

February 2024



Greater Western Water: Review of expenditure forecasts

2024 Water Price Review

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Executive Summary

FTI Consulting has been engaged by the Essential Services Commission (the Commission) to undertake an independent expert review of Greater Western Water's forecast (controllable) operating expenditure and capital expenditure for the 1 July 2024 to 30 June 2028 (PS5) four-year regulatory period.

The Commission is required to assess Greater Western Water's proposal against a legal framework set out in the *Water Industry Regulatory Order 2014* and the Commission's PREMO pricing framework. We have assessed Greater Western Water's forecast operating and capital expenditure based on the Commission's *2024 Greater Western Water Price Review: Guidance Paper* (the Guidance Paper), which recognises that Greater Western Water was formed on 1 July 2021 following the integration of City West Water and Western Water, both of which have existing price determinations in place.

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

Forecast operating expenditure

Greater Western Water has proposed an average net decrease in controllable operating expenditure (growth less efficiency factor) of -0.2 per cent per year for the regulatory period.

Greater Western Water's forecast operating expenditure reflects:

- baseline 2022-23 expenditure of \$209.63 million, which is 14 per cent above the combined expenditure benchmark allowances approved by the Commission in the previous price review for City West Water and Western Water
- a step change increase to the baseline of \$34.49 million across the regulatory period
- average growth in controllable operating expenditure of 2.8 per cent per year and an average efficiency factor of 3 per cent per year.

In instances where Greater Western Water has been unable to justify that an expenditure item is prudent and efficient, we have recommended the Commission remove this from the expenditure benchmarks for the PS5 regulatory period. The adjusted benchmarks set out in this report reflect the level of forecast expenditure we were able to assess as being prudent and efficient only.

Assessing the prudence and efficiency of Greater Western Water's baseline expenditure for 2022-23 has been difficult. While the Commission's approved benchmarks for controllable operating expenditure for the two antecedent businesses (City West Water and Western

Water), Greater Western Water considers that those benchmarks are not reflective of a notional determination for the current regulatory period as the business has fundamentally changed the way it operates.

However, the baseline controllable operating expenditure for 2022-23 was significantly more than the Commission's benchmarks for the antecedent businesses. As a result, we requested further supporting information to explain the key drivers associated with this increase. Ultimately, Greater Western Water was not able to provide sufficient information to clearly demonstrate that the associated cost increases were both prudent and efficient.

Based on Greater Western Water's submission, discussions with the business, the further information it provided, we are able to provide an adjusted forecast operating expenditure that is consistent with a prudent business operating efficiently. This reflects our view that:

- the key drivers of some of the overspend against the baseline appear reasonable, however, there are several instances where we were unable to assess the prudence and efficiency of the overspend
- the proposed step changes are mostly reasonable and supported by a sound rationale, with some changes.

We recommend the following adjustments to Greater Western Water's forecast controllable operating expenditure for the PS5 regulatory period:

- a reduction in baseline 2022-23 controllable operating expenditure of \$16.86 million
- a reduction in proposed step changes of \$3.16 million
- a reallocation of \$12.60 million from step changes to the efficiency factor.

Table 1: Recommended adjustments – controllable operating expenditure (\$ 1 January 2024, millions)

	2024-25	2025-26	2026-27	2027-28
Forecast controllable operating expenditure	218.18	218.52	219.00	220.42
Recommended adjustments:				
Baseline adjustments with amended efficiency factor (reductions)				
Integration costs	-1.21	-1.13	-1.04	-1.04
Compliance obligations	-2.95	-2.75	-2.54	-2.54
Corporate costs	-0.68	-0.63	-0.58	-0.59
Customer and community engagement	-0.92	-0.86	-0.79	-0.79
Field maintenance	-6.23	-5.81	-5.35	-5.36
Labour costs	-0.81	-0.76	-0.70	-0.70
Unexplained cost increases	-2.28	-2.13	-1.96	-1.96
	-15.09	-14.07	-12.95	-12.98
Step change adjustments (reductions)				
New billing and collection system - removal of contingency allowance	-0.77	-0.78	-0.80	-0.81
New billing and collection system - reallocation of forecast efficiencies	-1.86	-2.84	-3.93	-3.97
	-2.63	-3.62	-4.73	-4.78
Total recommended adjustments	-17.72	-17.69	-17.68	-17.76
Adjusted total operating expenditure	200.47	200.83	201.32	202.66

Forecast capital expenditure

Greater Western Water has forecast capital expenditure of \$1,721 million for the PS5 regulatory period. This is 22 per cent more than its actual expenditure over PS4 regulatory period and 68 per cent more than the forecast capital expenditure outlook for the PS5 regulatory period included in the PS4 submission for the two antecedent businesses.

Greater Western Water’s PS5 submission provides a detailed breakdown of its forecast capital expenditure for the PS5 regulatory period. The further information provided by Greater Western Water in relation to key issues for further investigation gave us a level of confidence that most of the proposed capital expenditure program is consistent with the actions of a prudent business operating efficiently. Most of the forecast capital expenditure is justified and is capable of being delivered by Greater Western Water in the PS5 regulatory period.

However, we recommend the benchmark capital expenditure allowance be adjusted for the PS5 regulatory period to reflect the removal of the following:

- the Water Main Renewal Program by \$79.43 million
- the Stormwater Harvesting Fund by \$12.84 million
- the Asset Ecosystem – Asset Foundations by \$68.13 million.

Table 2: Recommended adjustments - capital expenditure (\$ 1 January 2024, millions)

	2023-24	2024-25	2025-26	2026-27	2027-28	PS5 Total
Forecast capital expenditure	334.35	370.86	348.77	357.92	309.52	1 721.42
Recommended adjustments:						
Water Main Renewal Program	15.88	15.88	15.88	15.88	15.91	79.43
Stormwater Harvesting Fund	0.20	0.86	4.28	4.28	3.21	12.84
Asset Ecosystem – Asset Foundations	12.14	20.41	20.23	10.59	4.76	68.13
Total recommended adjustments	28.22	37.15	40.39	30.75	23.88	160.39
Adjusted total capital expenditure	306.13	333.71	308.38	327.17	285.64	1 561.03

1 INTRODUCTION

1.1 Purpose of this report

The Essential Services Commission (the Commission) is reviewing a submission from Greater Western Water lodged on 30 September 2023 setting out its proposed prices, revenue requirement and key service outcomes to apply to water and sewerage services from 1 July 2024 to 30 June 2028 (referred to in this report as the PS5 regulatory period).

FTI Consulting has been engaged to undertake an independent expert review of Greater Western Water's forecast operating expenditure and capital expenditure for the PS5 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 prudence and efficiency of Greater Western Water's capital expenditure and controllable operating expenditure forecasts for the PS5 regulatory period, in accordance with the requirements of the regulatory framework.

1.2 Greater Western Water

Greater Western Water was formed on 1 July 2021 upon the integration of City West Water and Western Water. The existing price determinations were approved in 2018 for City West Water and 2020 for Western Water. These determinations originally applied until 30 June 2023 but were extended to 30 June 2024 following an application by Greater Western Water. This will be the first price determination for the integrated business.

1.3 Water industry regulatory framework

Greater Western Water's proposal is being assessed against a legal framework set out in the *Water Industry Regulatory Order 2014*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 prudence 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 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

Performance	Have the performance outcomes to which the business committed in its last price submission been met or exceeded?
Risk	Has the business sought to allocate risk to the party best positioned to manage that risk?
Engagement	How effective was the business’ customer engagement?
Management	Is there a strong focus on efficiency? Are controllable costs increasing, staying the same, or decreasing?
Outcomes	Do proposed service outcomes represent an improvement, the status quo, or a withdrawal of service standards?

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, the business’s submission is expected to reflect its best offer to its customer base.

The *2024 Greater Western Water price review: Guidance paper* (the Guidance Paper) explains the Commission’s methodology and approach to assessing Greater Western Water’s price submission, making a price determination and the information required 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.

1.4 Methodology and approach

In assessing Greater Western Water’s forecast controllable operating expenditure and capital expenditure over the PS5 regulatory period, we have considered the capital expenditure incurred by Greater Western Water in the PS4 regulatory period, including an assessment of the capital expenditure for the 2023-24 year. We have not assessed whether Greater Western Water’s PS5 submission should be fast tracked and have not assessed other elements of the PREMO framework such as past performance or engagement.

Our methodology for assessing Greater Western Water’s capital and operating expenditure forecasts for the PS5 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 Greater Western Water’s proposal using the base-step-trend

³ Essential Services Commission (2022). 2024 Greater Western Water price review: Guidance paper, 26 October.

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 template.

- For forecast capital expenditure, our assessment focuses on Greater Western Water’s Top 10 major projects and its capital expenditure programs.

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 Greater Western Water’s PS5 price submission, Price Review Model and associated documentation
- visits and discussions with Greater Western Water on key issues related to its proposal
- requests for additional information from Greater Western Water
- further review and analysis of further information or explanations provided.

Assessing the prudence and efficiency of Greater Western Water’s baseline expenditure for 2022-23 has been difficult. While the Commission’s approved benchmarks for controllable operating expenditure for the two antecedent businesses (City West Water and Western Water), Greater Western Water considers that those benchmarks are not reflective of a notional determination for the current regulatory period as the business has fundamentally changed the way it operates.

Although Greater Western Water’s submission removed some costs associated with the transition from its baseline year, it did not clearly outline its significant overspend in this year with the benchmarks of the antecedent businesses. Rather, it stated that:

Greater Western Water is not a simple aggregation of the two pre-existing businesses. The integration has fundamentally changed the way we conduct our operations.....Combining the ESC’s CWW and WW operating expenditure is not reflective of a notional GWW determination for the current regulatory period (2018 to 2024).⁴

It is difficult to assess prudence and efficiency using the base-step-trend approach in circumstances where significant increases in costs cannot be directly referenced or reconciled back to the forecast reflected in the approved combined benchmarks.

This resulted in subsequent requests for information with the view to further understanding the drivers of these increases. We sought further information on the costings associated with several of the drivers identified, which is important in assessing the efficiency of the expenditure. Even if the information provided justifies the need for certain expenditure (i.e. the expenditure could be considered prudent), we still need sufficient information to assess whether the associated costs are efficient.

⁴ Greater Western Water (2023a). 2024 Price Submission, 28 September, p.68.

Throughout our review we often received supporting documentation that was lacking the detailed information we required to assess prudence and efficiency. Greater Western Water often provided more qualitative reasoning than quantitative evidence to support its expenditure, which further made assessment of prudence and efficiency difficult.

As a result, where Greater Western Water has been unable to provide the required information to enable us to form a view as to whether an expenditure item is prudent and efficient, we have recommended the Commission remove this from the benchmark expenditure allowance. The adjusted benchmarks set out in this report reflect the level of forecast expenditure we were able to assess as being prudent and efficient only.

1.5 Structure of this report

The structure of this report is as follows:

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

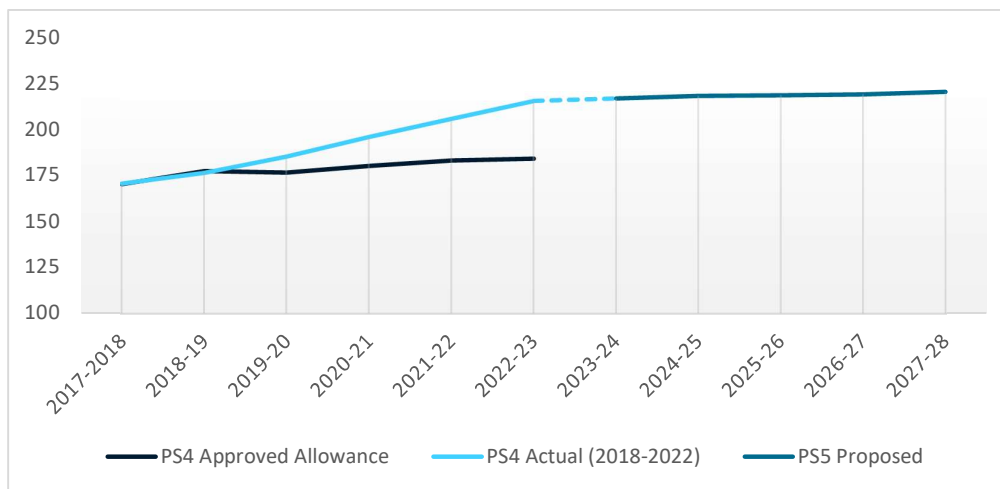
Consistent with the Commission's Guidance Paper and the Price Review Model completed by Greater Western Water, all forecasts and actuals are expressed in dollars as at 1 January 2024.

2 SUMMARY OF EXPENDITURE PROPOSAL

2.1 Forecast controllable operating expenditure

From the 2018-19 to 2022-23 period the combined approved controllable operating expenditure benchmark allowance for Greater Western Water was \$901.48 million. For these five years, Greater Western Water's actual expenditure (and its predecessors, City West Water and Western Water prior to 2021-22) was \$978.82 million. This amount is \$77.34 million above the benchmark allowance (\$1 January 2024), as shown in Figure 2.1.

Figure 2.1: Greater Western Water's actual and forecast controllable operating expenditure by year (\$ 1 January 2024, millions)



Source: Greater Western Water, PS24 Greater Western Water Price Review Model - 2023-09-27.

Greater Western Water's baseline 2022-23 controllable operating expenditure is \$25.48 million (or 13.8 per cent) above the combined benchmark allowance approved by the Commission for each business (in 2018 for City West Water and 2020 for Western Water).

Greater Western Water has proposed net step changes to the baseline of \$34.49 million across the PS5 regulatory period, as outlined in Table 2.1.

Table 2.1: Greater Western Water’s proposed step changes (\$ 1 January 2024, millions)

Step change	Value
Infrastructure investment	
Romsey WFP	0.64
Romsey RWP	0.24
Macedon Ranges Transfer	0.89
Western Irrigation Network	3.31
Opex from the new Billings and Collections system	15.77
Security of Critical Infrastructure	4.47
Traditional Owner Water Program	3.97
Customer Hardship Program	5.20
Total	34.49

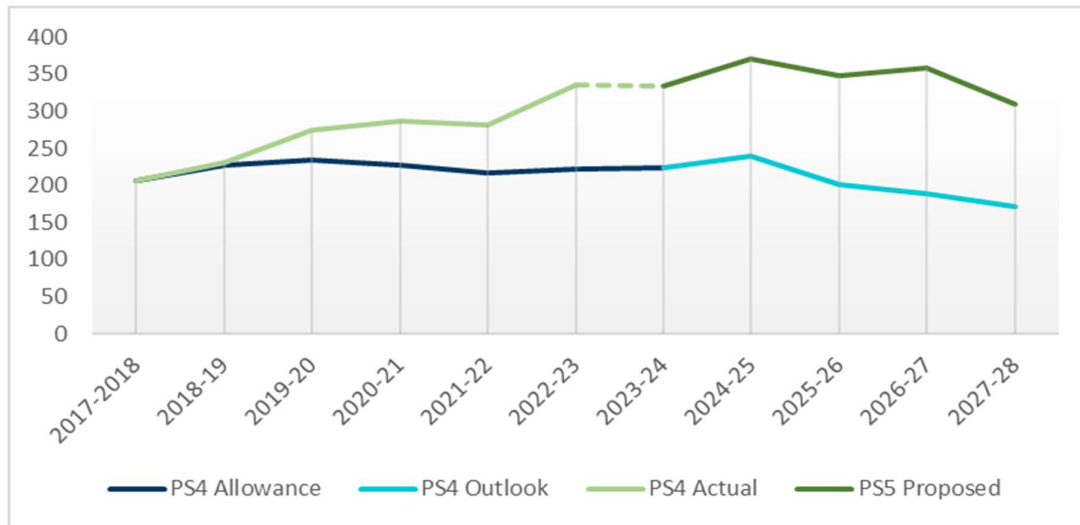
Source: Greater Western Water (2023). 2024 Price Submission, 28 September, p.85.

Greater Western Water forecasts an average growth factor for operating expenditure of 2.8 per cent per year and an efficiency factor of 3 per cent per year over the PS5 regulatory period.

2.2 Forecast capital expenditure

Greater Western Water has forecast capital expenditure of \$1,721 million for the PS5 regulatory period. This is 22 per cent more than the actual expenditure over PS4 regulatory period and 68 per cent more than the forecast capital expenditure outlook for the PS5 regulatory period that it included in its PS4 submission as shown in Figure 2.2

Figure 2.2: Greater Western Water's actual and forecast capital expenditure by year



'PS4 Approved Allowance' relates to the approved capital expenditure allowance for 2017-18 to 2022-23, and the business's 2018 forecast for 2023-24 to 2027-28.

Source: Greater Western Water, PS24 Greater Western Water Price Review Model - 2023-09-27.

The key drivers, projects and programs are:

- Renewals - 31 per cent of the program
- Growth - 49 per cent of the program
- Improvement/compliance - 20 per cent of the program

There are 28 capital programs across service, asset, and driver categories that total \$1,342 million (outlined in Table 2.2), and 10 major projects that total \$379.4 million (outlined in Table 2.3).

