February 2023

Wannon Water: Review of expenditure forecasts

2023 Water Price Review

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Glossary

Term	Definition
CX	Customer Experience
DEECA	Department of Energy, Environment and Climate Action, formerly DELWP
DELWP	Department of Environment, Land, Water and Planning
EA	Enterprise Agreement
ESC	Essential Services Commission
FTE	Full time equivalent
FTI Consulting	FTI Consulting (Australia) Pty Ltd
GL	Gigalitre
IPD	Integrated Planning and Delivery
kWh	Kilowatt
ML	Megalitre
PEER	Public Entity Executive Remuneration
PREMO	Performance, Risk, Engagement, Management and Outcome
PS4	Price Submission for the fourth regulatory period (2017-18 to 2022-23)
PS5	Price Submission for the fifth regulatory period (2023-24 to 2027-28)
PV	Photovoltaic
RBA	Reserve Bank of Australia
SaaS	Software as a Service
Schneider	Schneider Electric Energy and Sustainability Services
SGC	Superannuation Guarantee Charge
STP	Sewerage Treatment Plant
TDS	Total dissolved solids
WIRO	Water Industry Regulatory Order
WPI	Wage Price Index
WSAA	Water Services Association of Australia

Executive Summary

FTI Consulting has been engaged by the Essential Services Commission (the Commission) to undertake an independent expert review of 14 Victorian water businesses' forecast (controllable) operating and capital expenditure for the 1 July 2023 to 30 June 2028 (PS5) regulatory period.

The Commission is required to assess the water businesses' proposals against a legal framework set out in the *Water Industry Regulatory Order 2014* and the Commission's PREMO pricing framework. We have assessed Wannon Water's forecast operating and capital expenditure based on the guidelines contained in the Commission's 2*023 Water Price Review: Guidance Paper.*

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

Forecast operating expenditure

Wannon Water has proposed an average net decrease in controllable operating expenditure (growth less efficiency factor) of 0.3 per cent per year for the PS5 regulatory period. When compared to other water businesses, this places Wannon Water third out of the 13 urban water businesses subject to this review.

Based on Wannon Water's PS5 proposal, the further information provided and our discussions with the business, we have formed the view that most of the forecast operating expenditure is consistent with a prudent business operating efficiently. This reflects our view that:

- most of the expenditure in the baseline year of 2021-22 appears reasonable, and does not appear to include any items that are non-recurring
- most of the proposed step changes are reasonable and supported by a sound rationale.

This is considered within the context of its proposed net baseline growth in operating expenditure of –0.3 per cent per year.

We have proposed the following adjustments:

- The removal of $2.2 million from the baseline year, comprising:
  - $1.2 million for one-off operating projects
  - $1 million for additional contractor support.

- Removing the step change for the Greater Tasting Water Project ($1.95 million over the PS5 regulatory period).

Table 1: Recommended adjustments– controllable operating expenditure ($ 1 January 2023, millions)

	2023-24	2024-25	2025-26	2026-27	2027-28
Forecast controllable operating expenditure	**46.57**	**49.56**	**49.75**	**50.41**	**50.35**
Recommended adjustments:					
Baseline adjustments					
One-off operating projects	-1.19	-1.19	-1.19	-1.18	-1.18
Additional contractor support	-1.00	-1.00	-0.99	-0.99	-0.99
Step change adjustment					
Great tasting water project	-	-0.77	-0.39	-0.39	-0.39
Total recommended adjustments	**-2.19**	**-2.96**	**-2.57**	**-2.56**	**-2.56**
Adjusted total operating expenditure	**44.38**	**46.60**	**47.18**	**47.85**	**47.79**

Forecast capital expenditure

Wannon Water plans to invest $157.2 million in capital works over the PS5 regulatory period. This is 39 per cent more than its actual capital expenditure (including 2022-23 forecast) over the PS4 regulatory period.

Wannon Water's forecast capital expenditure for the PS5 regulatory period is dominated by the Warrnambool Sewage Treatment Plant Upgrade and Great Tasting Water projects.

The capital component of Wannon Water's PS5 submission was well prepared and provided a detailed breakdown of the proposed capital expenditure anticipated for the period. Along with the responses provided by Wannon Water to the issues raised for further investigation, this provides a reasonable level of confidence that the majority of the proposed capital expenditure program is justified, prudent and robust, and can be delivered by Wannon Water in the PS5 regulatory period.

However, our review has noted uncertainties associated with final selection of the first town for water treatment upgrades as part of the Great Tasting Water project, uncertainties in relation to timing and potential external funding contributions for this project and recent issues in attracting specialised contractors to the region. As such, although the drivers for this project appear to be well justified and aligned with expressed customer needs, our view is that we cannot appropriately assess the prudency and efficiency of the proposed capital expenditure forecast included for this project over the PS5 regulatory period due to this current uncertainty.

We therefore recommend adjusting Wannon Water's forecast capital expenditure by removing the forecast $15.75 million over the PS5 regulatory period for the Great Tasting Water project. As work on this project progresses further and these uncertainties (including any external funding contributions) are resolved, this will provide a better basis for assessing the prudency and efficiency of including the associated costs in Wannon Water's regulatory asset base in the future.

Table 1: Recommended adjustment – capital expenditure ($ 1 January 2023, millions)

Great Tasting Water	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Forecast capital expenditure	4.75	4.75	2.75	2.75	0.75	15.75
Recommended adjusted capital expenditure	**-4.75**	**-4.75**	**-2.75**	**-2.75**	**-0.75**	**-15.75**

1 INTRODUCTION

1.1 Purpose of this report

The Essential Services Commission (the Commission) is reviewing submissions from 14 Victorian water businesses setting out their proposed prices, revenue requirement and key service outcomes to apply to water and sewerage services commencing on 1 July 2023 through to 30 June 2028 (referred to in this report as the PS5 regulatory period).[1] Each of the Victorian water businesses, including Wannon Water, submitted their proposals to the Commission for assessment on 30 September 2022.

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

1.2 Context and challenges facing Victorian water businesses

The environment faced by most Victorian water businesses over the last few years has been significantly more challenging than envisaged in 2018 when the Commission approved the expenditure forecasts used to set water prices for the 1 July 2018 to 30 June 2023 (PS4) regulatory period.

The COVID-19 pandemic has been one of the unforeseen events that has impacted the Victorian water businesses' expenditure in several ways, including:

- requiring additional water and wastewater monitoring and treatment
- increasing customer hardship due to cost-of-living pressures
- disrupting business operations, including the ability to carry out maintenance activities and higher rates of staff absenteeism
- changing work practices, including social distancing and hygiene requirements as well as transitioning to enable staff to work from home

[1] This includes 13 water businesses providing urban water and sewerage services include Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, Lower Murray Water, South East Water, South Gippsland Water, Wannon Water, Westernport Water and Yarra Valley Water and two businesses providing rural services including Lower Murray Water and Southern Rural Water.

- disrupting supply chains, putting pressure on the availability and cost of inputs
- increasing migration from Melbourne to regional areas.[2]

These impacts have affected each water business's actual and forecast expenditure in different ways. Some water businesses have faced new costs or cost pressures, while others have enjoyed cost savings.

