and competition for these resources with major dam projects in other states), as well as high storage levels associated with catchment flooding impacts. Based on our follow up discussions with Goulburn-Murray Water, these deferrals into the PS6 period are not of concern in relation to major dam safety risks nor ongoing asset risk profiles.

All dams in Goulburn-Murray Water's systems are covered by a portfolio risk assessment, with none highlighted as being within the intolerable zone as defined by the Australian National Conference on Large Dams (ANCOLD). All dam safety works required relate to achieving risk profiles "as low as reasonably practicable" (ALARP) as required by ANCOLD, and to reducing business and operational risks (in particular cost impacts of rectifying asset failures), as aligned with Goulburn-Murray Water's dam safety assessment system and risk appetite.

As outlined in Goulburn-Murray Water 's submission, its delivery performance for major PS5 projects and programs has been reasonable overall, with:

- four projects completed
- four programs progressing on schedule

- three projects deferred beyond the PS5 regulatory period due to:
- undertaking extended option analysis to better address drivers and needs (Laanecoorie Spillway and Outlets upgrade)
- difficulties in engaging specialist detailed design resources (Lake Buffalo Outlets and Trashracks)
- impacts of flooding and high storage levels and shortage of appropriate resources to manage and undertake investigation and design (dam safety upgrade works – including Nillahcootie and Tullaroop).

We note that, in relation to the major project deferrals from the PS5 period, the Laanecoorie, Lake Buffalo and Tullaroop projects are now scheduled to progress as major projects for completion in the PS6 period. The Nillahcootie project will commence planning and design in the PS6 period, with construction scheduled to progress in the PS7 period.

4.2.3 Forecast capital expenditure – PS6

Goulburn-Murray Water 's gross capital expenditure forecast for the PS6 regulatory period is $114.6 million. This is 6.2 per cent more than the actual gross capital expenditure (including the 2023-24 forecast) undertaken over the PS5 regulatory period and is 15.6 per cent more than the forecast gross capital expenditure outlook for the PS6 regulatory period included in its PS5 final decision.

Noting this modest forecast increase in gross capital expenditure for the PS6 period, Goulburn-Murray Water has forecast a slight reduction in its renewals expenditure ($85.8 million in PS6 compared to the benchmark of $97.4 million for the PS5 period). This is offset by the forecast increase in improvement/compliance driven expenditure (mainly relating to IT and digital and cyber security upgrade initiatives), with $28.9 million forecast expenditure for the PS6 period compared to the $4.2 million benchmark for the PS5 period.

We also note that a total of $9.1 million of the forecast gross capital expenditure for the PS6 period is offset by:

- external funding of $5.95 million for some components of the surface and ground water irrigation meter replacement program
- expected revenue of $3.13 million generated from divestment of surplus land assets to completely offset proposed capital expenditure on office and depot site consolidation and upgrades for the Purchase of New Land, Building of New Office, Shedding and Fixtures major project (as agreed with the Victorian Department of Treasury and Finance).

Based on our review of Goulburn-Murray Water's submission and additional information provided, our view is that the proposed increased improvement/compliance driven capital expenditure for the PS6 period is prudent and reasonable given that it is:

- consistent with trends seen across the broader water sector in Victoria and in other states
- well-linked (including through appropriate business cases for two of the major programs, together totaling $6.2 million) to Digital and IT Cyber Security Strategies (provided by Goulburn-Murray Water for our review).

Further, we note that $3.13 million of the forecast $28.9 million improvement/compliance driven capital expenditure relates to the Purchase of New Land, Building of New Office, Shedding and Fixtures major project noted above, which is assumed to be fully offset in Goulburn-Murray Water's submission and supporting financial model by revenue generated by the sale of surplus land as part of the project.

Goulburn-Murray Water's forecast capital expenditure is also projected to further increase by around 20 per cent into the PS7 regulatory period driven by:

- renewals expenditure forecast to increase by around 17 per cent
- improvement/compliance expenditure forecast to increase by around 28 per cent.

The phasing of forecast capital expenditure over the PS6 and PS7 regulatory periods appears appropriate and reflects the outcomes of Goulburn-Murray Water 's asset risk based expenditure prioritisation process.