Table 2.2: Total project capital costs (\$ 1 January 2024, millions)

Service	Program	Proposed Capital Expenditure
Water	Water Main Performance Renewals	197.7
	Water Main Risk Renewals	101.8
	Water Growth	88.0
	Water Metering Program	57.3
	Water Treatment Growth	46.8
	Dams Works	21.2
	Water Compliance	20.7
	Water Tank Renewals	15.3
	Water Treatment Renewals	7.8
Sewer	Sewer Growth	158.0
	Sewer Treatment Growth	122.6
	Sewer Performance Renewals	79.4
	Sewer Risk Renewals	55.1
	Sewer Hydraulic Compliance	18.0
	Sewer Treatment Renewals	10.2
Recycled Water	Western Irrigation Network	30.0
	Recycled Water Growth	14.3
	Stormwater Harvesting	12.8
	Recycled Water Renewals	6.8
	Other – Recycled Water	2.7
Corporate	IT – Core Enabling Services	70.1
	IT – Asset Ecosystem	68.1
	IT – Core Business Development	37.0
	Asset Monitoring	36.8
	Corporate Works	24.8

Service	Program	Proposed Capital Expenditure
	IT – Billing & Customer	22.0
	Emissions Reduction	11.2
	ADOR capitalisation	5.8
Total		1 342.1

Source: Greater Western Water, 2023-28 Price Submission and associated Financial Model, 27 September 2023.

These projects and programs are linked to relevant strategies, customer outcomes and engagement results.

Greater Western Water’s top 10 capital expenditure projects, shown in Table 2.3, account for around 22 per cent of its proposed capital expenditure for the PS5 regulatory period.

Table 2.3: Greater Western Water’s top 10 capital expenditure projects (\$ 1 January 2024, millions)

Major capital expenditure project	Proposed cost over PS5 regulatory period
Woodend Recycled Water Plant	58.4
Macedon Ranges Transfer Augmentation	55.9
CBD Stage 4 – Siddeley Street	46.4
New billing system - Platypus	37.5
Holden Tank Water Pumping Station & Transfer Main	36.3
Emu Creek Branch Sewerage Main	34.3
Gisborne Recycled Water Plant Upgrade	29.9
Bald Hill Tank Construction	29.0
Romsey WFP – New Filtration Plant	27.8
Romsey Recycled Water Plant	23.9
	379.4

Source: Greater Western Water, 2023-28 Price Submission and associated Financial Model, 27 September 2023.

3 OPERATING EXPENDITURE ASSESSMENT

3.1 Overview of assessment approach

3.1.1 Expectations in the Commission's Guidance Paper

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).⁵

The Commission has asked us to provide an independent expert view on whether Greater Western 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 identifies specific considerations for Greater Western Water arising from the integration and anticipates that it will likely:

- incur one-off 'transition costs' as a result of integration
- produce longer term operational efficiencies compared to the two former businesses.⁶

It states:

Greater Western Water's price submission should clearly identify these cost variations in its actual and forecast operating expenditure, by comparison with the sum of the expenditure benchmarks and forecasts from the 2018 and 2020 price reviews for the antecedent businesses.⁷

The Guidance Paper also sets out the Commission's expectations on certain aspects, such as operating expenditure with uncertain outcomes, where it states:

If Greater Western 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 customers⁸

⁵ Essential Services Commission (2022). p.30.

⁶ Essential Services Commission (2022). p.30.

⁷ Essential Services Commission (2022). p.30.

⁸ Essential Services Commission (2022). p.31.

3.1.2 The implications of integration

In its submission, and reiterated in our discussions with us, Greater Western Water emphasised:

*Greater Western Water is not a simple aggregation of the two pre-existing businesses. The integration has fundamentally changed the way we conduct our operations.*⁹

It further states:

*Combining the ESC's CWW and WW operating expenditure is not reflective of a notional GWW determination for the current regulatory period (2018 to 2024).*¹⁰

With integration activities now largely complete, Greater Western Water is embarking on its business transformation program, which is aimed at identifying and transitioning the business to where it wants to be under its 2030 Strategy. As highlighted in Greater Western Water's submission, this is resulting in it incurring additional costs. It is also evident from discussions with Greater Western Water that several of the key programs are only in their early stages (or yet to be completed), and hence the future outcomes, including in terms of efficiency savings and cost impacts, are not yet known.

As noted above, the Guidance Paper is clear that the base-step-trend approach should be applied and that any cost variations need to be explained relative to the sum of the benchmarks and forecasts from the 2018 and 2020 price reviews for the antecedent businesses.

It is difficult to assess the prudence and efficiency of Greater Western Water's forecasts expenditure using the base-step-trend approach if changes in costs cannot be directly referenced or reconciled back to the approved benchmark. However, if the base-step-trend approach cannot be applied, the onus rests with the business to demonstrate why its proposed costs are prudent and efficient. For example, techniques such as benchmarking can be applied, although as highlighted by Greater Western Water it can be difficult to ensure meaningful like-for-like comparisons using this approach. Greater Western Water has not used this approach, nor have we sought to apply it in our assessment.

As outlined in section 0, these challenges were particularly evident in our assessment of the base year. This resulted in subsequent requests for information with the view to further understanding the drivers of these increases. We sought further information on the costings associated with several of the drivers identified, which is important in assessing the efficiency of the expenditure. Even if we could see the need for certain expenditure (i.e. the expenditure could be considered prudent), we still need sufficient information to enable us to assess if the associated costs are efficient.

While Greater Western Water responded to all our requests and was readily able to provide qualitative explanations, in some areas we had to press further to be provided with sufficient

⁹ Greater Western Water (2023a). 2024 Price Submission, 28 September, p.73.

¹⁰ Greater Western Water (2023a). p.73.

quantitative justification regarding the prudence and efficiency of these costs. However, Greater Western Water was more able to clearly explain and substantiate its proposal when it came to the step changes, which reflect costs not incurred in the current period.

Noting the challenges that this has presented, we have still sought to assess Greater Western Water’s operating expenditure in accordance with the Guidance Paper.

3.1.3 Our assessment approach

Having regard to the Guidance Paper, we have assessed whether forecast operating expenditure is consistent with the actions of a prudent business acting efficiently using the base-step-trend approach, 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
- 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 controllable operating expenditure, including step changes, we have had regard to Greater Western 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

In undertaking our expenditure reviews of the 14 Victorian water businesses as part of the 2023 Price Review, it was evident that there had 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 Greater Western Water.

3.3 Assessment of the base year

After adjusting for non-recurring items, Greater Western Water's adjusted controllable operating expenditure in 2022-23 was \$209.63 million. This represents an increase in actual expenditure of \$25.48 million (or 14 per cent) compared to the \$184.14 million controllable operating expenditure benchmark allowance, which is the sum of the benchmark allowances approved by the Commission for City West Water and Western Water in the 2018 and 2020 Price Reviews respectively.

We have assessed the reasonableness of Greater Western Water's base year operating expenditure by verifying:

- any increase in expenditure relative to the benchmark allowance is consistent with what is required by a prudent business operating efficiently
- the forecast operating expenditure does not include any items that are non-recurring.

This includes reviewing the treatment of the costs associated with integration, some of which Greater Western Water has identified as being recurring.

3.3.1 Context

Business drivers

While the focus of our assessment is on the prudence and efficiency of the proposed baseline year expenditure, operating expenditure performance in the current period (including prior to integration) provides important context. Greater Western Water notes that its controllable operating expenditure per connection has increased over the current period, from \$326 in 2018-19 to \$341 in 2022-23.

Greater Western Water highlighted that while City West Water's controllable operating expenditure per connection was closer to the benchmark from 2017-18 to 2020-21, Western Water did not achieve its benchmark controllable operating expenditure, even after accounting for growth above forecast.¹¹ Greater Western Water attributed this to higher growth, along with higher rainfall events. It also advised that the Western Water system was not designed to cater for large growth, with assets that are ageing and/or no longer fit for purpose.¹² This resulted in more operational fixes and temporary asset solutions.

Greater Western Water commented to us in discussions that in its view, the operating expenditure proposed by Western Water for the 2020 determination was unlikely to be representative (i.e., it under-stated) of the actual costs of running the business.¹³

In our initial discussion we also sought information from Greater Western Water on the extent of the differences between City West Water and Western Water upon integration, noting statements made in its submission such as: "The previous benchmark allowances were set for different businesses,

¹¹ Greater Western Water (2023a). Figure 47, p.234.

¹² Greater Western Water (2023b). 20231117_GWW Initial Information Request, GWW Part 2 of 2 Response.

¹³ Meeting with Greater Western Water, 24 November 2023.

facing different cost drivers”.¹⁴ Greater Western Water provided an overview of the different cost drivers for each business based on their different business structures. This is summarised in table 3.1.

Table 3.1: (Former) City West Water and Western Water – business structures and cost drivers

	Water	Sewerage
Business structure		
City West Water	Retailer-distributor, with treated bulk water supplied by Melbourne Water.	The majority (around 95 per cent) of sewerage is transported to Melbourne Water’s Western Treatment Plant, with the rest treated through Greater Western Water’s Altona Treatment Plant.
Western Water	Retailer-distributor, with some supply. Historically, water was supplied through its own local sources and raw water storage owned and operated by Southern Rural Water. More recently, there has been increased reliance on bulk water supplies from Melbourne Water that require additional treatment.	Vertically integrated, owning and operating seven sewerage treatment plants in regional towns in the service area. These treatment plants are small and are marketed as Recycled Water Plants to reflect the high level of reuse Greater Western Water aims to generate from the plants (e.g., for irrigation use).
Cost drivers		
City West Water	Network expansion (reticulation and distribution) to serve growing west. Increased demand and ageing assets in the inner urban areas with new water distribution mains across the network.	Network expansion (reticulation and distribution) to serve the growing west, particularly with the Werribee area that is heavily reliant on sewage pump stations. Increased demand and ageing assets in the inner urban areas with new sewers in the CBD.

¹⁴ Greater Western Water (2023a). p.68.

	Water	Sewerage
Western Water	<p>The need to increase supply to meet the growing customer base.</p> <p>Relatively high and ongoing operation and maintenance expenditure for low and declining yields, thereby increasing cost per ML.</p> <p>Higher and increasing energy use to pump water around the Western Water system to meet customer growth in the northern townships in the Macedon ranges.</p> <p>Increased treatment costs with poorer quality local sources and the need to treat increasing volumes of drinking quality bulk water from the Melbourne system.</p>	<p>Increased treatment costs due to growth.</p> <p>Managing compliance with existing EPA licences – particularly around discharge that has resulted in increased investment in alternative water uses. This requires additional energy and chemicals to operate.</p> <p>Managing non-compliance - high growth and high rainfall has resulted in non-compliance events at treatment plants resulting in the need for incident management staff.</p>

Source: Greater Western Water (2023). 20231117_GWW Initial information request_GWW Part 2 of 2 Response.

Greater Western Water also explained differences such as levels of water quality and tariff structures. It sought to align price and service quality for customers of the integrated business, which has had a number of challenges.

As relevant, we have explored some of these elements further in the review of both operating and capital expenditure.

Labour force

In its 2024 Price Review Model submitted to the Commission, a material increase in FTEs is noted over the current regulatory period. As outlined in section 3.3.2, upon integration, the Minister directed that all existing staff (executive and non-executive) of City West Water and Western Water were to be transferred to the new entity. Greater Western Water advised that there has been some natural attrition since the integration, and it has also recruited new staff in certain areas. In total, Greater Western Water has identified \$5.7 million (7.9 per cent) in additional labour costs compared to the combined benchmark allowance in the base year.

The labour force is one area where there is a natural expectation of some economies of scale following the integration of two businesses, acknowledging that this can take some time to flow through. At the same time, we note the Ministerial direction regarding the retention of existing staff. We sought to explore this further with Greater Western Water.¹⁵

¹⁵ Meeting with Greater Western Water, 4 December 2023.

Greater Western Water advised that it sought to comply with the Ministerial direction and retained existing staff, while working through role and alignment changes where appropriate to support the new integrated business. It also advised that in the early years of integration, the focus has therefore been on managing the vacancy rate. It commented that both former businesses, especially Western Water, were holding a higher-than-normal vacancy rate, which reflected the experience during the COVID period. We note that similar trends were experienced in some of the other water businesses we reviewed in the 2023 Price Review, with regional businesses facing more challenges in recruiting and retaining staff. Greater Western Water also noted that where some roles have been filled, this has been through fixed term contracts.

The team formed to manage and implement of the integration was staffed via secondments from City West Water and Western Water, with some new staff recruited where additional (or new) capability was required. Greater Western Water confirmed that these are not ongoing roles, and the team has now been disbanded.

Recognising that the review and consolidation of its labour force is continuing, of particular interest for our review is whether Greater Western Water has a process in place to manage this. One of the initiatives implemented under its Sustainable Efficiency Program is its Workforce Investment Review program (WIRP), which has introduced a process and governance framework for considering all new hires in the integrated business. This recognises the importance of managing labour costs “to improve our overall efficiency in a sustainable way”.¹⁶

This program was implemented following an initial recruitment pause and involved the following key elements:¹⁷

- the establishment of an ongoing centralised process and governance to manage the approval of all roles
- the establishment of a Workforce Investment Review Panel (WIRP) to oversee the approval of all new roles on a monthly basis
- the creation of a centralised labour recovery pool to bank or reinvest savings from vacancies or removed FTEs on a monthly basis
- building a workforce planning capability to underpin the management and control of the workforce going forward.

It is noted that one key feature of the approval by the WIRP is submission of a business case or Workforce Investment Request (regardless of the driver or type of role). Greater Western Water provided an example of a Workforce Investment Request for our review.

Some of the FTE growth also reflects a decision to insource certain functions that were previously outsourced. Greater Western Water advised that any efficiencies from this will already be reflected in the base year.¹⁸

¹⁶ Greater Western Water (2023c). Attachment 3_Workforce Investment Review ELT Discussion.

¹⁷ Greater Western Water (2023c).

¹⁸ Meeting with Greater Western Water, 4 December 2023.

Overall, we consider that Greater Western Water has a clear and disciplined process and governance framework to manage its future labour force needs. We understand that this process was applied in approving additional FTEs identified as contributing to the base year increase. However, the prudence and efficiency of the associated cost increases still needs to be demonstrated, which we have set out below.

3.3.2 Drivers of the increase in baseline year operating expenditure

Greater Western Water’s submission explained that the increase in its baseline (base) year operating expenditure against the benchmark allowance is attributed to the following drivers outlined in Table 3.2.¹⁹ This accounts for 99 per cent (or \$25.16 million) of the \$25.48 million increase.

Table 3.2: Drivers of increases in operating expenditure against the benchmark allowance in 2022-23, explained by Greater Western Water (\$ 1 January 2024, millions)

Driver	Contribution to increase \$ million
Integration	1.19
Transformation – Asset	1.19
Transformation – Compliance	3.54
Transformation – Corporate	0.76
Transformation – Customer	1.17
Transformation – Safety	0.29
Changes in obligations	1.33
External cost drivers	12.69
Labour movements	3.00
Total	25.16

Source: Greater Western Water (2023). 2024 Price Submission, 28 September, p.249.

In the course of our discussions and information requests, Greater Western Water reviewed the increases relating to labour costs and found that the majority of these were in the categories of integration, transformation or changes in obligations.²⁰ This left only \$0.91 million (not \$3 million) in the residual ‘labour movements’ category. It also resulted in a slight reduction in the increase in the Transformation – Customer category (\$1.03 million, rather than \$1.17 million). Greater Western Water attributed this to the challenges it has faced in reconciling back to the notional benchmark determination costs for the combined businesses, that is:

Given the notional determination opex are based on a combination of variance analysis and a top-down BST approach (extrapolation), and not a bottom-up activity cost level approach, there are practical difficulties in identifying all the

¹⁹ Greater Western Water (2023a). p.81.

²⁰ Greater Western Water (2024a). RFI#100 – Labour cost movements.

drivers responsible for the complete reconciliation of the \$25.2 million increment.²¹

Based on this Greater Western Water provided an updated reconciliation (in dollar terms) based on the above categories. This is shown below.

Table 3.3: Updated drivers of increases in operating expenditure against the benchmark allowance in 2022-23, explained by Greater Western Water (\$ 1 January 2024, millions)

Driver	Contribution to increase \$ million
Integration	1.19
Transformation – Asset	1.19
Transformation – Compliance	3.54
Transformation – Corporate	0.76
Transformation – Customer	1.03
Transformation – Safety	0.29
Changes in obligations	1.33
External cost drivers	12.69
Labour movements	0.91
Total	22.93

Source: Greater Western Water (2024). RFI#100 – Labour cost movements.

This does not change Greater Western Water’s total actual (controllable) operating expenditure for 2022-23 or the difference from the combined benchmark allowance. All this represents is a change in the dollars attached to each driver that Greater Western Water has explained in its submission, meaning that it has now explained \$22.9 million (or 91 per cent) of its base year increase, rather than \$25.16 million (or 99 per cent). The drivers themselves remain unchanged.

Greater Western Water provided information on these drivers in its submission. Particularly given the magnitude of the increase in its proposed base year expenditure, we explored these drivers further in discussion with the business and requested further information. Details of our assessment of the key drivers of the base year uplift are provided below.

²¹ Greater Western Water (2024a). RFI#100.

3.3.3 Integration

Greater Western Water's proposal

Additional expenditure for integration costs was not included in the 2018 City West Water and 2020 Western Water determinations.

Greater Western Water submitted that most of its integration costs are administrative in nature, such as:

- the consolidation of back-end systems
- workforce management.²²

It noted the two ministerial determinations that have impacted the management of its labour force and operations since integration, stating:

- all existing staff (executive and non-executive) would be transferred to the new entity
- all depots and offices would remain
- investment would be made to upgrade the Sunbury office
- an additional 50 staff would be relocated to the Sunbury office for at least three years, including a strong executive presence.²³

Greater Western Water advised that a total of \$23 million has been spent on integration for the three years from 2020-21 through to 2022-23, which has been offset by \$9.2 million in integration efficiencies, including the consolidation of two Boards into one and some natural attrition of senior managers.²⁴ Greater Western Water's integration team operated until 2022-23.²⁵

Total integration expenditure in the 2022-23 base year was just under \$7 million. Greater Western Water removed \$2.9 million of these costs that were non-recurrent. This leaves \$4.1 million of ongoing integration costs. Greater Western Water submits that \$2.93 million of these costs are offset by efficiencies embedded in the base year, resulting in net ongoing integration operating expenditure of \$1.19 million.²⁶

Greater Western Water provided the following additional breakdown of these costs and efficiency savings. It is noted that some of these costs, along with efficiency savings, were also incurred/realised in 2020-21 and 2021-22.