The effects of the COVID-19 pandemic continue to be felt nearly three years later. Some of these impacts are moderating as Victoria (and the rest of the country) adapts to a new phase of living with the pandemic. However, there is the potential for other more permanent changes, including changes to work practices and greater migration of people from major cities to regional areas. At the time of this review, the longer-term implications remain unclear.

There are other events and changes that were unforeseen (or at least unable to be fully anticipated) as part of the Commission's previous water price review. These 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 issues and challenges ***do not*** imply or support a premise that:

- water businesses should continue to increase their operating and capital expenditure, and hence water and sewerage prices
- there should be lower expectations in terms of the need to drive efficiency savings in the longer term for the benefit of customers
- businesses should avoid responsibility for managing the risk of cost increases and/or passing more of those risks on to customers.

It further underlines the importance of scrutinising increases in expenditure, as well as proposed step changes, to ensure that they remain consistent with the actions of a prudent

[2] For example, refer: https://population.gov.au/sites/population.gov.au/files/2021-09/the-impacts-of-covid-on-migration-between-cities-and-regions.pdf, accessed 1 December 2022.

business operating efficiently, including in how it responds to the uncertainties and challenges in its operating environment. It also does not alter the standards that should be reasonably expected of businesses in supporting and justifying any increases in expenditure for the next regulatory period, including being able to provide adequate supporting documentation (such as Board-approved policies or strategies and business cases).

1.3 Water industry regulatory framework

The water businesses' proposals are being assessed against a legal framework set out in the *Water Industry Regulatory Order 2014* (WIRO)[3] and the Commission's PREMO framework for approving prices.[4]

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

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

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

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

Figure 1.1: The Commission's PREMO framework

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

Under the PREMO framework, each submission is expected to reflect the water business's best offer to its customer base. Submissions may be fast tracked through the assessment process based on several factors. Some water business proposals may require a more detailed review of their proposed expenditure while others may only require a review of some elements of their proposed expenditure (for example, specific items where expenditure is increasing).

The *2023 Water Price Review: Guidance Paper* (the Guidance Paper) explains the Commission's methodology and approach to assessing water businesses' price submissions and making a price determination and sets out the information each business is required to provide in its price submission.[5] The Guidance Paper also identifies the governing criteria for each component of the building block methodology, including forecast operating and capital expenditure.

This review is the second review under PREMO for these businesses. The Commission also expects price submissions to demonstrate how water businesses are building on their previous proposals to deliver value to their customers.

[5] Essential Services Commission 2021, 2023 Water Price Review: Guidance paper, 26 October.

1.4 Methodology and approach

The scope of our assessments is limited to examining water businesses' forecast controllable operating expenditure and capital expenditure over the PS5 regulatory period. It does not include examining decisions about whether to fast track a water business's PS5 submission, nor does it involve assessing other elements of the PREMO framework such as past performance or engagement.

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

- for forecast operating expenditure, our assessment focuses on controllable expenditure only. We have assessed proposals using the base-step-trend approach as set out in the Commission's Guidance Paper and is consistent with the basis on which each water business has submitted information as part of their price review model templates
- for forecast capital expenditure, our assessment focuses on the Top 10 major projects and major capital expenditure programs that comprise a significant proportion of the water business's total capital expenditure forecast.

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

Our process has involved several steps:

- an initial review of PS5 price submissions, financial model templates and associated documentation
- comparison of each of the water business's proposed operating and capital expenditure proposals, including assumptions adopted in relation to growth trends, efficiency factors, and comparison of actual and proposed expenditure
- a Stage 1 (preliminary) assessment workshop undertaken with Commission staff identifying the key issues to be explored in our more detailed review
- visits and/or online discussions with each of the water businesses on key issues related to their proposal
- further review and analysis of further information or explanations provided.

1.5 Structure of this report

The structure of this report is as follows:

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

Consistent with the Commission's Guidance Paper and the price review model completed by businesses, all forecasts and actuals are expressed in dollars as at 1 January 2023.

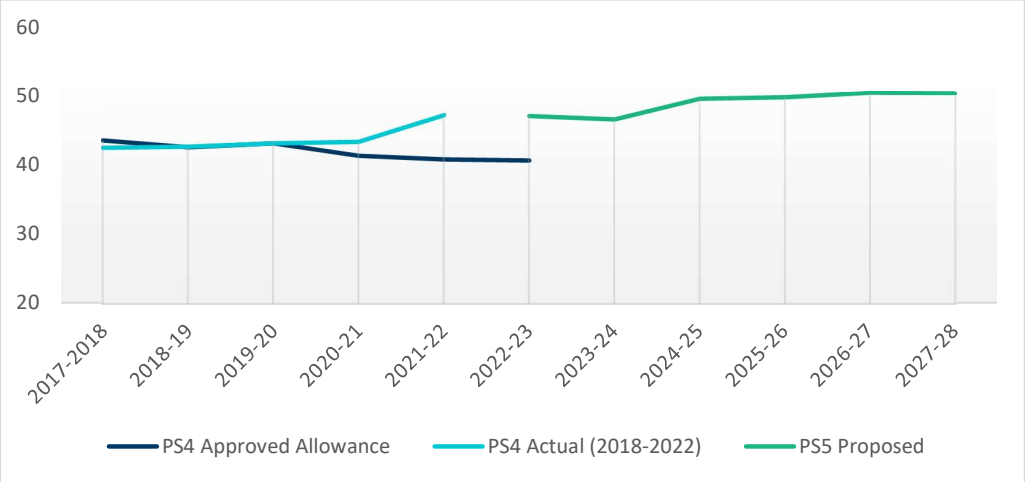
2 SUMMARY OF EXPENDITURE PROPOSAL

2.1 Forecast controllable operating expenditure

For the current PS4 regulatory period, the Commission approved a total controllable operating expenditure benchmark allowance for Wannon Water of $208.4 million ($ 1 January 2023).

For the first four years of the PS4 regulatory period, Wannon Water's actual operating expenditure was $180.4 million (7.5 per cent) above the benchmark allowance approved by the Commission for those four years.

Figure 2.1: Wannon Water's actual and forecast controllable operating expenditure by year ($ 1 January 2023, millions)



'PS4 Approved Allowance' relates to the approved operating expenditure benchmark allowance for 2017-18 to 2022-23.
Source: Wannon Water, WNW_2023 Price Review Model – 5 October 2022; Essential Services Commission 2018, Wannon Water Determination Price Review Model: 1 July 2018 – 30 June 2023, 29 May.

Wannon Water's baseline 2021-22 controllable operating expenditure is $47.2 million, which is $6.4 million (or 15.6 per cent) more than the benchmark allowance approved by the Commission in the last price review.

Wannon Water has proposed a step change increase to the baseline of $13.2 million across the PS5 regulatory period, as outlined in Table 2.1.