As noted in section 2.2, Goulburn-Murray Water has forecast no capital expenditure for growth-driven works in both the PS6 and PS7 regulatory periods. Given the lack of any current and anticipated future growth in its irrigation and water supply service demands at this point in time, this appears appropriate.

Based on Goulburn-Murray Water 's PS6 submission, further information provided and the workshop discussions with Goulburn-Murray Water on 13 November 2023, we consider that there is very strong justification for the capital expenditure projects and programs proposed for the PS6 regulatory period. The justifications put forward are reasonable and supported by good capital planning processes and good documentation, including appropriate strategies, service plans for each key service area that set out required levels of service and how these should be maintained, as well as major project and program business case documents.

4.2.4 Underlying processes for developing the program

Goulburn-Murray Water's PS6 submission briefly outlines its underlying process for developing the capital program and expenditure forecasts. This includes:

- linkage to Corporate Strategies and service standards required to meet customer needs through service plans, asset management plans for each key asset category and supporting business cases
- systematic asset condition and consequence of asset failure assessments to identify assets that pose potential unacceptable business risks
- risk-based asset analysis to identify and prioritise the capital plan.

These processes appear robust and appropriate, based on our review of Goulburn-Murray Water's submission and the outcomes detailed in the supporting financial model, as well as on our review of the following documents:

- Asset Management Strategy 2024 (A3895289)
- Asset Management Document Hierarchy (A4339753)
- GMW Investment Project Management Framework (A3686691)
- Service Plan - Gravity Irrigation - 2022 - Version 1 (A4312648)
- GMW_Digital Strategy Report_Final_updated (A3800733)
- Approved Strategy - IT - Cyber Security Strategy - December 2020 (A3838424) (A4064060).

Our review has established that Goulburn-Murray Water has applied these processes appropriately to develop the PS6 capital expenditure program, as evidenced through the detailed project and program business cases provided for our review.

Goulburn-Murray Water has clearly linked its proposed capital programs, projects and associated expenditures to risk based assessments of needs. It has developed its proposed capital program by applying a prioritisation process that appears to incorporate an appropriate risk sharing balance between Goulburn-Murray Water and its customers, in alignment with its stated Fair Pricing strategic outcome referred to in section 4.2.1.

Together, these factors provide a high level of confidence that the forecast capital expenditure for the PS6 regulatory period is justified, prudent and appropriate.

4.2.5 Reliability of cost estimation

Goulburn-Murray Water's approaches to estimating costs included in project and program budgets appear to be sound and appropriate. Goulburn-Murray Water has advised that it uses historic costs, first principles, consultant estimates and contractor/supplier quotes/estimates as the basis for developing project and program cost forecasts and

budgets. The type and combination of information sources used depends on the type and maturity of the project/program.

The major project expenditure forecasts are based on a P50 estimate with Monte Carlo simulation applied to optimise risk-based cost estimates. These estimates are developed using a simple model (@RISK software add-on in MS Excel), applying inherent risk to each line item in the cost estimate, plus an additional contingent risk component for potential additional costs, including procurement delays, high storage levels and other altered circumstances.

The base cost estimates (appropriately adjusted to account for observed escalation in construction costs over the past three years) used as input to the risk based cost estimation modelling for these projects are developed using appropriate combinations of consultant estimates and historical costs based on concept designs compared to similar past projects.

Cost estimates for the major program capital expenditure allocation forecasts typically use unit rates derived from historic costs, for example:

- Linear Program:
- channel bank remodelling: $75-$220 per metre
- rock armouring of channel banks: $ 55-$85 per metre
- graded access tracks: $35 per metre
- fencing: $25 per metre
- Structures Program:
- refurbishment costs are based on historic cost data where appropriate, otherwise using a draft cost estimating guidance document
- replacement cost estimates are based on historic costs where appropriate, otherwise using an applicable renewals replacement cost stored in Goulburn-Murray Water's asset management information system, Maximo (typically based on unit rates).