²² Greater Western Water (2023a). p.74.

²³ Greater Western Water (2023a). p.75. We clarified that this directive related to the location of existing staff at Sunbury, rather than the recruitment of additional staff.

²⁴ Greater Western Water (2023a). Table 64, pp.236-237.

²⁵ Greater Western Water (2023a). p.236.

²⁶ Greater Western Water (2023a). p.248.

Table 3.4: Integration costs and savings (\$ 1 January 2024, millions)

Category	Description	2022-23	Recurrent?
Assets	Maintaining two GIS systems. Consolidation of systems and processes for operations, assets and equipment.	+0.95	Yes
Customer services	Operating and managing two call centres with two systems, tariff structures and billing processes.	+0.40	Yes
Enterprise Agreements	Align Western Water employees with the City West Water EA	+1.86	Yes
Finance systems	Additional licences for Oracle offset by savings from retirement of Tech One	+0.79	Yes
HR/Payroll	Retirement of Western Water’s old HR system	-0.03	Yes
IT	Net benefits of rationalisation of duplicate IT software and systems	-0.62	Yes
Integration	Integration office to manage the day to day integration activities	+2.87	No
Management and Board	Consolidation of the Executive Leadership Team and only one Board of Directors	-2.16	Yes
Net operating expenditure - total		+4.05	
Net operating expenditure - recurrent		+1.19	

Source: Greater Western Water (2023). 2024 Price Submission, 28 September, pp.236-237.

Recognising that the additional recurrent costs have been partially funded by efficiency savings in other areas, we have still sought to verify each item. Further information provided by Greater Western Water is provided below.

Assets – maintaining two GIS systems

This is a temporary cost from maintaining the two duplicate systems following integration. Greater Western Water provided further information on the additional costs involved in maintaining the duplicate systems (over and above the existing costs that would have been incurred in managing each independently). This includes the following activities:²⁷

²⁷ Greater Western Water (2024b). RFI#104 – Integration Costs.

- With two sets of procedures, processes and work instructions/guidelines, work is being undertaken to rewrite this documentation to a single '1GWW way'. This accounts for around \$0.4 million of these costs, with this work due for completion at the end of FY24.
- An additional FTE to transition from dual processes for reliability and associated ways of working and have a single point of accountability and contact to manage these activities (\$0.12 million).
- A single FTE to decommission an asset ecosystem (\$0.16 million).
- Two FTEs to manage the duplicate systems (\$0.27 million). As some ongoing additional resourcing will be required, consolidation will only result in the reduction of 0.4 of an FTE following decommissioning of the Kern system in 2023-24.

The alignment of the two GIS systems is proposed to occur in 2026-27 (and is proposed as part of the capital expenditure forecast), which is also expected to result in a small labour saving (of less than \$0.1 million).²⁸ One of the two operations and maintenance systems (Kern) is due for decommissioning in 2023-24. Greater Western Water advised that the efficiencies that will be realised once the planned alignment occurs have been captured in its efficiency factor, as part of integration efficiencies²⁹ (refer section 3.5.2).

Customer services – maintaining two call centres

This is also a temporary additional cost based on activities required to consolidate two different billing systems and call centres (offset by a small saving from retiring legacy communications). This cost will continue to be incurred until completion of the new billing system.³⁰ Greater Western Water advised that the net cost (after allowing for \$0.04 million in operational cost savings from systems retirements) primarily represents six FTEs.

Greater Western Water confirmed that the efficiencies arising from the consolidation of the billing systems and call centres are captured in its efficiency factor. The efficiencies from the billing and collection system are included as part of the identified transformation efficiencies (customer services), while the efficiencies from the call centre consolidation is captured under integration efficiencies (refer section 3.5.2).³¹

Enterprise agreements – alignment of Western Water employees to the terms of the City West Water EA

The City West Water EA has become the prevailing EA for Greater Western Water. This is the most significant recurrent cost arising from integration and reflects the increase in total remuneration for Western Water employees as a result of the alignment. Greater Western Water provided further information explaining the pathway to this agreement, including a copy of the Board paper that summarised the process that had been followed in reaching this position. In transitioning to the City

²⁸ Greater Western Water (2023a). p.236.

²⁹ Greater Western Water (2023d). Further opex queries_OPEX Efficiency Categories.

³⁰ Greater Western Water (2023a). p.236.

³¹ Greater Western Water (2023d).

West Water EA, all former Western Water employees either maintained their current level of remuneration or were better off. Details of these EA arrangements are confidential.

Finance system - additional Oracle licences

This represents the costs of issuing additional Oracle licences to the new (former Western Water) users and has been offset by savings from the retirement of Western Water's TechOne system. Greater Western Water outlined that while the total Oracle licence fees were more expensive than Western Water's legacy system "it provided greater functionality through its ability to track more cost centres and increased potential for upgrades rather than replacement."³²

Assessment

The most material ongoing integration cost is the alignment of the EA agreements. We are satisfied with the information provided by Greater Western Water. We are also satisfied with the reasoning for the increase in Oracle licence costs. Both of these items are therefore considered prudent and efficient.

Our two key concerns are with ongoing costs from duplicate systems, being the GIS system and customer call centres. We understand that it will take time to rationalise and consolidate all duplicate systems, and that additional costs can be incurred in managing this in the interim. Associated savings are reflected in the amount forecast for integration efficiencies for the PS5 regulatory period once these activities are no longer required (noting that we have not verified all individual line items underpinning this total).

However, the Guidance Paper states that the baseline year must only comprise efficient recurrent costs "for those activities and services that are expected to be incurred throughout the next regulatory period."³³

Activities such as rewriting documentation and decommissioning systems are non-recurrent. While Greater Western Water's explanation suggests that some of these costs will continue to be incurred, mainly being some of the additional FTEs that have been recruited to manage the duplicate systems and customer call centres (over and above existing staffing), it has not clearly demonstrated that the nature of the activities will be recurrent (hence justifying inclusion in the baseline), nor that they are prudent and efficient.

As a result, we recommend an adjustment to Greater Western Water's base year expenditure of \$1.35 million, comprising \$0.95 million for the costs of consolidating GIS systems and \$0.4 million for the costs associated with operating and managing customer call centres.

This would also mean that after allowing for the savings that have already been reflected in Greater Western Water's net integration expenditure for 2022-23 (refer

³² Greater Western Water (2023a). p.237.

³³ Essential Services Commission (2022). p.32.

Table 3.4), total net integration expenditure would reduce from an increase of \$1.19 million to -\$0.16 million.

We note that Greater Western Water has removed some of these costs as part of the forecast integration efficiencies to be applied to controllable operating expenditure in the PS5 regulatory period (refer section 3.5.2). We have not verified how much of the above costs are reflected in those forecast savings, noting that some of them are potentially ongoing. If an adjustment is applied to Greater Western Water's base year expenditure to remove these costs, this will also need to be considered as part of the assessment of the efficiency factor.

3.3.4 Transformation – Asset

Greater Western Water's proposal

In 2022-23 Greater Western Water implemented its Asset Delivery Optimisation Review (ADOR), which is focused on improving the integrated business's asset delivery capability and capacity and ensuring consistency across the regulated business. Greater Western Water provided the Business Case for the ADOR program, which also provided further information on the problem statement or business need that the program is seeking to address. This identified the following issues with Greater Western Water's current asset delivery capacity and capability:

- a lack of fit-for-purpose, consistent and integrated project development, project management, procurement, project delivery and Health, Safety, Environment and Quality system
- lack of robust and timely cost, scheduling and asset performance data to support planning and decision-making
- resourcing and capability gaps.³⁴

The Business Case identified and assessed three options, including maintenance of the existing processes and systems with incremental improvement (i.e., the 'do nothing' option).

One of the key initiatives under the recommended solution is centralising procurement and contracting, including uplifting organisational capability. The Business Case explained the financial and non-financial benefits of the recommended solution, including expected savings to be realised in the first five years of the program that are largely based on improved procurement practices and delivery efficiencies.

Greater Western Water identified a total increase in recurrent operating expenditure for the ADOR program of \$1.2 million, comprising:

- training and capability uplift - \$0.5 million
- proactive procurement practices - \$0.7 million.

³⁴ Greater Western Water (2023e). Asset Delivery Organisation Review, Phase 3 Business Case.

Greater Western Water advised that this represents the lower bound estimate of these costs, with any additional costs to be funded via its general efficiency program.³⁵

It is proposing to capitalise the remaining operating expenditure for inclusion in the Regulated Asset Base (RAB).

Assessment

We requested more information on the additional costs outlined above.

Greater Western Water is initially spending \$1.5 million on training in 2023-24 and is forecasting this to stabilise to \$0.5 million per year over the PS5 regulatory period. The \$0.7 million for proactive procurement practices is to expand the team responsible for managing procurement in Corporate Services and Commercial management. This comprises three full-time roles and agency labour to support the program over the year, including the final two phases of program implementation. Greater Western Water stated that a benefits realisation program is being developed, which it will monitor through its Enterprise Value Office.³⁶ Greater Western Water confirmed that the benefits from this program will flow through the 'unidentified transformation efficiencies' and 'residual efficiencies' categories (refer section 3.5.2).

Greater Western Water submits that this program "represents an uplift in capability and capacity that currently does not exist at Greater Western Water."³⁷ As outlined in section 4.2.6, while the benefits of this program are yet to be fully identified we recognise that Greater Western Water has a process in place to address identified efficiencies and uplift the capability of the business to deliver its large capital works program.

We are not proposing an adjustment to these costs.

3.3.5 Transformation – Compliance

Greater Western Water's proposal

In its submission, Greater Western Water outlined that during the current regulatory period it has experienced an increase in the costs of managing existing water and sewer compliance obligations totalling \$10.4 million.³⁸ \$3.54 million of this increase in the 2022-23 base year expenditure is attributed to this driver, which it explains has been incurred in three main categories.³⁹

- **Sewer compliance obligations:** The increased expenditure has mainly been incurred in the area primarily serviced by the former Western Water, where compliance issues have emerged at wastewater treatment plants due to higher than expected growth, rainfall and the reprioritisation of capital expenditure. Greater Western Water states that from 2021-22, an additional \$3.3 million per year is being incurred to maintain compliance with

³⁵ Email from Greater Western Water, 15 December 2023.

³⁶ Greater Western Water (2023f). Ongoing Opex – ADOR.

³⁷ Greater Western Water (2023f). Ongoing Opex – ADOR.

³⁸ Greater Western Water (2023a). pp.238-239.

³⁹ Greater Western Water (2023a). pp.238-239.

Environment Protection Agency (EPA) obligations. Most of these costs are for tankering, plant and pump hire to manage water balance at its Northern Wastewater Plants.

- **Sewer quality management system.** Greater Western Water is building a new Sewage Quality System for its seven catchments that will reduce duplication and align with its obligations and standards. The additional annual cost of this system is \$0.24 million. Based on further information supplied by Greater Western Water, this cost is for two additional FTEs.⁴⁰
- **Incident management.** Greater Western Water has needed to make additional investments in communications and engagement resources to manage an increasing number of incidents “that have been driven by a lack of investment in asset solutions and a continued use of operational solutions, across the backdrop of climate change resulting in more frequent weather events.”⁴¹ It further states that this will “take time to reverse” suggesting an expectation that this will moderate in future.

Assessment

The most material driver is the increase in costs associated with sewer compliance obligations. Greater Western Water stated: “GWW’s capital program reflects the risks we hold, the operational costs of managing these risks and our ability to deliver works, rather than the need of works.”⁴² It indicated that its capital program to upgrade its water treatment plants is ongoing. As upgrades are completed, “new controls and operations adjustments will have to be made at other treatment plants to maintain compliance as they reach capacity until upgrades can be delivered at plants not scheduled for major upgrades during this regulatory period”.⁴³

Greater Western Water did not indicate how long it expects to continue to incur these additional costs (other than at least the duration of the PS5 regulatory period). The explanation provided in Greater Western Water’s submission suggests that this issue is mainly in the area formerly serviced by Western Water.

Noting the materiality of this item, we sought further information on the costings underpinning the increase. Given that additional expenditure on individual plants that have reached capacity should no longer be required once upgrades have been completed, we questioned the business as to the expected timing/duration of these costs.

Greater Western Water provided an itemised breakdown of the majority of the costs actually incurred in contracting suppliers for tankering, plant and pump hire in 2022-23. It assumes that this will remain representative of the (average) amount it will incur for these activities in each year of the PS5 regulatory period.

We understand that Greater Western Water has been incurring these costs and why they are required. However, based on the information provided, we are still unable to verify if embedding an

⁴⁰ Greater Western Water (2023g). Attachment 1_Labour cost movements in 2022-23.

⁴¹ Greater Western Water (2023a). p.239.

⁴² Greater Western Water (2023h). Greater Western Water response – Compliance and O&M.

⁴³ Greater Western Water (2023h).

(average) annual amount of \$3.3 million in baseline expenditure for the PS5 regulatory period is prudent and efficient. Further, while we understand that Greater Western Water plans to continue to incur these costs for the duration of the PS5 regulatory period while it is continuing to upgrade its sewer treatment plants, it would be expected that once this program is completed, they will no longer be incurred.

We are therefore unable to verify if the additional \$3.3 million for sewer compliance obligations is prudent and efficient.

If such costs were to be allowed, in our view this would be better addressed as a step change. We would expect that Greater Western Water will have a forecast program of works for the associated sewer treatment plant upgrades in the PS5 regulatory period (refer Chapter 4). These plants will operate at different capacities, which would presumably impact the additional operating expenditure that it will need to incur to maintain compliance until each plant is upgraded.

Given that we are unable to verify if the additional \$3.3 million for sewer compliance obligations is prudent and efficient, we recommend the removal of this expenditure from the 2022-23 baseline.

3.3.6 Transformation – Corporate

Greater Western Water’s proposal

Greater Western Water submits that it has implemented measures to streamline its corporate functions, which has resulted in some additional costs, along with efficiencies. The two main initiatives identified as underpinning this cost driver are additional investments in the following.⁴⁴

- **Digital improvements.** Greater Western Water identifies a number of drivers, including:
 - increases in the number of users
 - system upgrades to improve accessibility by those who may have an impairment
 - customer-based technology tools, such as an online portal
 - Cloud-based services. Greater Western Water noted that City West Water’s last determination included a step change for the transition to the Cloud, whereas this was not the case for Western Water.
- **Communications.** An external review identified under-investment in this area, with the need to increase this capacity for business-as-usual activities, emergency management and incident response. It stated that the total increase in costs for this capability uplift was \$0.8 million per year in 2022-23. It also noted (small) additional expenditure to manage external communications e.g., social media and media queries.

The proposed net increase in base year expenditure is \$0.76 million.

⁴⁴ Greater Western Water (2023a). pp.240-241.

Greater Western Water provided further information on the costs underpinning this increase, which relates to five additional FTEs in the Communications area.⁴⁵ Greater Western Water also provided a copy of the Business Case (confidential) for the implementation of its new operating model and structure for its:

- communications and engagement section
- strategic partnerships section.⁴⁶

This encompasses the additional FTEs under the Transformation – Corporate and Transformation - Customer base year uplifts. We have therefore assessed these two uplifts together in the next section.

3.3.7 Transformation - Customer

Greater Western Water's proposal

Greater Western Water has implemented improvements to its customer and community engagement in the current regulatory period across the business and the formation of partnerships within the region. This has required additional resources, with Greater Western Water submitting that it is incurring an additional \$1.03 million per year (after its updated reconciliation discussed in section 3.3.2).

Greater Western Water provided further information on the costs underpinning this increase, which relates to seven additional FTEs, including engagement and partnership advisers.⁴⁷ As outlined in section 3.3.6, this is based on the organisational design and recruitment strategy set out in the Business Case for Communications and Engagement and Strategic Partnership.

Assessment

The Business Case underpinning the increases reflected in Transformation – Corporate and Transformation – Customer explains the need for these business functions, which has been informed by an external review undertaken into the capacity and capability of Greater Western Water's communications and engagement function.

It includes phased recruitment over a 12-month period and identifies roles to be recruited as part of the first phase, in accordance with the requirements for approval under the WIRP framework (refer section 3.3.1). Greater Western Water's approved team structures, approach and recruitment strategy does not specifically identify and cost all individual roles and including the specific roles underpinning each uplift included in the base year for Transformation – Corporate (being communications staff) and Transformation – Customer (primarily being engagement and partnership advisers). The list of the roles relating to each of these categories – and the total costing - was provided by Greater Western Water in separate documentation.

⁴⁵ Greater Western Water (2023g).

⁴⁷ Greater Western Water (2023g).

Combined, the Corporate and Customer transformation initiatives involves 12 additional FTEs, which is a material increase. When Greater Western Water was established as an integrated business, it is likely that existing teams of staff were undertaking at least some of these functions. While we understand that Greater Western Water has identified a need to uplift its capability, the documentation provided does not clearly identify:

- all the key activities that either were not, or could not be undertaken with those existing resources
- why it is necessary for Greater Western Water (or important for its customers) to undertake those activities and/or increase its level of service to its required standard
- how this directly relates to these additional costs.