Table 2.1: Wannon Water's proposed step changes in forecast baseline operating expenditure ($ 1 January 2023, millions)

Proposed step change	Forecast expenditure
CX Plus - Billing and CRM System - Licensing costs	4.96
Customer Experience - CX Investment Package	3.48
Great Tasting Water	1.95
Warrnambool Sewerage Treatment Plant (STP) Upgrade - new operating costs	1.07
Digital projects - Licensing costs	1.02
Warrnambool STP UV System	0.92
Carbon Emissions Reduction (2030 Target)	0.37
Warrnambool STP - electricity demand increases	0.40
Electricity prices	-0.32
Electricity demand (solar projects)	-0.66
Total	**13.18**

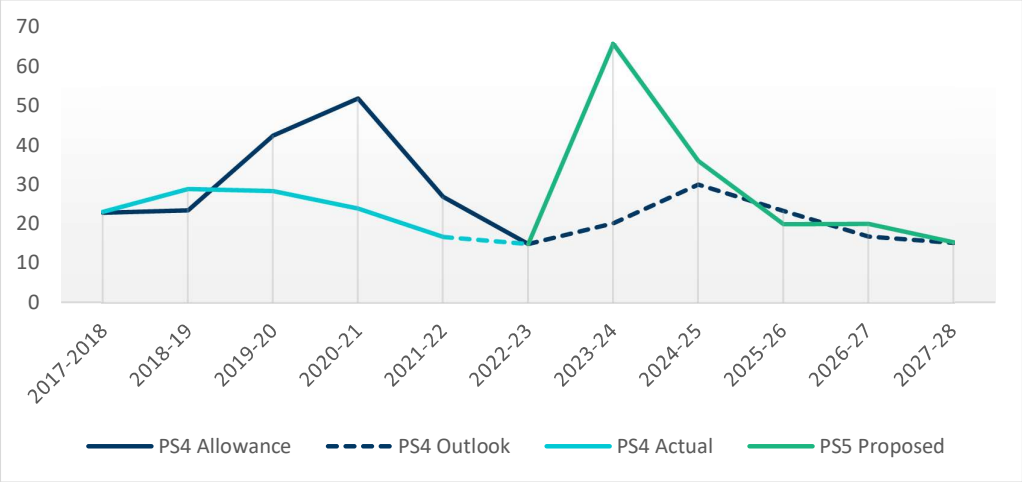
Source: Wannon Water, Price Submission 2023-28, pp.39-40.

Wannon Water has forecast an average growth factor for operating expenditure of 0.7 per cent per year and an efficiency factor of 1.0 per cent per year over the PS5 regulatory period.

2.2 Forecast capital expenditure

Wannon Water has forecast capital expenditure of $157.2 million for the PS5 regulatory period. This is $51.58 million 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: Wannon Water's actual and forecast capital expenditure by year (in $ 1 January 2023, millions)



'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: Wannon Water, _2023 Price Review Model - 5 October 2022; Essential Services Commission 2018, Wannon Water Determination Price Review Model: 1 July 2018 – 30 June 2023, 29 May.

The PS4 determination approved a benchmark allowance for capital expenditure of $159.67 million. Actual expenditure (including the 2022-23 forecast) is expected to be $46.77 million less than the Commission's approved benchmark allowance. This is predominantly due to impacts of COVID-19 on contractor availability and tendering some projects later than expected due to delays in gaining approvals. The Warrnambool Sewage Treatment Plant (STP) Upgrade Project, which was the largest project proposed in the PS4 regulatory period, was underspent due to significant delays in obtaining regulatory approvals. The project is now included in the PS5 regulatory period.

The key drivers, projects and programs are well linked to customer outcomes and engagement results defined in Wannon Water's PS5 submission and include:

- renewals totalling $44.47 million (28 per cent of the total capital program)
- growth totalling $59.27 million (38 per cent of the total capital program)
- top 10 major projects totalling $93.28 million
- seven major programs totalling $52.7 million.

Wannon Water's top 10 capital expenditure projects, shown in Table 2.2, account for 59 per cent of its forecast capital expenditure for the PS5 regulatory period. The proposed

capital investment is dominated by the Warrnambool STP Upgrade and Great Tasting Water projects, which together account for 45 per cent of the PS5 forecast capital expenditure.

Table 2.2: Wannon Water's Top 10 capital expenditure projects ($ 1 January 2023, millions)

Major capital expenditure project	Forecast expenditure
Warrnambool Sewage Treatment Plant Upgrade	52.89
Great Tasting Water	15.75
Warrnambool Sewage Treatment Plant UV Disinfection IDEA Tanks	5.88
Warrnambool Effluent Management Investigation	5.46
CX Plus - Billing and CRM System	3.44
Hopkins Point Road Water Supply Upgrade	3.02
Conversion of Citect to Clear SCADA	1.98
Camperdown Water Treatment Plant UV System	1.77
Data Centre - Servers, Storage and Back-up	1.58
Camperdown Industrial Water Reclamation Plant Lagoon No. 2 ANCOLD-related Dam Safety Work	1.50

Source: Wannon Water, 2023-28 Price Submission and associated Financial Model, 5 October 2022.

3 OPERATING EXPENDITURE ASSESSMENT

3.1 Overview of assessment approach

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

> *… operating expenditure which would be incurred by a prudent service provider acting efficiently to achieve the lowest cost of delivering on service outcomes over the regulatory period, taking into account a long-term planning horizon (prudent and efficient forecast operating expenditure).*[6]

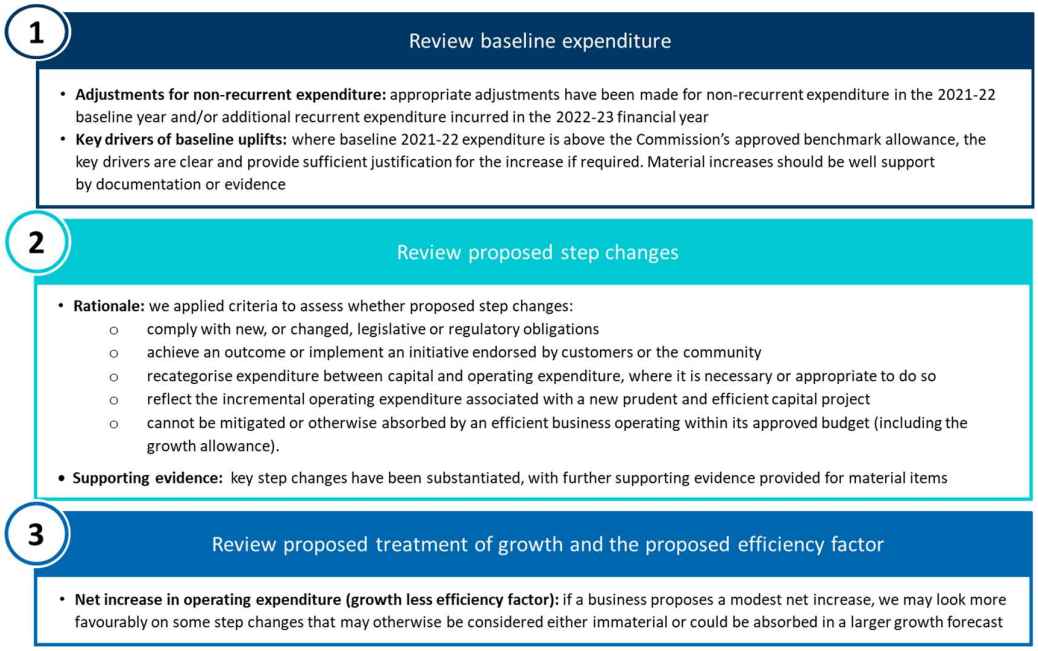
The Commission has asked us to provide an independent expert view on whether Wannon Water's forecast controllable operating expenditure is prudent and efficient, having regard to the base-step-trend approach and assessment criteria set out in its Guidance Paper.