Goulburn-Murray Water manages the projects within these Major Programs as individual projects with independent cost control. The actual portfolio of projects in each program is then managed on an ongoing basis, being adjusted to balance over and under cost variations aligned with Goulburn-Murray Water's Investment Project Management Framework, as overseen by the associated Program Boards.

Based on our review, we consider that Goulburn-Murray Water 's approaches to cost estimation provide a reasonable and appropriate basis for developing the budget estimates for its capital program for the PS6 regulatory period.

4.2.6 Deliverability of capital program

In addition to delays caused by lack of availability of specialist consultant, design and contractor resources for some of the bulk water major projects in the PS5 period, Goulburn-Murray Water advises that further unanticipated delays in delivering the PS5 capital program were driven by changes to procurement rules. In response, it has introduced more rigorous project planning, management and delivery processes with a separate team managing the upfront project development and preliminary planning, monitoring and project closure, whilst project delivery is specifically managed by separate dedicated groups.

Whilst acknowledging the above-mentioned delays in delivering some components its PS5 capital program, Goulburn-Murray Water also notes that, overall, delivery performance for the PS5 program was still strong. Building on this base, in preparation for delivering the PS6 capital program, Goulburn-Murray Water has also already implemented a number of changes to better support program delivery, including the following.

- Introduction of improved and more rigorous project planning, management and delivery processes:
- utlilisation of an Investment Framework with specific project gateways to ensure that the capital program is regularly reviewed and that all projects continue to be justified
- stronger project management processes that ensure key issues and potential difficulties are raised and addressed early in the project planning process
- the introduction of new Project Management software (Project Hub), with improved gateway management, tracking and approval work flows – this initiative ensures that there is clear handover of projects from planning to the delivery phase
- allowance for extended procurement timeframes in the lead times for projects included in the PS6 pricing submission
- formal presentation of major projects to executive management for systematic review to give greater confidence in capacity to deliver.
- Preparing procurement of specialist resources to assist with the initiation of major dam safety projects scheduled for the PS6 and PS7 regulatory periods.

These initiatives are also supported by continued scalability of Goulburn-Murray Water's resources to adapt to project workflow, as demonstrated through its flood response during the PS5 period. A mix of internal resources, external design consultants and external contractors is adopted to best suit specific project requirements.

In addition, the major project requirements for the PS6 period are better understood, with three of the four main major projects scheduled for this period already substantially progressed, with one in the procurement stage and one to commence procurement of an external consultant/designer shortly. Recruiting to the Dam Safety team is now in progress (with advertising for positions carried out in November 2023) to help progress early stages of the Tullaroop Project as well as other future Dam safety projects.

Goulburn-Murray Water also advises that its major capital programs are not complex, each comprising multiple small (with some very simple) projects. Mobilisation and procurement for these works and projects are relatively easy and can be scaled up or down using external contractors and labour hire resources as needed. The flow of projects through these programs is managed through the corporate planning cycle and aligned with its Investment Framework.

In summary, Goulburn-Murray Water has made good progress towards implementing delivery program enhancement initiatives that build on an already strong base. This provides a good level of confidence that robust arrangements are ready and in place to support implementation of its capital program for the PS6 regulatory period.

4.3 Assessment of major projects and major programs

4.3.1 Major projects

Goulburn-Murray Water's capital program for the PS6 regulatory period includes six major projects with a forecast total capital expenditure of $13.0 million (11.3 per cent of total capital expenditure). The four main major projects are outlined in Goulburn-Murray Water's PS6 submission and in more detail in specific project business cases provided to us for further review.

We reviewed the business cases provided to us for these four main projects.

- Tullaroop Upgrade Works – Secondary Embankment Filters:
  - improvement/compliance driver – achieving ALARP under the ANCOLD guidelines
  - cost estimates based on a 2006 consultant concept design, subsequently revised by another independent consultant for the 2019 Portfolio Risk assessment work
  - to commence procurement of external consultant/designer shortly
- Laanecoorie Weir Spillway – End of Life Asset Replacements:
  - renewals driver
  - cost estimates based on a 2019 consultant multicriteria analysis of options and a consultant concept estimate undertaken in 2020 for the preferred option
  - currently in final option assessment phase.
- Goulburn Weir Spillway – Replacement of Radial Gates Protective Coatings:
  - renewals driver
  - cost estimates based on concept design and similar historic project costs
  - although not yet commenced, the protective coatings works are not complex and will be fully contracted out - several similar protective coatings projects were completed early in the PS5 period, providing a high level of confidence that procurement and completion will proceed smoothly.
- Lake Buffalo Irrigation Outlets and Trash Screen Upgrade:
  - renewals driver
  - cost estimates based on 2019 consultant preliminary cost estimate
  - procurement stage has commenced.