We are therefore unable to verify if these costs are prudent and efficient and propose an adjustment of \$1.79 million (\$0.76 million for Transformation – Corporate and \$1.03 million for Transformation - Customer).

3.3.8 Transformation – Safety

Greater Western Water’s proposal

In its submission, Greater Western Water states: “Neither CWW or WW had a suitable health and safety system capable of complying with safety regulations and obligations, including the General Environmental Duty.”⁴⁸ It suggests that the development of a new Health, Safety, Environment and Quality system has resulted in additional labour costs of \$0.29 million per year.

Greater Western Water expects that the new Health, Safety, Environment and Quality system will result in future labour efficiencies. It has recognised this as part of identified efficiencies from Transformation – Safety that have been reflected in its PS5 forecast (refer section 3.5.2). It states that \$0.2 million per year has been identified as an efficiency for the Health, Safety, Environment and Quality systems.⁴⁹

Assessment

We note Greater Western Water’s statements that it did not have a suitable health and safety system, and the forecast efficiencies that are expected to arise from its uplift in its efficiency factor, which offsets some of the additional costs.

As Greater Western Water has advised that it is necessary for it to incur these costs in order to achieve compliance with its safety regulations and obligations, we are therefore not proposing any adjustment for these costs.

⁴⁸ Greater Western Water (2023a). p.238.

⁴⁹ Greater Western Water (2023a). p.254.

3.3.9 Changes in obligations

Greater Western Water's proposal

Greater Western Water submits that changes in obligations have accounted for a base year uplift of \$1.3 million, comprising:⁵⁰

- First Nations and Traditional Owner engagement (\$0.06 million)
- the Victorian Government's decision to increase payroll tax by 0.5 per cent (\$0.46 million) and
- the progressive increase in the Superannuation Guarantee Charge to 11 per cent in 2023-24 (\$0.78 million).

Assessment

With the exception to the relatively minor uplift for First Nations and Traditional Owner engagement (which is also subject to a further step change in the PS5 regulatory period, as outlined below), the other two main drivers, which account for most of the uplift, are beyond the control of the business. These changes also drove increases in expenditure for other Victorian water businesses in the 2023 Price Review. We consider these additional costs to be prudent and efficient and are not proposing any adjustment.

3.3.10 External cost drivers

This category represents the largest driver of the increase in base year expenditure (\$12.69 million), accounting for just over 50 per cent of the total uplift. This encompasses five key categories of expenditure that are external to the business. Greater Western Water states that it has used two methods to calculate the impact of these drivers over the current regulatory period, being:

- Extrapolation: where base year expenditure from the 2018 City West Water and 2020 Western Water determinations were extrapolated using growth and efficiency forecasts, along with adjustments for any approved step changes. This approach was used for IT costs, insurance and field maintenance.
- Determination reported: This uses reported figures from the final determination financial models. This was used for energy and chemicals.

The contributor of each item to the net increase in base year expenditure (compared to the combined benchmark allowance) is summarised below.

⁵⁰ Greater Western Water (2023a). pp.241-242.

Table 3.5: External cost drivers – contribution to base year increase (\$ 1 January 2024, millions)

Category	Net impact on base year expenditure
Field maintenance	6.96
Energy	-3.58
Information technology	4.08
Insurance	3.64
Chemicals	1.58
	12.69

Source: Greater Western Water (2023). 2024 Price Submission, 28 September, pp.242-245. Greater Western Water (2023). Further opex queries_OPEX Efficiency Categories, Response provided 22 December 2023.

Each category is examined below. This includes the forecast proposed by Greater Western Water for the PS5 regulatory period, with step changes (where relevant) considered separately in section 3.4.

Field maintenance

This is the largest contributor of the five items, accounting for \$6.96 million of the base year uplift. Greater Western Water submits that since the 2018 City West Water and 2020 Western Water determinations, it has seen an average annual increase in its asset management costs of 5.7 per cent. Responsive maintenance has accounted for the highest proportion of these costs, accounting for just under 75 per cent in the base year.⁵¹ Greater Western Water identifies the key drivers of the cost increases as:⁵²

- increases in input costs (fuel, materials, labour);
- meeting customer expectations on response and rectification times, particularly with the higher transport times to attend to faults in inner city suburbs;
- higher reinstatement costs given the increase in faults in the inner urban and CBD areas (although it confirmed that the trends in failure rates themselves are not abnormal or unusual⁵³);
- higher customer and network growth across areas previously served by City West Water and Western Water, although it noted that in the case of the latter, this has resulted in an increase in temporary assets to serve ‘out of sequence’ developments, resulting in more maintenance and pump management;
- increased safety requirements placed on repair crews, including additional traffic management requirements imposed at a State and local level from 2018-19.

We requested further detail from Greater Western Water on the \$6.96 million uplift, and basis for why it expect to continue to incur this cost for the duration of the current regulatory period.

⁵¹ Greater Western Water (2023a). Table 72, p.243.

⁵² Greater Western Water (2023a). pp.242-243.

⁵³ Greater Western Water (2024c). RFI#97 – Field maintenance.

As noted above, Greater Western Water provided details of how it had applied the extrapolation method to calculate the contribution of this driver to its base year uplift.⁵⁴ The combined 2022-23 benchmark allowance for this component was calculated as the sum of:

- the 2016-17 base year used in City West Water’s 2018 determination, extrapolated based on the net growth factor (i.e., growth less efficiency); and
- the 2018-19 base year used in Western Water’s 2020 determination, extrapolated based on the net growth factor.

This amount was then subtracted from actual 2022-23 Greater Western Water expenditure to arrive at the \$6.96 million increase. In response to our further queries, Greater Western Water stated:

*It is challenging to break this figure down further. GWW outsources a large component of its field maintenance service. This contract has strong governance around its management, including a strict verification and validation of all components of invoices and key performance indicators that align with ESC service standards and the businesses current customer outcomes. The contract GWW has with its service provider incentivises efficient service provision. The rate that the contractor pays is based on an agreed reimbursable rate for field based components and actual costs for support, with those costs measured against a target rate. The contractor’s margin is at risk if they don’t meet those targets, providing a strong incentive for efficiency.*⁵⁵

Greater Western Water provided further information explaining its competitive procurement process and the governance around its contract management with maintenance service providers.⁵⁶ This includes the performance monitoring and reporting, including Key Performance Indicators that align with the Commission’s service standards and Greater Western Water’s customer obligations. Payment arrangements are performance-based, with the service provider financially incentivised to deliver services below a specified cost target.

Noting that this will embed higher annual maintenance expenditure into the base year, we also discussed Greater Western Water’s maintenance model with the business, which is based on a hybrid delivery model (i.e., a combination of insourced and outsourced activities). Greater Western Water anticipates a shift to more proactive maintenance based on condition assessments, which will be driven by the ADOR program (and link to other key organisational initiatives such as the Asset Ecosystem Program).

Key to this will be the centralised approach to procurement. This revised strategy will be subject to a business case that is currently being developed. Benefits from the improvements to its asset management, including maintenance, have not been specifically identified (at this point in time) and are expected to be realised in future years (see below).

⁵⁴ Greater Western Water (2023i). O&M Opex Performance – Extrapolation.

⁵⁵ Greater Western Water (2023h).

⁵⁶ Greater Western Water (2024c). RFI#107 – External cost drivers – field maintenance.

Greater Western Water is not otherwise proposing any increases in field maintenance costs above inflation for the PS5 regulatory period.⁵⁷

Assessment

Greater Western Water provided descriptions of the key drivers of its increase in maintenance costs. These include drivers commonly cited by businesses in the 2023 Price Review, particularly increases in input costs. However, Greater Western Water was unable to provide a breakdown of costs associated with each of these drivers. Greater Western Water has explained that this is because these activities are delivered under an outsourced contract that has been competitively tendered.

In our view, Greater Western Water should be in a position to provide information on the costs of these drivers, which we expect it would need to know as part of its contract oversight/management.

Greater Western Water has increased its maintenance expenditure above the forecast reflected in the combined benchmark allowance and that at least some of this reflects market-driven cost increases experienced by it and other water businesses. To provide an opinion on the prudence and efficiency of these costs in accordance with the Guidance Paper (as is our role), we need quantitative information on the underlying cost drivers. This is particularly important given the size of the increase (just under \$7 million per year) that will be embedded in the base year.

While we recognise that Greater Western Water may have a legitimate need for the increase in base year maintenance expenditure, we cannot provide an opinion as to its prudence and efficiency.

Energy

As noted in Table 3.5, Greater Western Water's total energy costs were lower in the base year compared to the combined benchmark allowance. It stated that while energy consumption increased, it experienced a significant decrease in average unit rates.⁵⁸

Greater Western Water also details its forecast energy costs for the PS5 regulatory period. As with the other Victorian water businesses assessed as part of the 2023 Price Review, it has relied on unit cost assumptions provided by Schneider Electric Energy and Sustainability Services in a report commissioned by the industry's Intelligent Water Networks group. It is forecasting real growth in total energy costs of 3.6 per cent per year.⁵⁹

⁵⁷ Greater Western Water (2023a). p.259.

⁵⁸ Greater Western Water (2023a). p.243.

⁵⁹ Greater Western Water (2023a). p.257.

Information Technology

Greater Western Water attributes \$4.08 million of its external cost drivers to increases in IT costs, which is based on the extrapolation method.

In reviewing the summary profile of IT costs in Greater Western Water's 2024 Price Review Model, we noted that its actual IT costs for the current period were well below the combined benchmark.⁶⁰ Greater Western Water advised that the actual data was from its regulatory accounts but was unable to confirm what had been included in the cost build-up in the 2018 City West Water and 2020 Western Water determinations. It believes that these benchmarks may include other costs, such as labour.⁶¹ It commented that limited documentation and staff turnover since the completion of the prior reviews has restricted its ability to fully investigate this.

Greater Western Water demonstrated how it used the extrapolation method to calculate the difference between the combined 2022-23 benchmark allowance and its actual costs. This involved:

- as for field maintenance, calculating the combined 2022-23 benchmark allowance for this component as the sum of:
- the 2016-17 base year used in City West Water's 2018 determination, extrapolated based on the net growth factor (i.e., growth less efficiency); and
- the 2018-19 base year used in Western Water's 2020 determination, extrapolated based on the net growth factor;
- estimating IT operating expenditure using the base-step-trend approach based on all General Ledger (GL) codes related to IT cost centres and excludes labour;
- comparing the above estimate of actual costs with what it has reported in its regulatory accounts, which uses the same GL codes.

In terms of the resulting increase above the combined benchmark allowance, Greater Western Water states that this primarily relates to increases in the volume of users, per unit licence costs and the number of systems under management.⁶² It cites significant increases in licence fees in the current period of between seven and 12 per cent per licence. It indicates that it has sought to reduce fees for smaller services and expects to be able to rationalise costs upon completion of the new billing system, along with consolidation of other systems. Separate step changes have been proposed for increased costs associated with the new billing and collections system and cyber security.

Assessment

Greater Western Water provided us with further information on the composition of these costs including a detailed list of drivers of its IT cost increases, allowing us to reconcile the full \$4.1 million

⁶⁰ GWW_2024 Price Review Model, Expenditure Detail sheet, rows 25-27.

⁶¹ Greater Western Water (2023j). Attachment 2_IT cost difference in PS doc and model explanation.

⁶² Greater Western Water (2023a). p.244.

increase attributed to this cost driver.⁶³ We are therefore not proposing any adjustment to these costs.

Insurance

Greater Western Water is attributing \$3.6 million of the uplift in the base year to insurance costs. It notes that most of the increase has been experienced in the last two years.⁶⁴

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, in part driven by 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.

Water businesses have limited ability to control or influence this expenditure. It is also extremely difficult to forecast likely insurance premiums over the PS5 regulatory period given the complex factors influencing demand and supply, including the frequency and severity of major catastrophes.

We are therefore not proposing any adjustment to these costs.

Chemicals

Greater Western Water has experienced a significant increase in chemicals costs in the current regulatory period. The additional costs accounted for in the base year increase comprise:⁶⁵

- \$0.3 million from 2021-22, captured in the Transformation – Compliance uplift (above)
- \$1.58 million in 2022-23, reflecting supply chain disruptions and increases in unit costs.

Greater Western Water is forecasting an average annual increase in chemicals costs over the PS5 regulatory period of 3.5 per cent.⁶⁶

Assessment

While increases in chemicals costs was a common theme across the sector in the 2023 Price Reviews, we sought further detail to verify Greater Western Water's base year uplift.

It provided a copy of a Procurement Recommendation (dated October 2022) based on a strategy of establishing a 'fit for purpose' Chemical Supply Panel. The aims of the strategy include enabling continuity of supply, maintaining appropriate standards and driving commercial outcomes. It anticipates savings of \$0.05 million per year from the establishment of the panel.⁶⁷ We are satisfied

⁶³ Greater Western Water (2023k). GWW response – IT Costs and SOCI Step Change. Greater Western Water (2024d). RFI#108 – IT Costs.

⁶⁴ Greater Western Water (2023a). p.244.

⁶⁵ Greater Western Water (2023a). p.245.

⁶⁶ Greater Western Water (2023a). p.258.

⁶⁷ Greater Western Water (2023l). Procurement Recommendation.

that this demonstrates a robust approach to chemicals procurement. Greater Western Water provided a detailed breakdown of its competitive supplier evaluation for each key input.⁶⁸

We are therefore not proposing any adjustment to these costs.

3.3.11 Labour costs

Greater Western Water identified \$5.7 million in additional labour costs compared to the combined benchmark allowance in the base year. While it initially stated that \$2.7 million of this is captured under other categories outlined above (i.e., integration, transformation and changes in obligations)⁶⁹, following its subsequent reconciliation (refer section 3.3.2), the majority of these costs (\$4.8 million) are included in those categories.

The remaining \$0.91 million (reflected in this line item) is attributed to:

- internalising certain roles and functions (that were previously outsourced)
- additional resources for strategic planning activities across the business
- additional resources in corporate services, especially the people, culture and capability area. This reflected the focus on strategic opportunities and the need to upskill staff.⁷⁰

It advised that this amount is split equally between FTE and non-FTE related costs.⁷¹

We requested additional information on these costs. This did result in the revised reconciliation of labour costs between categories, including reducing the increases attributed to this residual 'labour cost' category (from \$3 million to \$0.91 million). However, Greater Western Water was not able to provide any further information beyond what was already included in its submission.

Greater Western Water is forecasting a flat profile for labour costs in the PS5 regulatory period. It states that it has set "ambitious efficiency targets" for labour (and other operating) costs and:

We anticipate the savings associated with labour costs to be equivalent to the step change in superannuation and payroll tax changes that have been incurred in 2023-24 and will occur during the regulatory period.⁷²

It has estimated this equates to \$7.9 million in savings.

Greater Western Water submits that further increases in labour costs are forecast for the PS5 regulatory period for:

- the continued increase in the Superannuation Guarantee Charge (to 12 per cent in 2025-26)

⁶⁸ Greater Western Water (2023m). Attachment 4_Chemicals RFP Price Eval – Final.

⁶⁹ Greater Western Water (2023a). p.249.

⁷⁰ Greater Western Water (2023a). pp.249-250.

⁷¹ Greater Western Water (2024a).

⁷² Greater Western Water (2023a). p.258.

- additional payroll tax levies announced by the Victorian Government, resulting in a total increase in payroll tax for Greater Western Water of 1 per cent. Half of this increase is included in the base year uplift, as outlined in section 3.3.9 (changes in obligations).

Greater Western Water submits that this will result in a total forecast increase in labour costs of \$7.33 million over the PS5 regulatory period.⁷³ It is therefore proposing that, rather than seek an additional step change for these costs, they will be funded by labour efficiency savings.

Assessment

While Greater Western Water has described the costs captured in this residual category, it has not provided sufficient information to verify the prudence and efficiency of the \$0.91 million increase included in this category. We therefore propose an adjustment of \$0.91 million to the baseline.

3.3.12 Remaining costs

As outlined above, Greater Western Water has explained \$22.93 million of the \$25.48 million increase in 2022-23 expenditure compared to the combined benchmark allowance. This leaves \$2.55 million in costs that have not been explained. It has attributed this to practical difficulties associated with a full reconciliation of its actual costs against the benchmarks determined for City West Water and Western Water in their previous price reviews.

Noting these challenges, we are unable to verify the prudence and efficiency of the remaining \$2.55 million of the base year increase.

3.3.13 Summary of our base year assessment

We have assessed the drivers of the increase in Greater Western Water's actual expenditure, and have been unable to verify the prudence and efficiency of the following, which totals \$16.86 million:

- \$0.95 million in integration expenses – assets
- \$0.4 million in integration expenses – customer
- \$3.3 million in Transformation – compliance
- \$0.76 million in Transformation – corporate
- \$1.03 million in Transformation – customer
- \$6.96 million in external cost drivers – field maintenance
- \$0.91 million in 'other' labour costs
- the remaining \$2.55 million in costs contributing to the total base year uplift that Greater Western Water has not been able to substantiate.

We recommend the Commission remove this expenditure from the base year.

⁷³ Greater Western Water (2023a). Table 94, p.262.

3.4 Assessment of the step changes

Greater Western Water has proposed total step changes to the base year of \$34.49 million across the PS5 regulatory period, as outlined in Table 3.6.