We have assessed whether forecast controllable operating expenditure is consistent with the actions of a prudent business acting efficiently, including if:

- the established 2021-22 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 2021-22 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.

[6] Essential Services Commission 2021, 2023 Water Price Review: Guidance Paper, 26 October (August 2022 Amendment), p.28.

The key steps in our approach were as follows.



In assessing proposed increases in expenditure, including step changes, we have had regard to each business's approach to allowing for growth and efficiency, and the resulting net growth factor for the PS5 regulatory period. For example, some businesses have proposed more ambitious efficiency targets (resulting in negative net growth in expenditure over the PS5 regulatory period) and/or have sought to recognise economies of scale in allowing for growth.

This is a relevant factor in considering the business's ability to absorb cost increases, including proposed step changes, which has required us to apply judgement in assessing the reasonableness of the business's proposals.

3.2 Key operating expenditure drivers across water businesses

There are several drivers of increased operating expenditure over the current PS4 regulatory period and/or forecast for the PS5 regulatory period that are common across water businesses, as summarised in Table 3.1.

Appendix A presents more detailed analysis and cross-industry metrics for electricity, labour and IT costs, using information submitted by the businesses in their respective price review models. We have not sought to directly benchmark these costs across the water businesses as the requirements of each business vary. However, such comparisons do

further assist in identifying those businesses that might be looking at more material increases in expenditure. It also provides some context to assessing these costs for each business. A summary of the key implications of this analysis for our assessment approach is provided below.

Table 3.1: Common operating expenditure issues

Expenditure category	What we have examined
Electricity	The application of the Schneider Electric Energy and Sustainability Services (Schneider) electricity price forecasts. Schneider was commissioned by Intelligent Water Networks to prepare an electricity price forecast that could be consistently applied by all of the water businesses. The approach to meeting the Victorian water sector's commitment to the State Government to source 100 per cent of their energy requirements from renewables by 2025, recognising that each business's approach will reflect its own circumstances and operating environment (this can also include capital projects).
Labour	The rationale for any material growth in employee numbers. Remuneration increases, having regard to each organisation's Enterprise Agreement (EA) as well as conditions in labour markets, with several regional businesses citing challenges in attracting and maintaining people with the right skills. Some businesses have also referred to the Victorian Government's 2022 Public Entity Executive Remuneration (PEER) review of executive remuneration.
IT	Software as a Service (SaaS), with all businesses either having transitioned, or are in the process of transitioning, to cloud-based services. This has also resulted in expenditure that would have been classified as capital expenditure now treated as operating expenditure. Cyber security, which is an important issue for all water businesses as well as utilities and other corporations more generally. This includes compliance with new obligations.

3.2.1 Electricity costs

The information submitted by each of the businesses indicates that most are applying the 75th percentile of Schneider's long-term forecast of the electricity spot price. In its report, Schneider assumes that the water businesses are most likely to enter a contract rather than

remain exposed to spot prices and that contract price will be around the 75th percentile of its forecast.[7]

This conclusion reflects the likelihood that generators will require a 'premium' above their expected spot price to enter a contract because:

- A premium will be required for the generator to be willing to forgo opportunities to sell that capacity if prices rise above the expected spot price (recognising that the generator is also benefiting if prices fall).
- If it is 'caught short' in terms of its ability to deliver the contracted capacity, it may need to go into the market to procure the shortfall at the prevailing spot price and is therefore exposed to short-term price increases.

While many businesses have sought to apply the 75th percentile in preparing their electricity price forecasts, Wannon Water has applied the median. We have reviewed each business's proposed energy expenditure within the context of its total forecast controllable operating expenditure proposal. Some businesses have proposed step changes for green power costs, which we have assessed on its own merits.

3.2.2 IT expenditure

As with other costs, we have not sought to directly benchmark IT operating expenditure across the businesses. This is because the needs of each business are likely to vary due several factors, including its size, customer base, the nature and scope of its operations and the age and maturity of its IT architecture and systems. Some businesses may also need to undertake capital expenditure.

We have assessed increases for IT expenditure as proposed by each business on their own merits. We have used this context to satisfy ourselves that the level of IT expenditure for each business is reasonable and justified, particularly for those businesses that appear higher on the comparative metrics.

For businesses that have proposed material increases in IT expenditure that have contributed to increases in baseline expenditure and/or step changes, we have sought to assess whether:

- it appears reasonable for the business to be incurring this expenditure, having regard to necessity/risk as well as the expected benefits
- it is supported by appropriate evidence, such as an IT strategy or business plan

[7] Schneider Electric 2022, Electricity Price Forecast, Covering FY23 to FY28, Base Case, 23 March, p.17.

- the evidence aligns with the forecasts proposed in the business's price review model.

3.2.3 Labour costs

As for IT expenditure, we have used the labour cost information in Appendix A as context when assessing each business's proposed operating expenditure. For most businesses identifying increases in labour costs, this has tended to be a combination of increases in staffing as well as remuneration.

For businesses that have proposed material increases in labour-related expenditure (either as reflected in a baseline uplift and/or step change), we have reviewed the rationale for the proposed increase and sought further supporting information where relevant. This included material increases in FTE numbers and/or increases in remuneration. Where increases have also been attributed to the Superannuation Guarantee Charge (SGC), we have confirmed with the business that this reflects an increase in total remuneration payable.

The following sections summarise our assessment of Wannon Water's forecast controllable operating expenditure for the PS5 regulatory period.

3.3 Assessment of the baseline

After adjusting for non-recurring items, Wannon Water's adjusted controllable operating expenditure in 2021-22 was $47.18 million. This represents an increase in actual expenditure of $6.38 million (or 16 per cent) compared to the $40.8 million controllable operating expenditure benchmark allowance approved by the Commission as part of the last price review.

We have assessed the reasonableness of Wannon Water's baseline operating expenditure by verifying that:

- any overspend against the benchmark allowance is consistent with what is required by a prudent business operating efficiently, particularly with reference to the large step increase compared to 2020-21 (or previous years)
- the forecast operating expenditure does not include any items that are non-recurring.

Wannon Water's PS5 submission explained that the increase in its baseline operating expenditure against the benchmark allowance is attributed to the following drivers outlined in Table 3.2.[8]

[8] Wannon Water, Price Submission 2023-28, p.65.

Table 3.2: Drivers of increases in operating expenditure against the benchmark allowance in 2021-22 by driver ($ 1 January 2023)

Driver	Contribution to increase $ million
New/increased regulatory obligations	1.40
Digital transformation	1.10
Energy prices	0.96
Insurance costs	0.29
Other costs	2.92
Employee costs	(0.29)
Total	**6.38**

Source: Wannon Water, Price Submission 2023-28, p.65.