The sample business cases are detailed, well focused and provide strong justification for these projects and the associated expenditures. The forecast expenditures appear to be appropriately targeted based on sound risk assessment approaches.

Other Major Projects - Nillahcootie Dam Safety Works (spillway walls stabilisation and construction of filters)

The construction phase for the Nillahcootie spillway wall strengthening project has been deferred to the PS7 period, with an allowance of $0.4 million included in the PS6 capital forecast to progress project development, planning and concept and preliminary design. This decision was made to allow adequate time to recruit the required resources and to properly commence and progress investigation and design prior to the construction phase.

Based on Goulburn-Murray Water's advice, the deferral of this project has not increased the risk profile, with the objective of the works driven by achievement of the ALARP requirements under the ANCOLD guidelines (improvement/compliance driver), rather than by any intolerable risk. The scheduling of this project, including the forecast PS6 capital expenditure on planning and design to ensure the project is ready for delivery in the PS7 period, appears appropriate.

Other Major Projects - Purchase of New Land, Building of New Office, Shedding and Fixtures

Goulburn-Murray Water advises that it currently carries out its operations from a mix of owned and leased offices and depots across Northern Victoria. The majority of these are associated with storage sites, although it also operates six regional customer service centres and three works depots. The key objectives of this project are to investigate opportunities to consolidate site locations where practical, as well as to ensure that all sites comply with required building regulation standards (improvement/compliance driver). In this context, Goulburn-Murray Water highlights that some of the current office sites do not meet the requirements of these regulations and would require significant investment to upgrade accordingly.

A new organisational structure has also been implemented by Goulburn-Murray Water, reflecting an East, Central and West operational model. The current locational distribution of its customer service centres does not align with this new operational model, with the centres not being central to the operations of the three regions. The project will therefore also provide the opportunity to address this lack of alignment in customer service centre locations with the operating model.

The intention is for this project to be self-funded, rather than being funded by Goulburn-Murray Water's customers through the pricing submission process. The aim is to fully fund the office and site consolidation and upgrade works (including purchase of more suitable new sites, as required) through revenue generated by the divestment of surplus sites as well as from ongoing operational savings made by having less sites to manage and

maintain. Goulburn-Murray Water advises that this approach has been discussed and agreed with the Victorian Department of Treasury and Finance (DTF).

Given:

- the proposed self-funding model for this project
- the potential to improve alignment with the operational model
- the likely ongoing operational cost savings
- the support by DTF for the approach taken,

the scheduling of this project and its inclusion in the forecast PS6 gross capital expenditure with a full $3.1 million offset appears appropriate.

Overall Assessment of Proposed Major Projects

In summary, our review confirms the appropriateness and robustness of Goulburn-Murray Water's proposed major projects and provides good insight into the strong underlying basis for the broader capital program. In particular, the projects are:

- appropriate in relation to key drivers and obligations
- strongly linked to customer service needs and preferences through the organisation's key strategic outcomes
- supported by appropriate analysis and assessment
- costed appropriately.

This provides a high level of confidence that the major projects and the associated expenditure forecasts are appropriate. As such, we do not recommend any adjustments to the forecast capital expenditures for Goulburn-Murray Water's major projects.

4.3.2 Major programs

Goulburn-Murray Water's capital program for the PS6 regulatory period includes six major program allocations with a forecast total capital expenditure of $64.4 million (56.2 per cent of total capital expenditure). These programs are:

- Irrigation and Drainage Linear (Channels) Renewals Program
- Irrigation and Drainage Structures Renewals Program
- Irrigation and Diversions Services Meter Replacement Program
- IT Equipment and Systems Refresh Upgrades Program
- IT Systems Security Upgrades Program
- Field and Mechanical & Electrical Services Plant and Equipment Replacement Program.