Table 3.6: Greater Western Water’s proposed step changes (\$ 1 January 2024, millions)

Step change	Total value	Explanation
<i>Operating expenditure from new assets</i>		
Romsey Water Filtration Plant Upgrade	0.64	Incremental opex from new capital project
Romsey Recycled Water Plant Upgrade	0.24	Incremental opex from new capital project
Macedon Ranges Transfer Augmentation	0.89	Incremental opex from new capital project
Western Irrigation Network	3.31	Incremental opex from new capital project
<i>Other</i>		
New billing and collection system	15.77	Additional licence fees from the new system. Efficiencies captured as an ‘identified transformation efficiency’.
Security of Critical Infrastructure	4.47	Additional costs in enhancing internal capability and measures to improve the resilience and security of Greater Western Water’s infrastructure, having regard to the relevant Commonwealth legislation.
Traditional Owner Water Program	3.97	An uplift in First Nations and Traditional Owner Engagement in accordance with industry and business commitments.
Customer Hardship Program	5.20	A \$1.3 million per year increase to fund additional staff and the proactive identification of customers experiencing hardship.
Total	34.49	

Source: Greater Western Water (2023). 2024 Price Submission, 28 September, pp.259-264.

As noted in section 3.3.11, Greater Western Water expects its labour costs to increase further increases due to changes in its superannuation and payroll tax obligations. This has not been proposed as a step change as it plans to fund this from future labour efficiencies.

We assessed the reasonableness of the above 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.

Our assessment of each step change is outlined below.

3.4.1 Operating expenditure from new assets

Romsey Water Filtration Plant Upgrade

A Master Plan developed for the Romsey and Lancefield Water Filtration Plants (WFPs) in 2020 identified the need for a new WFP to meet regulatory and customer requirements. This is because the existing Romsey WFP does not have adequate water treatment capacity to meet peak demand. The associated operating expenditure represents chemicals, energy and maintenance costs.

We have assessed Greater Western Water's proposed capital expenditure, including the associated increase in operating costs, and have not proposed any adjustments (see section 4.3.1.9). As a result, we are of the view that the expenditure reflects incremental operating expenditure associated with a new prudent and efficient capital project.

Romsey Recycled Water Plant Upgrade

The existing Romsey Recycled Water Plant (RWP) is non-compliant with winter storage requirements and does not have the capacity to manage peak instantaneous flows. This could result in breaches of the EPA licence. This project is the first stage of a program of works to bring the Romsey RWP into compliance with the EPA's containment requirements for wet weather conditions (defined as 90th percentile wet weather year). The associated operating expenditure represents energy, maintenance and greenhouse gas offset costs.

We have assessed Greater Western Water's proposed capital expenditure, including the associated increase in operating costs, and have not proposed any adjustments (see section 4.3.1.10). As a result, we are of the view that this proposed step change reflects incremental operating expenditure associated with a new prudent and efficient capital project.

Macedon Ranges Transfer Augmentation

This project is required to maintain consistent storage levels at Rosslynne Reservoir, increasing the security of water supply to this region. It will utilise water from the Rosslynne reservoir to supply the Macedon Ranges region throughout the year by transferring water supplied by Melbourne Water to Rosslynne Reservoir as required. The additional operating expenditure reflects the increased water volume to be treated through the Rosslynne WFP.

We have assessed Greater Western Water's proposed capital expenditure, including the associated increase in operating costs, and have not proposed any adjustments (see section 4.3.1.2). As a result, we are of the view that this proposed step change reflects incremental operating expenditure associated with a new prudent and efficient capital project.

Western Irrigation Network

The Western Irrigation Network (WIN) will connect multiple existing recycled water sources to supply a new irrigation district in the Parwan-Balliang area, near Bacchus Marsh, with a guaranteed supply of recycled water suitable for irrigated farming in 2023. The project is jointly funded by the Australian Government, Greater Western Water and the private agribusinesses that will become the network's foundation customers.

The Project Summary Document provided by Greater Western Water⁷⁴ indicates that there are three components to the associated operating expenditure:

- variable energy costs incurred to pump recycled water to customers (which is also the key factor driving variability in total operating expenditure)
- the fixed component of energy costs related to installed power capacity at pump stations
- an annual fixed maintenance allowance, which is calculated as a percentage of the installed capital cost.

This expenditure will be recovered from urban (residential and non-residential) and foundation customers. Greater Western Water has allocated the costs between urban and foundation customers based on the 'beneficiary pays' approach, with foundation customers paying a dollar per ML Recycled Water Volumetric Charge, with the balance recovered from urban customers.

In setting the charge levied to foundation customers, which is fixed for the (20 year) life of the Recycled Water Agreement, Greater Western Water states that it had regard to the need to balance recovery of costs from these users against their capacity to pay (noting their limited ability to absorb variability in input costs). It also noted that the feasibility of the 'efficient least cost option' depends on demand from these customers.

It also stated that because this is a fully variable charge, the revenue raised from these foundation customers will initially be below their share of total operating costs in the early years of operation. As contracted volumes increase, total revenues will also increase to the point where they will exceed expenditure "by a significant margin" in the later years of the contact term.⁷⁵

We have assessed Greater Western Water's proposed capital expenditure, including the associated increase in operating costs, and have not proposed any adjustments (see section cross-reference capex chapter). As a result, we are of the view that this proposed step change reflects incremental operating expenditure associated with a new prudent and efficient capital project. We note that Greater Western Water has clearly explained the methodology that has been applied in allocating those costs between foundation and urban customers.

⁷⁴ Greater Western Water (2023n). Western Irrigation Network (WIN) – Program, Project Summary Document, Greater Western Water 2024 Price Submission, July.

⁷⁵ Greater Western Water (2023n). section 2.6.4.

3.4.2 New billing and collections system

Greater Western Water's proposal

Greater Western Water is in the process of completing the development of a new billing and collections system – Platypus. This will replace the two duplicate systems inherited from City West Water and Western Water upon integration.

We have assessed Greater Western Water's proposed capital expenditure for this system and have not proposed any adjustments (see section 4.3.1.4). The delivery of this system will deliver efficiency savings (as set out in the Business Case). Rather than apply these to the step change, they have been allowed for separately under the 'Transformation – Customer Services' efficiency category (refer section 3.5.2).

Greater Western Water has submitted a step change for the incremental operating expenditure associated with this project totalling \$15.8 million over the PS5 regulatory period. We reviewed the Business Case for this project and requested further information on the associated operating expenditure. Based on the information provided, these costs comprise the following incremental costs:

- Greater Western Water's (incremental) internal labour costs.
- DB Results, which accounts for over 50 per cent of these costs (before the contingency). DB Results will be providing support and maintenance services for the Oracle CCS and SelfServe Portal solutions under a five-year contract. It is also the supplier for the SelfServe Portal solution (i.e., a SaaS solution). The forecast expenditure with DB Results therefore includes a component for the support and maintenance services and a subscription component for access to the SelfServe Portal. On average 66 per cent of the expenditure is for support and maintenance services and 34 per cent is allocated to the SelfServe Portal subscription fees. There is a 2 per cent per year increase in support and maintenance fee included in the forecast and a 3 per cent per year increase for the SelfServe Portal subscription fee.
- Oracle, which is the second largest cost component. This represents the subscription fees for Oracle's CSS solution.
- An allowance for the costs of other incremental services.

In addition to this, the forecast costs include a contingency allowance of \$3.16 million of the step change over the PS5 regulatory period. Greater Western Water described this as follows:⁷⁶

The contingency component covers a risk element and a continuous improvement element. The risk element is intended to cover the uncertainties associated with forecasting the operating environment's support and subscription requirements. An average of \$170k per annum is allocated to this part of the contingency line. This represents 5 per cent of the GWW and DB Results incremental support costs, and 6 per cent of the forecast subscription fees. An average of \$620k per annum is

⁷⁶ Email from Greater Western Water, 12 December 2023.

forecast for the continuous improvement element. This forecast is provided to accommodate the continued improvement and refinement of the solution.

As we would typically expect to see more specific details and costings for an allowance such as what it has proposed for continuous improvement, we sought further information from Greater Western Water. It responded:⁷⁷

All opex projects of this size and complexity have continuous improvement built into the program. The inclusion of a continuous improvement allowance within our OpEx framework is a strategic decision aimed at enhancing the operational resilience of our systems. This is to cover unexpected and/or planned changes that occur ongoing to any system or technology. Allowing for continuous improvement is also consistent with established industry good practice.

Greater Western Water confirmed that the roadmap for these improvements has not yet been fully defined. It advised that it would include improvements such as an enhanced self service capability and outage improvements and provided some examples of the types of capability improvements that could be made. It also indicated that these were not deemed critical for Phase 1 but will be required in future iterations. It also stated that it has “a review mechanism that enables us to assess the evolving needs of our customers and GWW.”⁷⁸

It also provided information on the assumptions underpinning the costing of the contingency allowance. This was determined based on the average cost of two to three resources to undertake the work based on an average of \$1,000 per day at 200 days per year (which it said is an industry-based average).⁷⁹

Assessment

Noting the explanations provided by Greater Western Water, our key concern is that this forecast step change includes a contingency factor, including the ‘continuous improvement’ element. We would expect to see such an allowance underpinned by a schedule of activities with associated justifications and costings. While we understand the inherent uncertainties in forecasting these costs, and the reasons put forward as to why they should be allowed, we consider that this should otherwise be managed within the business, rather than passed on to customers.

We have also considered this within the context of the proposed net growth factor of -0.2 per cent (refer section 3.5.2), which includes the efficiencies from this investment.

We therefore recommend removal of the contingency allowance from the Greater Western Water’s proposed step change, which would remove \$3.16 million from the proposed step changes.

We also consider that the proposed efficiencies that are forecast to result from this investment should be applied to the step change, rather than be embedded in the efficiency factor. Otherwise,

⁷⁷ Greater Western Water (2024d). RFI#110 – B&C step change.

⁷⁸ Greater Western Water (2024d).

⁷⁹ Greater Western Water (2024d).

we are of the view that the adjusted step change reflects incremental operating expenditure associated with a new prudent and efficient capital project.

This would result in the following profile. By the last two years of the period this would result in the savings exceeding the adjusted cost of the step change.

Table 3.7: Billing and Collections system step change – proposed adjustment (\$ 1 January 2024, millions)

	2024-25	2025-26	2026-27	2027-28
Proposed step change	3.79	3.90	3.99	4.09
Removal of contingency allowance	-0.77	-0.78	-0.8	-0.81
Reallocation of forecast efficiencies	-1.86	-2.84	-3.93	-3.97
Recommended step change	1.16	0.28	-0.74	-0.69

As the efficiencies have been included separately in the efficiency factor, they should be removed so they are not counted twice. This is discussed further in section 3.5.2 below.

3.4.3 Security of Critical Infrastructure

Greater Western Water’s proposal

In March 2023, the Department of Home Affairs identified Greater Western Water as a ‘critical infrastructure entity’ under the *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022* (SLACIP Act), which amended the *Security of Critical Infrastructure Act 2018* (SOCI Act). Under the SOCI Act, Risk Management Program Rules commenced in February 2023 requiring it to implement adequate risk management controls to secure its critical infrastructure. Under the Risk Management Program Rules, Greater Western Water is delivering a Board-attested risk management plan, a five-year roadmap to uplift critical infrastructure security and implementing Board-approved annual reporting obligations.⁸⁰

Greater Western Water submitted that from 2023-24, it will incur additional expenditure in complying with these requirements.⁸¹ It identified these costs as including and additional resource, licence costs, cyber and other emergency incident preparedness, a security operations centre, independent maturity reviews and training for key staff.

Assessment

The need for upgrades to cyber security has accelerated in recent years and is receiving increased scrutiny from government agencies, customers and the wider community. Activities range from ensuring that water assets and operations remain resilient to cyber-attacks, through to adequate

⁸⁰ Greater Western Water (2023o). 5.2 Opex Step Change Security of Critical Infrastructure.

⁸¹ Greater Western Water (2023a). p.261.

protection of customer data. Customer and community expectations around data protection have heightened further given the impact of recent major cyber-attacks in Australia.

In addition to Commonwealth legislation, Victorian water businesses are required to comply with several requirements and standards, such as the Victorian Protective Data Security Framework, Victoria's Cyber Security Strategy 2021, the Victorian Critical Infrastructure Resilience Framework and implementation of the recommendations of the Victorian Auditor-General's Office Security of Water Infrastructure Control Systems.

While the driver for this expenditure is clear, we sought further information from Greater Western Water to verify the costs underpinning its forecast step change. It provided a detailed breakdown of its forecast annual costs over the PS5 regulatory period,⁸² including assumptions underpinning forecasts of the more material cost items, being labour, security product licence costs and physical security standardisation at sites.

We consider that the information provided by Greater Western Water clearly outlines the need for this expenditure and substantiates how it has developed its cost forecast. As a result, we are of the view that this proposed step change meets the criteria outlined above, specifically:

- comply with new, or changed, legislative or regulatory obligations
- 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.

3.4.4 Traditional Owner Water Program

Greater Western Water's proposal

Greater Western Water outlined how its obligations to formally engage with Traditional Owners has increased since the last price review, and following the enactment of the Water for Victoria (2016) policy. It noted commitments that have subsequently been made in the *Central Gippsland Regional Sustainable Water Strategy* (2022), as well as the Victorian Government's Water is Life: Traditional Owner Access to Water Roadmap (2022). Greater Western Water has five formally recognised Traditional Owner organisations in its service area.⁸³

Greater Western Water submitted that in addition to incurring costs to uplift its own internal capability and understanding to effectively engage and partner with these organisations, it also needs to provide further funding to:

- support Traditional Owners in increasing their foundational knowledge at priority sites
- implement policy and partnership agreements
- increase Traditional Owner capacity to meaningfully engage with Greater Western Water on key programs and initiatives.⁸⁴

⁸² Greater Western Water (2023p). OPEX step changes_SOC1 detail.

⁸³ Greater Western Water (2023a). p.260.

⁸⁴ Greater Western Water (2023a). p.260.

Greater Western Water stated that its program was informed through discussions with Traditional Owner Groups and aligns with their aspirations.⁸⁵

Assessment

Greater Western Water provided further information on the assumptions underpinning its forecast for this step change.⁸⁶ The two most significant cost items are for a new senior resource to lead the program, as well as its Cultural Values Assessments and Aboriginal Waterways Assessments (which are assumed to be conducted based on a five yearly review cycle).

We consider that the information provided by Greater Western Water regarding this step change clearly outlines the need for this expenditure and substantiates how it has developed its cost forecast. As a result, we are of the view that this proposed step change meets the criteria outlined above, specifically:

- 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
- 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.

3.4.5 Customer Hardship Program

Greater Western Water's proposal

Greater Western Water outlined that during its customer engagement program there was “significant support” for increasing its services to vulnerable customers and those experiencing payment difficulties, which has been driven by the cost of living crisis.⁸⁷ It anticipates a further increase in customers experiencing financial stress in the next few years. It further outlined that under recent changes to the *Water Industry Standard – Urban Customer Service*, the eligibility for customer support has increased for small businesses, which comprises a high proportion of its customer base.

Greater Western Water indicated that its best-worst survey revealed that “customers wanted Greater Western Water to maintain or increase the current spend for customers experience hardship” and preferred that this be via direct bill relief.⁸⁸ It stated:

Our bill simulator survey found that 53% of customers were willing to pay more to increase the number of customers supported. In our billing simulator focus groups, six out of eight focus groups, including the financially vulnerable group, chose the second most expensive option by increasing our support to customers. Verbatim comments and probing by the facilitator of focus groups sought to elicit the

⁸⁵ Greater Western Water (2023a). p.260.

⁸⁶ Greater Western Water (2023q). 5.2-7.1 OPEX Step Changes Expenditure Workings.

⁸⁷ Greater Western Water (2023a). pp.253.

⁸⁸ Greater Western Water (2023a). pp.12.

underlying values that drove customers to express their views. Their comments suggested that values of fairness and equity overrode concerns for their personal financial needs and were more at the forefront of their considerations due to cost of living challenges. Renters and small business owners voted to maintain the same number of customers we support annually.⁸⁹

Greater Western Water commented that the consistency of customer support for this was such that further investigation was not considered necessary as part of the deliberative stage of its engagement program.

It therefore proposes additional expenditure of \$1.3 million above the costs incurred in the 2022-23 base year, which represents an almost doubling of the program. This will provide for:

- additional consultants to visit customers' homes to assist Greater Western Water's culturally and linguistically diverse community and customers who may have lower literacy levels
- more proactive identification of customers experiencing hardship and vulnerability, enabling early intervention and support.⁹⁰

Assessment

Greater Western Water provided further information on the assumptions underpinning its forecast for this step change.⁹¹ The most material cost item is the expansion of its team of consultants, which accounts for around 70 per cent of the total cost of the program and the increase from 2022-23 base year expenditure. The forecast includes the cost of the Water Assist program previously funded by the Victorian Government.

Reference is made to the *Water Industry Standard – Urban Customer Service* and the expectations and obligations placed on Greater Western Water in relation to customer assistance and support. Even if the nature of those obligations has not changed, we consider that an increase in the number of customers requiring this support (including extension to small business) will increase Greater Western Water's costs in complying with those obligations.

We note the difficulties in forecasting the number of customers who are likely to need (or would benefit from) access to Greater Western Water's Hardship Program. We also note Greater Western Water's intention to take a proactive approach, and the potential for early intervention to eventually reduce the incidence and extent of hardship.

We consider that the information provided by Greater Western Water regarding this step change clearly outlines the need for this expenditure and substantiates how it has developed its cost forecast. As a result, we are of the view that this proposed step change meets the criteria outlined above, specifically:

⁸⁹ Greater Western Water (2023a). p.37.

⁹⁰ Greater Western Water (2023a). p.264.

⁹¹ Greater Western Water (2023q).

- 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
- 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.

3.4.6 Summary of our step change assessment

Based on Greater Western Water’s PS5 submission and the further information provided to us, and having regard to our step change criteria, we consider that most of the proposed step changes are prudent and efficient.