Wannon Water's PS5 submission provided limited explanation of these drivers. We therefore sought further information on these drivers, including the breakdown of 'other costs' ($2.92 million). We also asked Wannon Water to confirm whether there were any non-recurring items in the baseline 2021-22 operating expenditure. Details of our assessments of key drivers of the baseline year uplift are below.

3.3.1 New/increased regulatory obligations

Wannon Water's PS5 submission lists new or increased regulatory and compliance obligations it has had to meet in the PS4 regulatory period.[9] It also references a 2022 report from INXURE Strategy Group, commissioned by VicWater, which stated that expenditure associated with new and revised compliance obligations has doubled in the past five years.[10]

Wannon Water explained that as a small regional urban water provider, it has limited ability to absorb additional compliance costs from new or increased obligations. It also commented that this has particularly been the case in the current PS4 regulatory period due to its high staff turnover and higher vacancy rates. The significantly higher turnover and vacancy rates it has experienced in the current period has put pressure on delivery. This has resulted in a greater use of external contractors and consultants, including in meeting compliance obligations.

9 Wannon Water 2022, Price Submission 2023-28, p.65.

10 Wannon Water 2022, p.41.

Based on Wannon Water's reasoning, we further queried whether this increased reliance is driven by the current challenges in recruiting staff because if this was the case, it would not necessarily continue over time and hence should not be embedded in a higher baseline. Wannon Water advised that this increased reliance on external expertise will be required to meet its new or changed obligations. It said that to manage these costs, its objective has been to ensure that it is meeting its minimum obligations, rather than doing more than is necessary. It did not provide any further comment on the extent to which this has been driven by its higher vacancy rates and recruitment challenges.

We note the increased regulatory and compliance burden over the PS4 regulatory period, which has also been experienced by other businesses. We also understand the challenges faced by the smaller businesses in managing these increased demands on their internal resources. We therefore consider that the increase in baseline expenditure for these costs is reasonable.

3.3.2 Digital transformation

Wannon Water's expenditure on digital transformation is intended to build its capacity to deliver enhanced digital outcomes. It explained that this has included additional resources to plan for the implementation of roadmaps for specified digital platforms (such as customers, operations, corporate), as well as increase the speed of implementation.

One of the key drivers identified is cyber security. Wannon Water advised that its Cyber Resilience Strategy is aimed at enhancing its prevention and recovery capabilities, including system-wide security improvements and increasing the awareness and capability of its people.

We requested further information from Wannon Water to clearly substantiate the $1.1 million increase. Wannon Water provided additional details that outlined its digital strategy, and how the higher spend in the baseline year will continue into PS5. A breakdown of the additional expenditure items and Digital Strategy Action Plans were also provided.[11]

Based on the additional information provided by Wannon Water, we are of the view that the increase in baseline expenditure for these costs is reasonable.

3.3.3 Energy prices

Wannon Water indicated that the cost increase is largely attributed to the higher cost of energy in 2021-22 compared to the forecast reflected in the benchmark allowance for that

[11] Wannon Water 2023, email from General Manager People and Business Services, 14 February.

year. It advised that this increase above the forecast was 35 per cent. In addition, it stated that its energy price assumption in its PS4 price submission was adjusted down by the Commission by $1.07 million ($ 2017-18) per year for the final three years of the PS4 regulatory period, including the 2021-22 baseline year. This amount reflects the variance the business experienced in 2021-22.

Wannon Water also explained that it experienced a 11.5 per cent increase in energy consumption due to water pumping at the North and South Otway Pump Stations.[12] This further contributed to an increase in the cost of energy in 2021-22.

It stated that some of the increase in its energy costs has been offset using renewable energy sources, such as wind and solar.

As outlined in Appendix A, increases in energy costs have been experienced across the sector in recent years. The cross-industry metrics presented in Appendix A does show that Wannon Water's forecast energy costs for the PS5 regulatory period are amongst the higher of the businesses, although it is not the highest (based on energy costs per water volume, as well as energy costs as a percentage of total controllable operating expenditure). Given the differences between each business and its operating environment we have referred to this data in providing context only. We have not sought to use these comparisons as a basis for our assessment of the reasonableness of Wannon Water's forecast electricity costs.

As noted below, Wannon Water has applied a negative step change for forecast energy cost reductions in the PS5 regulatory period and is therefore demonstrating a commitment to actively manage these costs. For the PS5 regulatory period, Wannon Water has also chosen to base its forecast of energy costs on the median of the Schneider forecasts rather than the 75th percentile applied by most of the other businesses (refer section 3.2.1). It is therefore assuming more risk in relation to future increases in energy prices.

We are satisfied with Wannon Water's explanation of its higher energy costs in the PS4 regulatory period and that these costs appear reasonable.

[12] Wannon Water explained that water to service the Eastern and Central districts is sourced from the Otway system. The Otway system includes two pipelines (North and South) and pump stations that transport water about 200km to service customers. Customers within the Otway system use approximately 66 per cent of Wannon Water's total customer water consumption.

3.3.4 Insurance costs

Wannon Water explained that its increase in insurance costs in 2021-22 reflects market conditions that have continued to harden throughout the past three years. We note that this is consistent with what other water businesses have reported.

Wannon Water advised that it has seen a further increase in its insurance costs as part of its 2022-23 renewal, however it has not sought to include this known increase in its forecast operating expenditure. We are satisfied with Wannon Water's explanation of this driver and that these costs appear reasonable.

3.3.5 Other costs

This is the largest component of Wannon Water's baseline increase, totalling $2.92 million. In response to our request for more information on the 'other costs', Wannon Water provided us with more detail, which is summarised below.

Increased costs for 'one-off' operating projects

Explanation provided by Wannon Water

This is the largest individual item comprising 'other costs', with Wannon Water attributing a $1.2 million increase to this category of expenditure.

Wannon Water explained that higher than forecast expenditure was incurred for 'one-off' projects, with most of that due to delayed works scheduled to occur earlier in the PS4 regulatory period that occurred in 2021-22. Because these projects include initiatives that require a higher level of project oversight, they are captured and accounted for separately. These projects are aligned to delivering customer outcomes, particularly ongoing reliability of water and sewerage services (customer outcome 1).

We sought further information on these costs and Wannon Water's strategy in managing them. Apart from being satisfied as to their prudency and efficiency, a key concern is whether they are recurrent costs.

Wannon Water explained that it has historically allocated over $2 million operating expenditure annually to operating projects. Each year, these initiatives are re-prioritised, and hence, movements during the five-year pricing period will impact the baseline assessment. It stated that most of these projects are initiatives to deliver customer outcomes, with most relating to its commitment to provide ongoing reliability for water and sewerage services. The program of work includes:

- specific asset maintenance works that do not meet the definition of capital expenditure (i.e. recoating tanks, applying protective coating to above ground pipes)
- water and sewer condition assessments (i.e. CCTV etc)
- monitoring and inspection programs
- non-revenue water - leakage detection and repair
- Intelligent Water Network contributions
- expenditure related to and funded by non-prescribed revenue and/or grants.