All six programs are summarised in Goulburn-Murray Water's PS6 submission and in more detail in the following specific program business cases (two of which cover the Structures Renewals Program) provided to us for further review:

- Goulburn-Murray Water - PS2024 - WDS Linear Capital Program Business Case (A4666155)
- Goulburn-Murray Water - PS2024 - WDS Structure Capital Program Business Case (A4666153)
- Goulburn-Murray Water - PS2024 - WDS Drainage Structure Capital Program Business Case (A4666167)
- Goulburn-Murray Water - PS2024 - WDS Meter Replacement Capital Program Business Case (A4666146)
- Goulburn-Murray Water - Program Candidate - IT Equipment and System Refresh WP6 (A4646628)
- Goulburn-Murray Water - Program Candidate - IT Security stream WP6 (A4694486)
- Goulburn-Murray Water - Field Services P&E Replacement Program Business Case (2023) - Project 10836 (A4642539).

The business case documents sighted are detailed, well-focused and provide strong and robust justification for the proposed program objectives and associated expenditures. Following our review of these documents, it appears that these programs have been developed based on strong and appropriate analysis and assessment of needs and benefits and that they:

- are appropriate in relation to key drivers and obligations
- have strong linkage to customer service needs and preferences through the organisation's key strategic outcomes
- are supported by appropriate analysis and assessment
- have appropriate cost estimates.

On this basis, we do not recommend any adjustments to any of Goulburn-Murray Water's PS6 capital program allocation expenditure forecasts.

4.4 Summary of capital expenditure assessment

Overall, Goulburn-Murray Water's PS6 capital forecast submission is well developed and, together with the additional information reviewed and the outcomes of a review workshop held on 13 November 2023, provides a high level of confidence that its proposed capital expenditure program is:

- appropriate
- prudent
- robust
- is deliverable.

As such, we do not recommend any adjustments to Goulburn-Murray Water's forecast capital expenditure for the PS6 regulatory period.

Appendix 1 Documents Reviewed for Assessment of Goulburn-Murray Water's Forecast Capital Expenditure

- Goulburn-Murray Water - Asset Management Strategy 2024 (A3895289)
- Goulburn-Murray Water - Asset Management Document Hierarchy (A4339753)
- Goulburn-Murray Water - GMW_Digital Strategy Report_Final_updated (A3800733)
- Goulburn-Murray Water - Approved Strategy - IT - Cyber Security Strategy - December 2020 (A3838424) (A4064060)
- Goulburn-Murray Water - PS2024 Additional Capex Information (A4768603)
- Goulburn-Murray Water - Service Plan - Gravity Irrigation - 2022 - Version 1 (A4312648)
- Goulburn-Murray Water - GMW Investment Project Management Framework (A3686691)
- Goulburn-Murray Water - PS2024 Major Project BC - Tullaroop (A4564105)
- Goulburn-Murray Water - PS2024 Major Project BC - Laanecoorie (A4564830)
- Goulburn-Murray Water - PS2024 Major Project BC – Goulburn Weir (A4564103)
- Goulburn-Murray Water - PS2024 Major Project BC - Buffalo (A4550595)
- Goulburn-Murray Water - PS2024 - WDS Linear Capital Program Business Case (A4666155)
- Goulburn-Murray Water - PS2024 - WDS Structure Capital Program Business Case (A4666153)
- Goulburn-Murray Water - PS2024 - WDS Drainage Structure Capital Program Business Case (A4666167)
- Goulburn-Murray Water - PS2024 - WDS Meter Replacement Capital Program Business Case (A4666146)
- Goulburn-Murray Water - Program Candidate - IT Equipment and System Refresh WP6 (A4646628)
- Goulburn-Murray Water - Program Candidate - IT Security stream WP6 (A4694486)
- Goulburn-Murray Water - Field Services P&E Replacement Program Business Case (2023) - Project 10836 (A4642539)