We have also considered these within the context of Greater Western Water’s proposed net annual growth in expenditure over the PS5 regulatory period of -0.2 per cent per year (inclusive of the efficiencies from the billing and collections system).

We recommend two adjustments, to remove the contingency allowance for the new billings and collections system, and to offset the forecast efficiencies separately included in the efficiency factor. This adjustment has the effect of reducing Greater Western Water’s forecast controllable operating expenditure by \$15.76 million over the PS5 regulatory period. A corresponding adjustment should be made to the efficiency factor to ensure that these forecast savings are not removed twice.

Table 3.8: Summary of step changes – proposed adjustment (\$ 1 January 2024, millions)

	2024-25	2025-26	2026-27	2027-28
Step change adjustments (reductions)				
New billing and collection system - removal of contingency allowance	-0.77	-0.78	-0.80	-0.81
New billing and collection system - reallocation of forecast efficiencies	-1.86	-2.84	-3.93	-3.97
	-2.63	-3.62	-4.73	-4.78

3.5 Forecast growth and efficiency factors

3.5.1 Growth

Greater Western Water is proposing an average annual growth factor of 2.8 per cent per year based on forecast connections growth.

In its submission, Greater Western Water states:

*Greater Western Water is a newly integrated business with limited historical data on actual performance. While data exists for CWW and WW, it is unclear how these historical growth rates are relatable to the operating expenditure associated with the new integrated businesses Greater Western Water.*⁹²

In discussions with Greater Western Water, it explained that it had sought to undertake econometric analysis with a view to understanding the relationship between growth and operating expenditure.⁹³ However, this was limited by the existence of only two data points for the integrated business. It commented that it was the area formerly serviced by Western Water that had demonstrated a more ‘unusual’ relationship in terms of higher growth in operating expenditure per connection.

3.5.2 Efficiency

Greater Western Water’s proposal

Greater Western Water is proposing an average annual compounding efficiency factor of three per cent per year. This has been based on a ‘bottom up’ review of efficiencies – some of which are based on specific targets and some that are yet to be identified. Greater Western Water explains these in detail in its submission.⁹⁴ These are summarised below.

⁹² Greater Western Water (2023a). p.250.

⁹³ Meeting with Greater Western Water, 24 November 2023.

⁹⁴ Greater Western Water (2023a). pp.251-255.

Table 3.9: Greater Western Water forecast efficiencies (\$1 January 2024, millions)

Category	2024-25	2025-26	2026-27	2027-28
Integration	1.17	1.17	1.69	1.69
<i>Identified Transformation efficiencies</i>				
Asset Management	0.66	0.66	0.66	0.66
Corporate	1.60	1.60	1.60	1.60
Customer Services	1.86	2.84	3.93	3.97
Compliance	0.10	0.22	0.22	0.22
Safety	0.21	0.21	0.21	0.21
Total	4.43	5.53	6.62	6.66
<i>Unidentified future Transformation efficiencies</i>				
Residual	5.80	9.02	12.35	15.79
TOTAL	12.39	19.73	26.02	31.19
Per cent per year	3.8	3.3	2.8	2.2

Source: Greater Western Water (2023). 2024 Price Submission, 28 September, Tables 83 and 84.

Apart from the Billing and Collections system, which has been included under the Transformation - Customer Services category (refer section 3.4.2), we are not aware of other expected efficiencies from the 2024-28 capital program reflected in the proposed efficiency factor.

Greater Western Water’s explanation of the composition of each category is summarised below.⁹⁵

- **Integration.** Greater Western Water advises that \$3 million per year in realised integration efficiencies are already reflected in the base year. This category includes further efficiencies that have been identified from integration that will be realised in the PS5 regulatory period. By way of example, this includes the planned alignment of the two GIS systems (as outlined in section 3.3.4, the additional costs from running these two systems have been identified as a recurrent cost from integration).
- **Identified Transformation efficiencies.** This reflects the efficiencies that Greater Western Water has identified from its five Transformation programs.
- **Unidentified Transformation efficiencies.** As outlined above, Greater Western Water has embarked on (or plans to undertake) initiatives under its Transformation program that are expected to realise efficiencies, but these are yet to be quantified (including, for example, the ADOR program).⁹⁶

⁹⁵ Greater Western Water (2023a). pp.251-255.

⁹⁶ Greater Western Water (2023d). Greater Western Water advised that the future (as yet unquantified) benefits from the ADOR program will flow through this category, as well as ‘residual’ efficiencies.

- **Residual efficiencies.** This includes efficiencies not directly related to integration or Transformation, including economies of scale and scope. This is based on a target of 1.4 per cent, which Greater Western Water has selected with reference to the Commission’s “standard PREMO operating expenditure expectations”.⁹⁷ This is also the only efficiency component included in the 10-year operating expenditure forecast for the following (PS6) regulatory period.

Greater Western Water’s submission outlined the key types of efficiencies included in the allowance for Unidentified Transformation efficiencies that are yet to be quantified. We sought confirmation of these as there appear to be a number of initiatives represented in this category including:

- Asset Management: the ADOR program (with some of these also reflected in the ‘residual efficiencies’ category).
- Corporate:
 - some IT systems e.g., continued rationalisation of licence fees;
 - IT delivery model review;
 - workforce optimisation plan.
- Customer services: alignment of the duplicate billing and collections systems.
- Compliance: review of incident and emergency management.
- Safety: increased deployment of operational technology in the field, reducing the need for staff to visit remote meters and facilities.

To manage the above, Greater Western Water has implemented a Sustainable Efficiency Program. It provided us with further information on this program.⁹⁸ This is intended to provide a roadmap (co-designed with Deloitte) to enable it to identify and achieve the savings required to keep bills stable, meet the financial commitments it has made in its price submission and achieve its 2030 Strategy. At the time of this assessment, Greater Western Water is in the design phase.

Assessment

Greater Western Water has sought to be transparent in how it has built its efficiency target. We acknowledge it is still undertaking a number of transformation initiatives and is not yet able to fully quantify the savings from these initiatives. It has also allowed for further residual (unidentified) efficiencies from economies of scale and scope.

It is reasonable to expect that the integration of the two businesses, City West Water and Western Water, should result in efficiencies through economies of scale and scope. We would expect that this underpinned the business case for integration. At the same time, Greater Western Water has emphasised that from its perspective, the integration was not simply the sum of two businesses. Instead, it has fundamentally changed the way it conducts its operations and its journey in this regard is continuing.

⁹⁷ Greater Western Water (2023a). p.254.

⁹⁸ Greater Western Water (2023q). 2.3 Sustainable Efficiency Program – Oct 2023.

In the meantime, there has been a significant increase in actual operating expenditure relative to the previous benchmark allowances used to set prices for the predecessor businesses (noting that some of the economies of scale and scope from integration are already reflected in the higher actual base year expenditure). From the perspective of customers who will be funding this increase through prices, if the efficiencies from integration cannot be realised immediately, there is a reasonable expectation of subsequent future savings.

Some of these will be 'catch-up' efficiencies, such as the removal of duplicate systems. Others will be new initiatives that push the business further towards the efficient frontier. Given the size of the increase in operating expenditure, as well as the presumption that integration should lead to economies of scale and scope – at least at some point – these subsequent future savings should be sufficiently material to warrant the investments proposed for the PS5 regulatory period.

We also note that the only capital investment planned for the PS5 regulatory period that has identified associated efficiency savings is the new billings and collections system (which we consider should be applied to that step change). Again, we would expect that some savings should be realised from these investments, whether this is in the next or subsequent regulatory periods.

Greater Western Water has proposed average growth in operating expenditure of 2.8 per cent per year and an average efficiency factor of 3.0 per cent per year over the regulatory period. This results in a net decrease in operating expenditure of 0.2 per cent per year. As noted in table 3.9 above, Greater Western Water has included \$46.35 million of forecast efficiencies that are attributable to integration or transformation activities out of a total of \$89.33 million, this is equivalent to an average annual efficiency factor of 1.6 per cent. This means that Greater Western Water is proposing an ongoing efficiency factor that is not related to integration or transformation of only 1.4 per cent.

We note that in the 2023 water price review, a net efficiency factor of -0.2 per cent this would have resulted in Greater Western Water being middle of the table in terms of net average increase in operating expenditure compared with other Victorian water businesses (see table 3.10 below). However, if you remove the forecast efficiencies attributable to its transformation and integration, Greater Western Water's net efficiency factor would become 1.4 per cent, which would place it at the bottom of this table.

Table 3.10: Net average increase in operating expenditure per year by business

Water business	Net average annual increase
South East Water	-0.9%
GWMWater	-0.8%
Wannon Water	-0.3%
Gippsland Water	-0.2%
Yarra Valley Water	-0.2%
Greater Western Water	-0.2%
Lower Murray Water (Urban)	0.0%
Barwon Water	0.1%
South Gippsland Water	0.2%
Westernport Water	0.5%
Coliban Water	0.5%
East Gippsland Water	0.7%
Goulburn Valley Water	1.1%
Central Highlands Water	1.2%

Source: Calculated from pricing models submitted by water businesses.

Further, consideration will need to be given to adjusting this efficiency factor for the following:

- the integration costs relating to the duplicate systems and customer call centres that Greater Western Water is subsequently proposing to remove once consolidation is completed during the PS5 regulatory period (as reflected in the integration efficiencies), noting that we do not know the quantum of the relevant savings included in that forecast. We have recommended that these costs are removed from the base year;
- the efficiencies from its new billings and collections system that we consider should be applied to the relevant step change.

This would result in a reduction in Greater Western Water’s proposed efficiency factor and hence an increase in its net growth in controllable operating expenditure.

3.6 Summary of controllable operating expenditure assessment

Based on Greater Western Water’s PS5 proposal, the further information provided and our discussions with the business, we have proposed adjustments to its proposed operating expenditure.

Table 3.10: Recommended adjustments – controllable operating expenditure (\$ 1 January 2024, millions)

	2024-25	2025-26	2026-27	2027-28
Forecast controllable operating expenditure	218.18	218.52	219.00	220.42
Recommended adjustments:				
Baseline adjustments with amended efficiency factor (reductions)				
Integration costs	-1.21	-1.13	-1.04	-1.04
Compliance obligations	-2.95	-2.75	-2.54	-2.54
Corporate costs	-0.68	-0.63	-0.58	-0.59
Customer and community engagement	-0.92	-0.86	-0.79	-0.79
Field maintenance	-6.23	-5.81	-5.35	-5.36
Labour costs	-0.81	-0.76	-0.70	-0.70
Unexplained cost increases	-2.28	-2.13	-1.96	-1.96
	-15.09	-14.07	-12.95	-12.98
Step change adjustments (reductions)				
New billing and collection system - removal of contingency allowance	-0.77	-0.78	-0.80	-0.81
New billing and collection system - reallocation of forecast efficiencies	-1.86	-2.84	-3.93	-3.97
	-2.63	-3.62	-4.73	-4.78
Total recommended adjustments	-17.72	-17.69	-17.68	-17.76
Adjusted total operating expenditure	200.47	200.83	201.32	202.66

4 CAPITAL EXPENDITURE ASSESSMENT

4.1 Overview of approach to the Review

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).⁹⁹

We have assessed Greater Western Water’s proposed capital expenditure program against the criteria set out in Figure 4.1.

Figure 4.1: Capital expenditure assessment criteria

Assessment of capital program
<ul style="list-style-type: none">• Link to customer service outcomes, regulatory obligations and risk management• Comparison of forecast and actual capital expenditure• Reliability of cost estimation• Deliverability of capital program
Assessment of major capital projects and programs
<ul style="list-style-type: none">• Major capital projects and programs are clearly justified• Proposed delivery solution is reasonable

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 Greater Western Water’s forecast capital expenditure for the PS5 regulatory period focusing 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 to verify the quality and strength of the submission, including expenditure forecasts, and the proposed outcomes, and to establish what further verification work is required to inform the ESC’s draft decision.

In numerous circumstances the information provided by Greater Western Water lacked sufficient detail and justification to support its forecast capital expenditure program. To test the infrastructure planning and project/program development underpinning the proposed program, we made several follow up requests for information and questions to verify and justify the capital projects and programs expenditure included in the submission.

Greater Western Water provided additional information in response.

Our assessment is based on a review of the information contained in Greater Western Water’s PS5 submission and additional information provided in response to requests reflecting the above criteria.

⁹⁹ Essential Services Commission (2022), p.33.

We also conducted workshop sessions with Greater Western Water at its offices on the 2 and 22 November 2023 and several follow-up meetings to explore this information and additional related queries in more detail.

4.2 Assessment of overall capital program

Greater Western Water is expected to overspend against its capital benchmark allowance in the PS4 regulatory period, with forecast capital expenditure for the period of \$1,409 million compared to the benchmark allowance of \$1,128 million approved by the Commission in the last price review. Greater Western Water attributes its higher capital spend to:

- post-integration corporate capital costs (increasing sharply in 2020-21)
- significant investment in pipelines and network throughout the regulatory period, driven by growth and investment in existing infrastructure
- significant cost increases for major projects, renewals and maintenance since the 2018 Pricing Submission.

Greater Western Water's submission supporting its proposed capital expenditure program provided good information for its top 10 projects albeit spread across several documents. However, supporting documentation for some of its programs, in particular its sewer treatment growth and water main performance renewals programs, lacked sufficient detail or rigour to support forecast expenditure and associated benefits, which resulted in several requests for additional information to test the justification for the increase in capital expenditure forecasts for the PS5 regulatory period compared to PS4 regulatory period forecasts. Supporting information was provided to inform our assessment of individual projects and programs.

4.2.1 Link to customer outcomes and obligations

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

- growth
- renewals
- improvement/compliance
- twenty-eight major programs
- ten major projects.

Supporting strategies, asset management plans, business cases, project justifications and major project business cases provided by Greater Western Water varied in detail and quality and some required substantial additional supporting information to provide confidence that the associated capital expenditure proposed is prudent and efficient.

The projects and programs that underpin the overall capital expenditure program and forecast are well linked to Greater Western Water's five key customer outcomes:

- Your water is safe, consistent and resilient
- When things go wrong, we fix them

- We support our diverse communities and customers
- We enable growth and help businesses thrive
- We heal and care for Country.

4.2.2 Comparison of forecast and actual capital expenditure – PS4

Greater Western Water’s actual capital expenditure for the PS4 regulatory period is expected to be \$1,409 million. This is a \$281 million (or 24.9 per cent) increase to the benchmark allowance approved by the Commission in the last price review.

Greater Western Water attributes its capital expenditure variation to:

- higher than forecast customer growth, particularly in the western region, leading to infrastructure being brought forward
- the previous Western Water price submission underestimated the capital expenditure required to meet compliance requirements
- substantial increases to unit rates across all capital works driven by supply chain challenges and ageing infrastructure
- ageing infrastructure (parts of the network are over 100 years old in the inner CBD region) requiring significant increased renewals to maintain reliability to these highly urbanised and high-risk areas
- new systems needed to support integration, for example additional expenditure required for the billing and collections system to accommodate data from two businesses rather than one.
- Ten of the top 22 projects were delivered, but at a significantly higher overall cost. The cost increases for these projects ranged from 13 per cent to 269 per cent, however, there were some projects that were delivered under budget. The reasons for this scale of increases included scope additions and under estimation of costs and the impacts of material and labour shortages caused by the pandemic, as well as disruption on the supply chain and high volume of construction work in Victoria. Other capital projects in the top 22 have been delayed and are still under construction.

FTI considers that the capital expenditure delivered in PS4 is reasonable given the reasons outlined by Greater Western Water for the significant increases compared to the benchmarks.

4.2.3 Forecast capital expenditure – PS5

Greater Western Water’s gross capital expenditure forecast for the PS5 regulatory period is \$1,721 million. This is a 22.1 per cent increase in expenditure compared to the PS4 regulatory period and a 67.9 per cent increase on the forecast gross capital expenditure outlook for the PS5 regulatory period included in the Commission’s PS4 final decision.

Greater Western Water’s capital expenditure is predominantly driven by growth (\$843 million), and renewals also form a large component (\$532 million). Improvements and Compliance make up the smallest portion of the overall capital expenditure (\$347 million).

Greater Western Water’s pricing submission attributes the significant increase to:

- customer growth in the western region being higher than anticipated
- previous underestimation of the investment required to service this additional growth in the western region
- higher level of risk held in the western region, which has resulted in regulatory breaches.

Our review of Greater Western Water’s submission and additional information leads us to conclude that the majority of the proposed increased improvement/compliance driven capital expenditure for the PS5 regulatory period is prudent and efficient, and it is consistent with trends seen across the broader water sector in Victoria in the 2023 water price review.

We consider that there is strong justification for the top 10 capital expenditure projects and the majority of the programs proposed for the PS5 regulatory period. The justifications put forward are reasonable and supported by capital planning processes and documentation. However, as discussed further in section 4.3.2, we have made recommendations to remove some of the proposed capital expenditure associated with major programs.

4.2.4 Underlying processes for developing the program

Greater Western Water’s PS5 submission outlines its underlying process for developing the capital program and expenditure forecasts, including:

- linking expenditure to Corporate Strategies and service standards required to meet customer needs through service plans, asset management plans, masterplans supporting business cases and project justifications.
- 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.

Our review has established that Greater Western Water has applied these processes appropriately to develop the PS5 capital expenditure program, as evidenced through:

- Strategic Asset Management Plan June 2022
- Expenditure Prioritisation Framework & Tool May 2023
- Strategic IT Roadmap July 2021.