It can also relate to requirements to undertake preliminary environmental and/or health-based studies for regulatory approvals prior to undertaking capital projects (the majority of which is not capital expenditure).

For example, the main driver of the increase in 2021-22 was a delay in the lagoon desludging program. Between 2019 and 2021, this program was delayed for various reasons, including weather, contractor availability and the higher priority of other projects. As the project was supposed to be completed within the PS4 regulatory period, it was re-prioritised as 'high'. The costs of completing the program increased due to high demand for the required specialised services and difficulties in engaging contractors in a regional area.

Wannon Water also highlighted the increase in costs that it is experiencing for these types of projects in recent years. Most of the projects require specialised skills and equipment, which are in high demand. Further, Wannon Water's remote regional location puts it at a disadvantage in competing for contractors to undertake the work, which can also result in an additional premium (as these contractors otherwise have a sufficient volume of work in Melbourne and its surrounding areas).

We questioned if the $1.2 million of the baseline expenditure increase attributed to these projects reflects an increase in Wannon Water's annual average expenditure. Wannon Water advised that this is not the case. It stated that in 2021-22, the total amount spent was $2.32 million. It removed $0.28 million of this for desludging works performed in that year, because this expenditure is cyclical in nature.[13] After this adjustment, the allowance reflected in the baseline is consistent with average historical expenditure.

Wannon Water therefore advised that in citing this expenditure category as contributing $1.2 million towards the increase in actual baseline expenditure compared to the Commission's benchmark allowance, this does not mean that the amount it has spent on these projects in that year increased by $1.2 million. It stated that the main reason for the

[13] Wannon Water 2022, p.38.

variance was because of the reduction to tariffs applied by the Commission in its determination for the PS4 regulatory period.

While the Commission's tariff determination was not an explicit reduction to expenditure on these projects, Wannon Water has submitted that this mainly impacted the allowance relating to expenditure on one-off operating projects. However, rather than reduce that expenditure in response, Wannon Water has continued to incur average annual expenditure that is more consistent with historical expenditure, noting the additional cost pressures it has been experiencing in recent years.

Assessment

After seeking further information from Wannon Water on this item of expenditure on two occasions, we have found its explanation confusing. While this was initially attributed as a driver of the additional expenditure compared to the benchmark allowance, including due to delays in projects (in this instance, the Lagoon Desludging program), Wannon Water has subsequently advised that the amount it is proposing to spend is consistent with average historical expenditure. It is attributing the variance to the final tariff outcomes for the PS4 regulatory period.

We note that in its 2018 final determination, the Commission did not specifically identify concerns with this category of expenditure[14], although its consultant (Deloitte) recommended the removal of $0.29 million of additional expenditure incurred in the 2016-17 baseline year[15] (the Commission accepted that recommendation). At the time, Wannon Water had forecast average annual expenditure of around $1.93 million. Accounting for inflation and having regard to the additional cost pressures noted by Wannon Water, this is broadly consistent with Wannon Water's budgeted annual expenditure of $2.2 million.

Wannon Water has argued that the total amount for these projects reflected in its actual 2021-22 expenditure is largely consistent with historical expenditure. The reason why it has contributed towards the increase in actual expenditure above the benchmark allowance is because the reduction applied to operating expenditure for the PS4 regulatory period resulted in a lower allowance compared to what Wannon Water has continued to spend. It is not apparent that this was the result in a specific adjustment to expenditure on one-off operating projects (apart from the $0.29 million adjustment) - instead, Wannon Water has attributed this to a more general reduction in allowable revenue.

[14] Essential Services Commission 2018, Wannon Water Final Decision, 2018 Water Price Review.

[15] Deloitte 2018, Wannon Water – Expenditure Review for 2018 Water Price Review, Report for the Essential Services Commission – Final Report.

Based on the information submitted in its price review model, Wannon Water experienced a material increase in controllable operating expenditure in 2021-22 relative to the benchmark allowance for that year, as well as compared to its actual expenditure in the first three years of the PS4 regulatory period. This item was identified by Wannon Water as accounting for $1.2 million of the variance against the benchmark allowance. However, the explanations it has provided regarding this item have been very unclear.

In the absence of this clarity, we are unable to assess if this is prudent and efficient. We therefore recommend that an adjustment be made to baseline controllable operating expenditure to remove the $1.2 million attributed to one-off operating projects.

Additional contractor labour support

The next largest item under 'other costs' is additional contractor labour support, which Wannon Water advised was around $1 million higher than forecast in 2021-22. The main drivers of this additional need for support were:

- Cyber security: This relates to expert advice and support to ensure the risk of exposure to cyber threats was minimised as much as practicable. Wannon Water indicated that this expertise was not available in-house, nor does it consider it prudent and efficient to recruit these highly remunerated roles.
- Resourcing: This is where internal resources could not meet work demands either due to vacancies (including challenges to replace roles for extended periods of time) or specialised services. Wannon Water's employee costs in 2021-22 were $0.3 million lower than forecast, which it said demonstrates the significantly higher turnover rate and vacancy rate. It indicated that labour market challenges in regional Victoria are likely to improve in the medium term. It's use of external resources to complement and fill FTE gaps will continue to be a strategy it applies during the PS5 regulatory period.

We understand the resourcing challenges faced by smaller businesses like Wannon Water (particularly given its more remote location) and its need to supplement its own labour force with external contractors. We also understand that these pressures have been more acute in recent years, particularly given the backlog of work that occurred as a consequence of the COVID-19 pandemic. The duration and extent of these pressures remains highly uncertain.

However, we do not consider that Wannon Water has adequately explained the drivers of this increase and why it warrants an uplift to baseline expenditure for the PS5 regulatory period. In the first instance, we do not know how long these pressures will persist. Further, it is not clear to us whether at least some of these costs are not also reflected in two other

drivers considered above, being new and increased regulatory obligations and digital transformation. The business has not been able to clearly explain the costs and activities that relate to each driver. For example, if additional expert advice has been required for cyber security, this should be able to be separately identified and costed.

In the absence of Wannon Water being able to clearly identify the specific drivers of this additional expenditure, including demonstrating that these are ongoing requirements, we propose that an adjustment be made to 2021-22 baseline expenditure to remove these costs ($1 million).

Other items

Wannon Water identified other items in this category, including the following.

- The cost of supplies (such as pipe fittings, chemicals and fleet operating costs) was $0.53 million higher than forecast due largely to changing market conditions and a small increase in chemicals consumption.
- Support for vulnerable customers was $0.15 million higher than forecast as more customers sought this support.
- While relatively immaterial ($0.01 million), the business incurred higher cleaning costs as a response to COVID-19, as it entered a new cleaning contract with extended services to its other sites during 2021-22. It stated that this remains a health and safety priority for the business and that it sees benefits in continuing the increased hygiene practices at its sites during the PS5 regulatory period.
- Wannon Water operates a trainee program. Its forecast operating expenditure for the PS4 regulatory period included two trainees. Given the success of the program, with several trainees securing roles within the organisation, it has allowed for the engagement of two additional trainees each year in the PS4 regulatory period. It is expecting to increase this to six in 2023. Its 2021-22 expenditure reflects the costs of the four trainees per year, with the two additional trainees increasing costs by $0.06 million. Wannon Water is proposing to absorb the costs of the further two additional trainees that it proposes to engage in 2023.

Overall, we consider that these costs are reasonable.

3.3.6 Summary of our baseline assessment

After adjusting for non-recurring items, Wannon Water's adjusted controllable operating expenditure in 2021-22 was $47.18 million, compared to the $40.8 million benchmark allowance approved by the Commission. This is $6.4 million (or 15.6 per cent) more than the benchmark allowance approved by the Commission in the last price review.

We have assessed the drivers of the increase in Wannon Water's actual expenditure, and we propose two adjustments for cost drivers that have not been clearly substantiated. It is therefore not clear to us that these costs are prudent and efficient. These are:

- $1.2 million for one-off operating projects
- $1 million for additional contractor support.

This would reduce its adjusted baseline controllable operating expenditure to $44.98 million.

3.4 Assessment of the step changes

Wannon Water has proposed a step change increase to its baseline 2021-22 operating expenditure of $13.18 million across the PS5 regulatory period, comprising the additional costs listed in Table 3.3.

Table 3.3: Explanation of Wannon Water's key step change drivers ($ 1 January 2023, millions)

Key drivers	Value	Explanation
CX Plus – Billing and CRM System	**4.96**	Associated with a new billing and CRM software platform (Wannon Water's customer outcome 5 in its PS5 price submission). This proposed expenditure is an offset for savings associated with licensing the current billing system platform post-transition.
Customer experience (CX)	**3.48**	Associated with a software package that aims to optimise system functionality and support the move to a more customer-centric organisation.
Water taste	**1.95**	Associated with the capital investment to improve the quality and taste of tap water (refer section 4). The solution requires new treatment infrastructure with increased associated expenditure on chemicals, energy, maintenance, consumables, and operator supervision.
Warrnambool Sewage Treatment Plant upgrade (including electricity demand)	**1.46**	This is the operating expenditure associated with this capital project (refer section 4). Comprises $1.1 million for the plant upgrade and $0.4 million for electricity demand.
Digital projects licensing costs	**1.0**	Licensing and support expenditure associated with software transitions including cyber and security-related resilience, works management mobility and GIS platform replacement, consistent with meeting various consumer outcomes.
Warrnambool Sewage Treatment Plant – UV System	**0.92**	Proposed to meet EPA compliance obligations and will increase energy and maintenance expenditures associated with operating the new system, consistent with customer outcome 2 in its PS5 price submission.

Key drivers	Value	Explanation
Carbon emissions reduction	**0.37**	This program is to meet emissions reduction targets.
Electricity prices	**(0.32)**	Based on professional advice from Schneider Electric, Wannon Water forecasts that electricity price fluctuations during 2023-29 will decrease electricity costs by $0.67 million in 2028-29 compared to the baseline year.
Electricity demand (solar projects)	**(0.7)**	Associated with the implementation of two large solar projects, resulting in $0.2 million in operating expenditure savings.

Source: Wannon Water 2022, Price Submission 2023-28, pp.39-40.

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

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

To further assess the proposed step changes, we sought more information from Wannon Water.

3.4.1 CX Plus billing and CRM system – $4.96 million

The CX Plus billing and CRM system accounts for 39 per cent of Wannon Water's total step changes over the PS5 regulatory period. The information provided by Wannon Water shows that the proposed additional expenditure is necessary to address issues existing in the current billing and CRM system. It indicated that the replacement of the current system with CX Plus will enable the delivery of both the customer value and business excellence outcomes of its strategic direction and is an initiative of its Digital Strategy Action Plan.

Wannon Water provided the following breakdown of the proposed operating expenditure over the PS5 regulatory period (Table 3.4).

Table 3.4: Breakdown of CX Plus – Billing and CRM System proposed operating expenditure during the next regulatory period ($ 1 January 2023, millions)

Component	Forecast expenditure
Software licensing	5.33
Support agreement	0.78
Aquarate licensing	-1.14
Total	**4.96**

Note: values may not sum to the total due to rounding.

As Table 3.4 shows, over 87 per cent of the proposed operating expenditure is due to software licensing, which cannot be avoided or mitigated. As outlined in section 3.2 (and Appendix A), the Victorian water businesses either have transitioned, or are in the process of transitioning, to Cloud-based applications (SaaS), which is also resulting in the recategorisation of certain IT expenditure from capital to operating expenditure.

We also reviewed the procurement process employed by Wannon Water to engage the preferred vendor. It advised that it has gone through a tender process where the selected solution:

- presents a lower risk, lower cost and shortest implementation time
- is the only proposed solution that has previously been successfully implemented in Australia and New Zealand
- has a high degree of cultural fit with Wannon Water.

Wannon Water explained that this project responds to learnings from its customer engagement insights. For example, customers increasingly expect improved customer experience (customer outcome 5 in in its PS5 price submission), with the provision of timely and accurate information being a driver of key customer value metrics.

Overall, we consider that Wannon Water has adequately substantiated this proposed step change and the associated costs. It supports the achievement of outcomes endorsed by customers (criterion 2). It also reflects the recategorisation of costs between capital and operating expenditure (criterion 3). We are therefore satisfied that this expenditure is prudent and efficient.

3.4.2 Customer experience (CX) investment package – $3.48 million

As the second largest proposed step change, we requested further information from Wannon Water.

We reviewed Wannon Water's Business Case for the CX investment package. This outlines how Wannon Water's customer engagement has informed the development of the initiatives addressed by this package. This includes higher customer expectations of accessible, tailored and immediate interactions, which has also been influenced by improvements implemented by electricity utilities (e.g. real time bill information and SMS notifications).

The 2021 Engagement Cycle also demonstrated customer support for providing further assistance to vulnerable customers and customers having difficulty paying their bills. The 2022 Community Panel members for the PS5 submission asked Wannon Water to continue to find improvements to support customers in hardship, in line with the Customer Support Review.

This Business Case outlined the identification and assessment of three options to address these requirements (including the Base Case or 'do nothing' option). The preferred option was seen as being driven by customer expectations and was underpinned by substantial development work. It considered the level of investment to be commensurate with similar investments occurring within other water businesses and was seen as providing the best value for money over the long-term.

Table 3.5 summarises the forecast expenditure associated with three key components of Wannon Water's CX investment package. The items presented include a mixture of capital expenditure, operating expenditure and offset revenue requirement - $3.48 million out of the $4.57 million (75 per cent) is operating expenditure.

Table 3.5: Summary of Customer Experience (CX) forecast expenditure for PS5 regulatory period ($ million 1 January 2023, millions)

Component	Forecast expenditure
Coordination and improvement	1.56
Vulnerable Customer Support	0.76
Customer Digital Platform	2.25
Total	**4.57**

Source: Supporting information provided by General Manager People and Business Services, Wannon Water.

Based on the information provided by Wannon Water, we are satisfied that it has adequately substantiated the proposed investments and that they support the achievement of outcomes endorsed by customers (criterion 2). We are therefore satisfied that this expenditure is prudent and efficient.