Greater Western Water inherited two distinct capital programs with different investment priorities from the merger of City West Water and Western Water. It has been refining and prioritising its long-term capital program since integration in 2021 by applying an Expenditure Prioritisation Tool (EPT) that was developed by Aurecon Consulting. We have reviewed the EPT and consider it to be sufficiently detailed and robust.

Greater Western Water has demonstrated that it has used this EPT to effectively prioritise its capital expenditure projects.

Our review of Greater Western Water’s overall approach to developing its capital program is appropriate for the development of its forecast capital expenditure.

4.2.5 Reliability of cost estimation

Greater Western Water has adopted a bottom-up approach to estimating costs for projects and programs for PS5, which considers the current economic climate and availability of resources. For the majority of projects/programs reviewed, it has developed project budget forecasts on the basis of quotations sought and probabilistic cost estimates at the P50 level based on recent projects/unit rates.

Greater Western Water competitively tenders all major projects and programs and tenders several programs as term contracts for several years to maximise the opportunity for efficient prices.

Greater Western Water is enhancing its asset delivery maturity and addressing challenges across the asset delivery lifecycle by implementing a program called the Asset Delivery Organisational Review (ADOR). Greater Western Water expects that the program will enable the successful delivery of current programs by establishing:

- Portfolio Project Management Framework that ensures consistent standards for upfront planning and risk identification, standardises cost estimation and business case development and increases project governance requirements.
- An Infrastructure PMO with cost estimation, scheduling and risk capabilities that will support Greater Western Water to deliver its program on time and on budget.
- A centralised Procurement function with commercial and contract capabilities that will support Greater Western Water to deliver efficiencies in procurement and comply with State Government requirements.
- A dedicated Project Feasibility function that will lead business case development and improve the service need, risk, and options analysis in business case development.
- Improved project management and project leadership through training, mentoring and additional support from enabling functions such as the PMO and centralised procurement functions.

Discussions with Greater Western Water indicated that it would take some time to achieve improvements to cost estimation capability due to the timing of the delivery of ADOR. In the meantime, Greater Western Water advised that the current gap may lead to lower than market rate estimates, implying some conservatism in its forecasts. It cited recent experience over the last twelve months of tendering across major projects, where market rates are exceeding its project estimates.¹⁰⁰

Based on our review, we consider that Greater Western Water's approaches to cost estimation in cases where quotes have been received or projects tendered provide a reasonable and appropriate basis for developing the budget estimates for its capital program for the PS5 regulatory period.

¹⁰⁰ Infrastructure responses to FTI – Email Manager, Price Submission & Regulation – 4th December 2023

4.2.6 Deliverability of capital program

Greater Western Water is in the process of developing a transformation program (ADOR) to uplift capability within the organisation to deliver an ambitious program of works. The ADOR program encapsulates a four-phase approach, with phases 1 and 2 complete and phases 3 and 4 underway. These phases are as follows:

- Phase 1 (independent maturity assessment) and 2 (Roadmap Development and Planning) are complete.
- Phase 3 (Building Foundational Capability) is 50 per cent complete and commenced in January 2023. Phase 3 is focused on establishing and building foundational capability and capacity across Project Planning, Project Management, Cost Schedule and Risk Management, Procurement, Contract and Commercial Management, Project Governance and Assurance by the end of June 2024.
- Planning of Phase 4 is underway in parallel to delivery of Phase 3. Phase 4 is expected to commence early to mid-2024 and is estimated to have a 18–24-month duration. It will focus on technology enhancements, and the next evolution of delivery models, partnerships and/or contracts (leveraging the uplift in foundational capability delivered in Phase 3).

The improvements to be achieved by the ADOR program may not be fully realised for this price submission. However, we believe that Greater Western Water is substantially progressed through the capability enhancement afforded by the ADOR program to provide sufficient rigour to the capital works projects and programs delivery. We are therefore confident that it can deliver the proposed capital program for the PS5 regulatory period.

4.3 Assessment of major projects and major programs

4.3.1 Major Projects

Greater Western Water's capital program for the PS5 regulatory period includes 10 major projects that account for a relatively small component of the overall program, with a forecast total capital expenditure of \$379.4 million (22 per cent of total forecast capital expenditure). These projects are outlined in Greater Western Water's PS5 submission and in more detail in specific project business cases provided as part of our review. We have assessed the business cases and related supporting documentation for all 10 major projects.

The following sections outline our assessment of each of the 10 major projects and provide a summary of our overall assessment.

Waterway Health (Woodend Recycled Water Plant) - \$58.4 million

This project entails the upgrade of the existing 0.85 ML/day Woodend recycled water plant (RWP) to a 2.1ML/day plant. The Woodend RWP is currently treating approximately 1.1 ML/day at average dry weather flow (ADWF), which is above its designed treatment capacity.

Greater Western Water has undertaken modelling that demonstrated that, assuming reasonable allowance for redundancy in the existing process, there is a high risk of exceeding the total nitrogen limit outlined in the EPA licence by 2025, resulting in potential non-compliance with current licence conditions. We have reviewed the approach to undertaking the modelling and are satisfied it is robust.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimates are reasonable as the basis for the budget cost estimate included in the capital expenditure forecast.

Macedon Ranges Transfer Augmentation - \$55.9 million

The Sunbury area water supply is supplied from the Melbourne System with the northern towns (Macedon Ranges) supplied from the Melbourne System during winter and the Rosslynne Water Filtration Plant (WFP) during summer. Rosslynne Reservoir supply and existing maximum transfers from the Melbourne Supply are insufficient to meet ongoing demand for Macedon Ranges which pose a risk of water restrictions.

The Macedon Water Supply Network does not have capacity to meet current and future Peak Day Demand, impacting the reliability of local water pressure and supply. Highly inconsistent water supply quality complicates operations of the network, risking water quality and reliability.

This project will utilise Rosslynne reservoir water to supply the Macedon Ranges region throughout the year by transferring Melbourne Water to Rosslynne Reservoir as required to maintain consistent storage levels at Rosslynne Reservoir increasing the security of Macedon Ranges water supply.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

CBD Stage 4 – Siddeley Street - \$46.4 million

The Melbourne CBD Sewer Strategy was developed in 2015, to cater for growth and replace the 120-year-old Melbourne brick sewer over four key stages. Stages 1 and 2A (Spencer Street Sewer and 2A Lonsdale Street Sewer) were completed in December 2018 and November 2020 respectively.

Stage 3A is in construction (Elizabeth Street) due to be complete in late 2023, Stage 3B will be a future stage, and the Siddeley Street Sewer is the fourth stage.

Completion of this Strategy will increase the capacity of the Melbourne CBD Sewer Network by constructing a second sewer outlet.

The current estimate for this project is based on a third-party estimate informed by a concept design.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed,

our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

Platypus- \$37.5 million

Greater Western Water have forecast a spend of \$37.47 million for the completion of its Platypus billing system project. It has already incurred \$60.11 million in the current regulatory period on this project. The project seeks to establish a single billing and collection system to replace the current two systems in operation now that are at end of life.

City West Water's 2018 Pricing Submission outlined plans to implement a billing and collections solution in the FY20/21 to FY22/23 years. Expenditure for this initiative was forecast to be \$15 million (P50 forecast in Real \$17/18), and this formed one of City West Water's top 10 major projects in its 2018 Price Submission.

The forecast implementation cost identified in Greater Western Water's Business Case - Version 3 (February 2022) for the recommended solution was then upgraded to \$62 million +/-20 per cent¹⁰¹. The difference between the 2018 Pricing Submission estimate and new forecast was attributed to the following factors:

- The 2018 Pricing Submission estimate was developed before business requirements were documented or a market assessment completed.
- The estimate only included the technology solution cost, not the cost to implement.
- The 2018 Pricing Submission estimate was predicated on replacing City West Water's Gentrack only, rather than migrating and replacing two billing systems (Gentrack and Aquarate).
- The level of knowledge and understanding of the complexities of preparing and migrating Greater Western Water's data.
- Replacement of the customer communications management (CCM) functionality was added to the scope of this program.
- Abstraction of the Property Master function from the replaced systems also extended the scope.

Forecasts were then revised to \$92.53 million (nominal) to complete the implementation following detailed design activities and early implementation phase period. The drivers for this change were attributed to the following variations to the scope of the project:

- Discovery during detailed design that changed scope and complexity of the project. The analysis to document the functional designs that the specific system configurations and builds are based on highlighted changes to meet the Greater Western Water operating needs. The types of changes related to interface data fields, Information Statement functionality, residential portal functionality, technical changes interfaces, automation, life support obligations, as examples.

¹⁰¹ This figure is in dollars as at 1 January 2022.

- Additional complexity of data migration than originally anticipated.
- Greater number and complexity of interfaces with external and internal systems than was not anticipated during the original design.
- The go-live delay from the end of September 2023 to late March 2024 due to the increased scope.
- The extension of the supplier contracts across the program to align with the longer period.

The estimated total cost of this project is now \$97.6 million with \$37.47 million expected to be spent within the 2023-24 to 2027-28 period.

Greater Western Water has forecast some operational savings by decommissioning the two current legacy systems once the project is commissioned commencing in FY25 building to \$3.97 million per year from FY28 which will be netted off against future operational cost of the project. These savings were initially included in Greater Western Water's efficiency factor, however, we have recommended they be reallocated as a downward adjustment to the proposed step change in operating costs (see section 3.4.2 above).

A review of the documentation provided by Greater Western Water has clarified that the project is prudent. Cost escalations that occurred over the project life driving the significant cost increase from the project inception were explained and not within the scope of this review and managed by Greater Western Water's governance processes. Greater Western Water has provided information that it has followed a thorough procurement processes and has been in discussions with DEECA and the Department of Treasury throughout the project life to advise them of the increases. In this regard the forecast expenditure is considered efficient.

Holden Tank Water Pumping Station & Transfer Main - \$37.3 million

Greater Western Water propose to construct a new potable Water Pump Station at the Melbourne Water's Holden Tank site and a new transfer main between Melbourne Water's Holden Tank and a proposed Greater Western Water's Bald Hill tank (detailed further in this report) to cater for growth to increase from 17,000 lots to 64,000 lots in the next 50 years.

Greater Western Water is proposing a Design and Construct (D&C) delivery model via open tender to provide the greatest value for money. The D&C contract would be procured under the VicWater Major Works Contract with standard Greater Western Water annexures.

Greater Western Water have utilised historical unit rates for the pipeline cost estimation and similarly for the proposed pump station. Considering the differential in costs recently observed for large capital projects we have a low level of confidence that the estimated costs reflect the potential actual costs of this project. Greater Western Water have acknowledged that the current estimate is based on planning figures and is subject to further refinement to reflect project development, including design refinement, additional investigations, and further risk reviews and analysis.

A detailed review of the Business Case, workshop discussions and follow up written explanations provided by Greater Western Water have clarified that the project is prudent. Considering the low confidence in the project estimate, a comparison to the other options in the business case was

undertaken. As the other options reviewed were similar in nature, we consider the selected option is efficient with the caveat that the estimated cost may vary.

Emu Creek Branch Sewerage Main - \$34.3 million

Modelling undertaken by Greater Western Water has indicated that the Emu Creek population growth will exceed the existing sewer network capacity from 2026 for a Peak Wet Weather Flow Rate, a 1 in 5-year Average Recurrence Interval (ARI) storm event, leading to sewage overflows. This project will provide a sewerage outlet for the Sunbury growth areas within the Emu Creek catchment and ensure containment of sewage in accordance with compliance obligations under the Environment Protection Act in July 2021.

The total project cost is estimated at \$81.1 million with \$34.2 million spend in this regulatory period.

Construction cost estimation for different sections of the proposed pipeline has been determined by several methods including actual approved developer reimbursement rates, escalated tender rate and a high-level independent consultant estimate.

Greater Western Water have undertaken a preliminary procurement analysis to identify potential delivery models for this project with different sections of the project to be procured under different methodologies. Large sections of the new sewer will be delivered under a design and construct delivery model utilising Engineering Design partnership for the design works and a Framework Works Agreement partnership for construction.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

Gisborne Recycled Water Plant Upgrade - \$29.9 million

The Gisborne Recycled Water Plant Upgrade Project Business Case to replace the existing plant that has reached the end of its life and is unable to cater for the growth in the region was developed by Western Water and approved by the Treasurer of Victoria in November 2020.

The project was then tendered under a Design & Construct & Prove procurement strategy with a two-year Operations and Maintenance period.

In September 2022, following some scope changes identified through the detailed design process, the project was approved for an additional \$1.8 million in capital, resulting in a total capital cost of P90 \$52.9 million.

Construction commenced in December 2022 and the new plant is expected to be fully operational by March 2025.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

Bald Hill Tank Construction - \$29.0 million

Demand for water from the growing population within the Sunbury Water Network is forecast to exceed the existing supply capacity (conveyance and storage), from 2023. The number of properties connected to the Sunbury Water Network is forecast to grow from an estimated 19,785 lots (January 2023) to 64,000 lots (ultimate state) by 2067.

New water tanks at Bald Hill will address short-term demand and provide for longer term storage capacity.

This project will be procured as a Design and Construct contract. CH2M Beca was engaged to undertake project investigations and prepare the project technical and Stantec will be engaged as the superintendent for the contract and provide engineering support to review contractor submissions and temporary flow management plans.

Tender award has been completed and Capex forecasting based on an updated schedule.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

Romsey WFP – New Filtration Plant - \$27.8 million

The Romsey Water Filtration Plant (WFP) employs a microfiltration-based treatment process and has been in operation since 1992. Raw water feeding the plant is sourced from a combination of bores and surface water sources, each with its own unique water quality characteristics.

Romsey WFP does not have the water treatment capacity to meet existing peak demand and is unable to adequately treat the levels of protozoa and viruses in its source water, resulting in not delivering best practice to protect customer health and therefore not complying with the Victorian *Safe Drinking Act 2003*.

A review of options identified the construction of a new WFP as the preferred option. This option is expected to have the lowest capital and net present cost while also meeting capacity needs and health-based targets.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

Romsey Recycled Water Plant - \$23.9 million

Romsey RWP is a lagoon-based plant and unable to demonstrate compliance up to a 90th percentile wet year due to insufficient hydraulic capacity. Temporary operating solutions have been implemented, which increase operational cost and pose an increased risk to the safety of plant operators and the reliable performance of the plant. A detailed asset condition assessment was

undertaken by GHD in 2016 which raised risks associated with concrete erosion of the inlet works and poor condition of the lagoons including seeping of effluent into the groundwater.

This Project is the first stage of a program of upgrade works at Romsey RWP to bring the plant into compliance with the Environment Protection Agency's (EPA) containment requirements for wet weather conditions (defined as 90th percentile wet weather year).

The project will be delivered by a Design and Construct (D&C) delivery model via Open Tender and would be procured under the VicWater Major Works Contract with standard Greater Western Water annexures.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. Based on the business case and supporting documentation reviewed, our view is also that the proposed scope and associated cost estimate are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

4.3.2 Major Programs

Greater Western Water's capital program for the PS5 regulatory period includes 28 capital programs across service, asset, and driver categories with a forecast total capital expenditure of \$1,342 million (78 per cent of total capital expenditure).

The program justification documents provided to support these programs varied in detail and quality and required significant additional supporting information for our assessment.

Water Main Performance Renewals - \$197.66 million

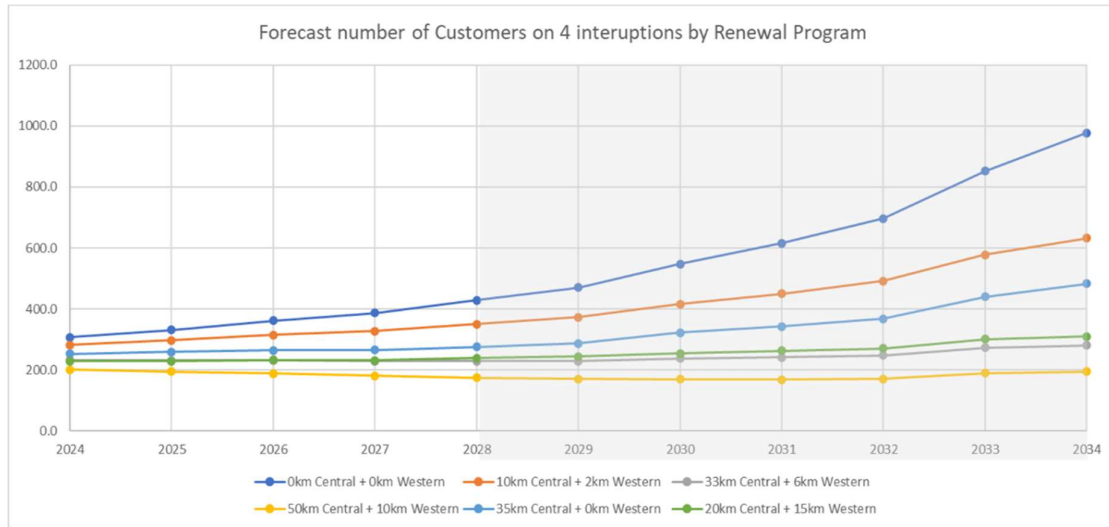
Greater Western Water has investigated the degree of water main renewals required to maintain an acceptable level of risk associated with not exceeding its target of no more than five water supply interruptions in a rolling 12-month period. It invested a significant level of capital expenditure in the previous pricing period (\$198.0 million) to reduce the number of water main failures, which assisted it to meet this target.

Greater Western Water proposes to renew 39km of water mains annually at a cost of \$172.8 million for PS5 to maintain the number of water main bursts and leaks per 100km to current levels. Greater Western Water has assumed that by maintaining these levels it will not exceed customers experiencing 5 or more interruptions in a 12-month period.¹⁰²

Figure 4.2 sets out the options Greater Western Water considered to review the appropriate level of risk of not exceeding the target of no more than five interruptions in a rolling 12-month period in its Water Main Performance Program.

¹⁰² Water Mains KPI Cohort Renewal Program justification_FINAL - 20231117

Figure 4.2: Customers experiencing four interruptions per year by renewal program



Source: Water Main Performance Program, September 2023, p.46.

Greater Western Water’s Water Main Performance Program did not include the capital expenditure associated with each of these options nor the end outcome (number of customers exceeding five interruptions by option).

Greater Western Water provided additional information indicating that the option of renewing 35km annually of water mains (20km Central + 15km Western) would achieve a similar target to the option chosen at a cost of \$130.96 million, as detailed in Table 4.1.

Table 4.1: Options considered to achieve target.

Options	Budget in 2022/23 real \$\$	Expected Number of Customers on 5 interruptions per year	Expected to achieve the target of No Customers on more than 5 interruptions
0km Central + 0km Western	\$0	47	No
10km Central + 2km Western	\$42.78M	31	No
33km Central + 6km Western	\$172.77M	23	Yes
50km Central + 10km Western	\$264.52M	19	Yes
35km Central + 0km Western	\$166.35M	29	No
20km Central + 15km Western	\$130.96M	24	Yes

Source: Email - Manager, Price Submission & Regulation - 11 December 2023.

Greater Western Water advised:

.....though this option (\$131.0 million spend) just achieves the target of no customers on more than 5 interruptions, the main failure rate would rise from 23.06 to 25.91 faults/100km by 2028, reaching 26.40 faults/100km by 2034. The central area has an ageing network and far more mains failures. Renewals are key to controlling the main failures.¹⁰³

We have reviewed the program justification report and supporting data provided by Greater Western Water. Based on the information provided, Greater Western Water has identified three options that could achieve the required target utilising differing lengths of renewals in the Central and Western regions.

A review of the data also shows that renewing 20km of mains in the Central region (from option '20km Central + 15km Western') and 6km of mains in the Western region (from option '33km Central + 6km Western') also achieves the target. As Greater Western Water did not provide an estimated cost for this option, we have derived a cost estimate based on the average cost of all options, resulting in an estimate of \$4.18 million per km.

Given this, we are not satisfied that the higher cost option chosen by Greater Western Water is prudent and efficient. While not an option considered by Greater Western Water, the information it provided suggests that adopting an option of 20 km in the Central region and 6 km in the Western region is the lowest cost option and could potentially be delivered at an estimated cost of \$93.34 million (\$130.96 million – (\$4.18 million x 9km)).

Our review of the program justification and supporting documentation indicates that the project justification is strong, and that the proposed timing is appropriate. However, the proposed scope is greater than required to achieve the proposed target, which can be achieved by adopting an alternative more efficient option. While we understand that this option may lead to a higher average failure rate, we consider it the most appropriate to achieve the desired outcome of no more than five water supply interruptions in a 12-month period. On this basis, we recommend that the capital expenditure benchmark for this project be reduced by \$79.43 million.

Water Main Risk Renewals - \$101.83 million

Greater Western Water's Asset Risk Management Model (ARMM) assesses the asset risk profiles of the water reticulation and distribution mains. It uses the results of the ARMM to develop its forecast risk renewals.

The length of risk-based water main renewals proposed for the PS4 period was 21.4 km, with an estimated cost of \$46.04 million. Greater Western Water renewed 16.8 km at a forecast cost of \$73.7 million.¹⁰⁴ The length of water main renewals proposed for the PS5 regulatory period under this

¹⁰³ Email - Manager, Price Submission & Regulation - 11 December 2023.

¹⁰⁴ Email Team Leader Economic Regulation – 19 January 2024.

program is 30 km at a forecast capital cost of \$101.8 million which represents an increase to the PS4 expenditure of \$28.1 million (38 per cent).

Greater Western Water has explained that the increased forecast cost partly reflects higher unit rate costs, with supply chain cost increases and difficulty in securing contractors to undertake more complex projects. It also claimed it had difficulty in delivering the expected amount of work for the PS4 regulatory period, resulting in some projects being delayed.

Greater Western Water has stated that it has improved its project management and delivery processes, and as a result, it has put forward lengths to be replaced due to its combined network of former Western Water and City West Water assessed by the ARMM and projects not completed in the previous period.

Our review indicates that the program justification is strong and well supported, and that the proposed timing is appropriate. Based on the supporting documentation we reviewed that explained the reasoning behind the variations in costs and water mains renewed in PS4, we are also of the view that the proposed scope and associated cost estimates are appropriate as the basis for the budget cost estimate included in the capital expenditure forecast.

Sewer Treatment Growth - \$122.59 million

Greater Western Water proposes a series of upgrades at several Recycled Water Plants (RWPs) to cater for growth in sewage inflows. In its PS5 regulatory submission, it stated:

We also recognise the previously constrained investment in the western region and ageing infrastructure in the central region. A key focus area is investment in our water and sewer treatment growth and renewals programs to comply with our general environmental duty (GED) under the Environment Protection Act 2017 (Vic) and Environment Protection Authority Victoria (EPA) licence requirements and have the capacity to service growth.¹⁰⁵

We have noted that some of the upgrades contained in this program: Melton RWP, Bacchus Marsh RWP and Sunbury RWP form part of a staged approach to upgrade the entire treatment plant, which we would normally expect to have been detailed in a standalone business case. Documentation provided to support this program was fragmented, provided inconsistencies, and spanned numerous documents which made its assessment as prudent and efficient difficult.

The Sewage Treatment Growth Program document provided by Greater Western Water outlined capital works at Recycled Water Plants (RWPs) required to cater for observed and predicted growth in inflows and remain compliant with its regulatory obligations. However, it did not provide detailed information regarding the justification or options assessed for these proposed works, and instead noted that justifications and options considered were contained in individual masterplans.¹⁰⁶

¹⁰⁵ Greater Western Water (2023a). pp 58-59.

¹⁰⁶ Sewer Treatment Growth Program Justification 20231110

We reviewed the Masterplans for the individual treatment plants to determine the prudence and efficiency of the proposed works. The Masterplans provided did not contain sufficient information to assess the upgrades included in the program and in other cases were inconsistent with the proposed expenditure outlined in the pricing submission. We requested and reviewed further documents provided in the form of explanatory emails, business cases, Board paper extracts and older masterplans. This information, albeit needing to be sourced from several documents, provided sufficient detail to support the majority of this program of works.

Melton RWP

The program included the Melton RWP (\$70.1 million), which is larger than any of the top 10 capital projects. Given the significant forecast capital expenditure associated with this project, we have assessed it using the same approach we used to assess the top 10 capital projects.

The Melton RWP treats raw sewage and septic waste to produce Class C and Class A recycled water. Class C recycled water is used by farmland customers for irrigation and soon it will be supplied to the Western Irrigation District via the Western Irrigation Network. Class A is used to supply existing Melton and future Wyndham customers with recycled water. Melton RWP does not currently have sufficient secondary treatment capacity to manage inflows from the existing and growing population.

The effluent water quality of the plant does not comply with the water quality standards, risking environmental issues and breaching Greater Western Water's licensed quality limits for discharge. The current inflow to the plant is around 17 megalitres per day of Average Dry Weather Flow and is forecast to increase to 36.7 megalitres per day by 2070.

Greater Western Water propose a series of upgrades under this program to make the plant compliant and cater for growth. The proposed works entail:

Table 4.2: Works associated with the Melton RWP Upgrade (\$ 1 January 2023, millions)

Melton RWP	
New Bioreactor Tanks 7 and 8	17.3
Inlet Works Upgrade	9.2
Class A Plant Upgrade	11.0
PST 1 & 2 Renewal	7.6
Melton RWP - Pump Station 3/4 & Ancillary Pipework Upgrade	3.8
Melton RWP - Additional WAS Pumping and Storage	1.7
Melton RWP - Tank 6 Capacity Upgrade	3.0
Melton RWP - Class C Chemical Dosing System Upgrade	45.0
Melton RWP - Lagoon No. 3 Embankment Improvement	0.1
Melton RWP - WAS Thickening System Upgrade	0.5
Melton RWP - Rotary Drum Thickener	1.6
Melton RWP - Odour Control Upgrade	1.7
Melton RWP - Digester and Gas Engines	3.2
Melton RWP - Facilities Building	1.8
Melton RWP - Blower Building	0.8
Melton RWP - Dewatering Building Upgrade	1.7
Total	70.1

Greater Western Water does not have a concise business case for this project. Instead, the program justifications, options considered and derivation of cost estimate derivation, are contained in various business cases and masterplans provided as part of our review.

Notwithstanding this, our review of the documentation provided indicates that the project justification is well supported, the proposed scope, timing and associated cost estimates are efficient.

Remaining program

In assessing this program, we noted that the numerous components that make up the majority of the spend in this category will ultimately be required but the timing of the works varied within documents. Overall, we believe that the works are required, and Greater Western Water has based the timing of the works on recent operational observations to supersede those timings mentioned in the masterplan. We are of the opinion that the works are prudent and while the documentation provided does not explicitly provide evidence for inclusion in this pricing period, we have accepted Greater Western Water's decision to proceed with the works now based on its recent operational assessments.

Sewer Risk Renewals - \$55.05 million

Greater Western Water's ARMM assesses the asset risk profiles of its sewer pipelines. Closed circuit TV (CCTV) is used to identify the structural condition grade of the pipeline inspected. This structural condition grade is then assessed against consequence of failure using Greater Western Water's ARMM model to determine the asset risk.

The proposed program of sewer risk renewals for the PS5 regulatory period totals \$55.1 million, which represents a \$34.5 million increase to the previous PS4 regulatory period expenditure of \$20.5 million. This difference has been partly explained by the significantly higher costs experienced with supply chain cost increases and difficulty in securing contractors to undertake more complex projects.

Greater Western Water has stated that it has improved the project management and delivery process internally. As a result, Greater Western Water believe delivery of the proposed projects identified is achievable over the PS5 regulatory period.

Greater Western Water has included assets for renewal that are not yet within the risk threshold but are connect sections of sewer pipelines that are similar in type/age and location. This principle appears logical where adjacent small lengths of sewer pipelines are renewed as part of the risk-based renewal, however Greater Western Water has adopted this practice for large lengths of sewer renewals.

Greater Western Water does not have individual business cases for these projects; but it has advised:

When rehabilitating circular sewer mains, it can be quite cost effective to reline the asset, this is a fairly simple process until larger sized sewer mains are involved. These mains can often contain large sewage flows that need to be addressed while relining. As such mobilisation and flow diversion can become significant proportions of the relining cost and it becomes more financially effective to reline longer lengths of similar aged and material assets along a sewer line that has some lengths identified as above the risk threshold.

Flow diversion and Traffic Management costs for this project are estimated to be about 50 per cent. Set up and flow diversion costs would be similar to this each time GWW came back to renew short lengths of a large sewer, this would quickly make it less financially effective to renew only the lengths identified as above the risk threshold.¹⁰⁷

We have reviewed Greater Western Water's methodology and the further explanations provided. The methodology adopted is considered appropriate for this program due the additional complexity associated with deeper sewer replacements, including bypass pumping utilising large (noisy)

¹⁰⁷ Email 13 December 2023 - Program Manager & Strategic Advisor

generators, traffic management and safety requirements. In this regard we believe that the program is prudent and efficient.

Stormwater Harvesting - \$12.84 million

Greater Western Water has proposed a stormwater harvesting partnership fund to support the use of stormwater as an alternative water source to deliver non potable water for irrigation of public open space across its service area.

The fund is expected to support the delivery of 10-15 stormwater harvesting schemes in Greater Western Water's service area. Greater Western Water proposes to advertise Expressions of Interest to suitable partners, such as councils, to fund projects which meet specific criteria. It has yet to finalise funding parameters but expects to contribute funding of a maximum of \$1.0-1.5 million per project (assuming up to 50 per cent of total project value). The program will include a competitive, merit-based funding model to demonstrate funded stormwater harvesting projects can provide the greatest liveability and environmental benefits at the lowest cost to the community.

While we understand that Greater Western Water has been able to garner support from its customers for this program, it has not been able to identify the individual projects or business cases for review. Therefore, we have not been able to assess whether this expenditure is prudent and efficient and recommend that the capital expenditure benchmark allowance be reduced by \$12.84 million to remove this proposed capital expenditure.

IT – Core Enabling Services - \$70.1 million

Greater Western Water proposes to upgrade or replace components of its existing IT technology. to provide services for the business, including data management, data analytics, integration, process automation and management, and to ensure that Greater Western Water's underlying technology infrastructure is secure, robust, modern, and efficient.

Greater Western Water propose to upgrade or replace the following technology platforms:

- Automation and Digitisation (AnD)
- Business Support Program
- Strategic Integration (SI)
- Data and Analytics (D&A)
- Enterprise Security Program
- Technology Platform Enhancements
- Network & Communications Technology Uplift
- Legacy System Remediation
- Technology Hardware and Computing
- Asset Integration Services.

A review of further supporting documentation provide by Greater Western Water has confirmed that the program is required to update ageing systems and/or address compliance issues. Our review also concludes that the proposed approach to implementation, including estimates of cost, are prudent and efficient.

Asset Ecosystem – Asset Foundations - \$68.13 million

Greater Western Water proposes to spend \$68.13 million over the PS5 regulatory period to upgrade systems to support Asset Management. It proposes to create a system that enables greater flow of data, automate some processes and assist in the availability of information.

The program includes seven IT projects:

- Enterprise asset and works capability uplift
- Geospatial capability uplift
- Growth and Development capability uplift
- Operational intelligence and visualisation capability consolidation
- Content management (asset) capability uplift
- Field service management capability consolidation
- PPM (asset) capability consolidation.

The project justification document provided by Greater Western Water did not contain sufficient detail to assess the prudence and efficiency of the projects. Greater Western Water advised that it has not prepared business cases for these programs despite the significant investment required.¹⁰⁸ The following is an extract from Greater Western Water's response to questions regarding business case outcomes for the program and any tangible benefits and savings that support the proposed capital spend:

Each of the seven capabilities comprising the Asset Ecosystem require significant investment to enable us to deliver value for our customers. This investment will enable us to:

- *Increase reliability, resilience, and efficiency of Greater Western Water's assets in the most prudent manner by supporting efficient access to data and insights. Accomplished through having the systems, processes and access to data that provide a more complete view of the status of our network, our programs and work in the pipeline - underpinning the ability to make the most appropriate decisions for now and the future.*
- *Better identify and track disruptions by uplifting the systems and processes required to provide insights on the status of the network and key assets enabling access to insights in near real time and with confidence. Enablement of just in time decisions (through data and insights) supporting an ongoing ability to service customers and service growth appropriately.*
- *Improve direct customer service through an increase in first-call resolution, reduction in frequency of unplanned interruptions, increased*

¹⁰⁸ Memo -Asset Ecosystem additional information – 8 December 2023 - Price Submission and Regulation Manager.

self-service capability in finding information about outages and works and improved quality and timeliness of information about interruptions able to be shared via preferred contact channels.

Greater Western Water advised that the proposed systems would provide efficiencies and improve operational decisions, which should lead to greater savings above the base case systems that are currently in operation. However, it has not quantified the potential savings nor indicated how they have been accounted for in operational or capital savings in the future.

Further information provided by Greater Western Water further information that itemised risks, compliance issues and benefits of each system to justify its upgrade. However, it did not include a quantification of the benefits.

We would expect detailed business cases for totalling nearly \$70 million to sufficiently identify the need and quantify the financial benefits of the upgrades. As a result, we do not consider that the information provided contains sufficient information to assess the prudence and efficiency of the program and recommend that the capital expenditure benchmark allowance be reduced by \$68.13 million to reflect the forecast associated with this program.

IT – Core Business Development - \$36.95 million

Greater Western Water proposes to uplift of key IT platforms including by replacing ageing ERP system, consolidating corporate systems resulting from the merger of City West Water and Western Water. The supporting documentation provides sufficient justification for the replacement of these systems ranging from versions being unsupported, legislative compliance and efficient management of contracts and inventory.

Our review indicates that the project justification is strong and well supported, and that the proposed timing is appropriate. We are also of the view that the proposed scope and associated cost estimates are reasonable.

4.4 Overall assessment

Greater Western Water’s pricing submission provided a breakdown of the proposed capital spend anticipated for the PS5 regulatory period. Along with the responses provided by Greater Western Water to the issues raised for further investigation, this provides a reasonable level of confidence that most of the proposed capital expenditure program is prudent and efficient and can be delivered by Greater Western Water in the PS5 regulatory period.

However, we recommend adjustments to the forecast capital expenditure for the PS5 regulatory period as follows:

- the Water Main Renewal Program by \$79.43 million
- the Stormwater Harvesting Fund by \$12.84 million
- the Asset Ecosystem – Asset Foundations by \$68.13 million.

Table 4.3: Recommended adjustments - capital expenditure (\$ 1 January 2024, millions)

	2023-24	2024-25	2025-26	2026-27	2027-28	PS5 Total
Forecast capital expenditure	334.35	370.86	348.77	357.92	309.52	1 721.42
Recommended adjustments:						
Water Main Renewal Program	15.88	15.88	15.88	15.88	15.91	79.43
Stormwater Harvesting Fund	0.20	0.86	4.28	4.28	3.21	12.84
Asset Ecosystem – Asset Foundations	12.14	20.41	20.23	10.59	4.76	68.13
Total recommended adjustments	28.22	37.15	40.39	30.75	23.88	160.39
Adjusted total capital expenditure	306.13	333.71	308.38	327.17	285.64	1 561.03