3.4.3 Water taste – $1.95 million

As outlined in section 4, one of Wannon Water's largest proposed capital projects for the PS5 regulatory period is the Great Tasting Water project. This step change is for the operating expenditure associated with that capital project.

We have proposed the removal of the capital expenditure for this project for the PS5 regulatory period (refer section 4.3). The step change in operating expenditure associated with this project should therefore also be removed.

3.4.4 Warrnambool Sewage Treatment Plant upgrade (including electricity demand) – $1.46 million

The Warrnambool Sewage Treatment Plant Upgrade is the largest individual capital project proposed by Wannon Water for the PS5 regulatory period.

This project is expected to increase the plant's capacity from four to six treatment cells. This will result in associated increases in operating expenditure including energy, chemicals, maintenance, biosolids transport and operator supervision. A breakdown of forecast operating costs corresponding to this project is provided in Table 3.6. This is consistent with the information provided in the project's Business Case, along with the expected increase in electricity usage.

Table 3.6: Forecast operating costs for Warrnambool Sewage Treatment Plant upgrade for PS5 regulatory period ($1 January 2023, millions)

Component	Forecast expenditure
Labour	0.10
Chemicals	0.22
Maintenance	0.60
Biosolid transport	0.12
Electricity demand increases	0.39
Total	**1.46**

We have assessed the proposed capital project as prudent and efficient. We are satisfied that this step change satisfies criterion 4, representing incremental operating expenditure associated with a new prudent and efficient capital project. We are therefore not proposing any adjustments to this step change.

3.4.5 Warrnambool Sewage Treatment Plant UV System - $0.92 million

Wannon Water is also proposing capital investment to install a disinfection system for the four current and two new treatment cells at the Warrnambool Sewage Treatment Plant, which is required to meet EPA Development Licence requirements.[16] We have not undertaken a detailed review of this project as part of our capital expenditure assessment.

We are satisfied that this investment is necessary to comply with new, or changed, legislative or regulatory obligations (criterion 1). It is also incremental expenditure associated with a new prudent and efficient capital project (criterion 4). We are therefore not proposing any adjustments to this step change.

3.4.6 Digital projects licensing costs - $1 million

We sought further information on these costs from Wannon Water. In response, Wannon Water provided us with separate capital and operating costs corresponding to each digital project.

The largest individual component relates to the GIS Platform Replacement,[17] accounting for just under half of the total proposed step change for the PS5 regulatory period. We therefore requested more information from Wannon Water about this item.

Wannon Water explained that for the GIS Platform Replacement, the total investment is $1.3 million for the PS5 regulatory period, which is allocated as $0.82 million capital expenditure and $0.48 million operating expenditure. The annual operating expenditure (which is now $0.12 million) represents 15 per cent of the total capital costs and is aligned with accounting standards. This expenditure is forecast to be incurred from 2024-25, following completion of the associated capital investment.

Based on the information provided by Wannon Water, we are satisfied that it has adequately substantiated this proposed step change. In total, the expenditure is material and cannot be absorbed by the business, noting that it is also proposing the third most ambitious target in terms of net annual growth in operating expenditure (-0.3 per cent per annum). We are therefore not proposing any adjustments to this step change.

[16] Wannon Water 2022, Price Submission 2023-28, p.46.

[17] Wannon Water explained that the Platform Replacement project is an initiative to consolidate an existing suite of software applications (Open Spatial's Munsys/Enlighten technology) to ESRI's ArcGIS technology. This system is predicted to be a cloud-based service, implemented over 2 years and subsequently, an annual SaaS fee as operating expenditure for ESRI's ArcGIS is assumed.

3.4.7 Carbon Emissions Reduction – $0.37 million

Pursuant to the Victorian water businesses' commitment to source 100 per cent of their energy from renewables by 2025 (refer section 3.2 and Appendix A), Wannon Water is proposing a step change from 2025-26 for the additional costs of meeting this requirement. This is based on the purchase of offsets. Wannon Water has advised that this is the lowest cost of procuring offsets using forecast prices provided by the Department of Energy, Land, Water and Planning (DELWP) (now the Department of Energy, Environment and Climate Action (DEECA)).[18]

We reviewed the relevant calculations from Wannon Water's Carbon Emission Strategy Budget Workbook to verify the estimates underpinning the proposed step change.

Based on the information provided by Wannon Water, we are satisfied that this step change meets our first criterion, which is expenditure that is necessary to comply with new, or changed, legislative or regulatory obligations. We are therefore not proposing any adjustments to this step change.

3.4.8 Summary of our step change assessment

Based on Wannon 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 reasonable.

We have also considered these within the context of Wannon Water's proposed net annual growth in expenditure over the PS5 regulatory period. As outlined below, its net expenditure growth factor of –0.3 per cent per year is the third most ambitious of the urban water businesses.

We have recommended one adjustment, which is to remove the proposed step change for the operating expenditure associated with the Greater Tasting Water project. This is because we have recommended removal of the associated capital expenditure for the PS5 regulatory period. This adjustment has the effect of reducing Wannon Water's forecast controllable operating expenditure by $1.68 million over the PS5 regulatory period.

[18] Wannon Water 2022, p.40.

3.5 Forecast growth and efficiency factors

Wannon Water is forecasting average growth in operating expenditure of 1.0 per cent per year and an efficiency factor of 0.7 per cent per year over the PS5 regulatory period. This results in a net decrease in operating expenditure over the next regulatory period of 0.3 per cent per year. When comparing this net result against other water businesses, Wannon Water is third out of the 13 urban water businesses subject to this review (see Table 3.7).

Table 3.7: 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%
Lower Murray Water (Urban)	0.0%
Barwon Water	0.1%
South Gippsland Water	0.2%
Wannon 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.

3.6 Summary of operating expenditure assessment

Based on Wannon Water's PS5 proposal, the further information provided and our discussions with the business, we have formed the view that most of the forecast operating expenditure is consistent with a prudent business operating efficiently. This reflects our view that:

- most of the expenditure in the baseline year of 2021-22 appears reasonable, and does not appear to include any items that are non-recurring
- most of the proposed step changes are reasonable and supported by a sound rationale.

This is considered within the context of its proposed net baseline growth in operating expenditure of –0.3 per cent per year.

We have proposed the following adjustments:

- The removal of $2.2 million from the baseline year, comprising:
  - $1.0 million for additional contractor support
  - $1.2 million for one-off operating projects.
- Removing the step change for the Great Tasting Water Project ($1.95 million over the PS5 regulatory period).

Table 3.8: Recommended adjustments – controllable operating expenditure ($ 1 January 2023, millions)

	2023-24	2024-25	2025-26	2026-27	2027-28
Forecast controllable operating expenditure	**46.57**	**49.56**	**49.75**	**50.41**	**50.35**
Recommended adjustments:					
Baseline adjustments					
One-off operating projects	-1.19	-1.19	-1.19	-1.18	-1.18
Additional contractor support	-1.00	-1.00	-0.99	-0.99	-0.99
Step change adjustment					
Great tasting water project	-	-0.77	-0.39	-0.39	-0.39
Total recommended adjustments	**-2.19**	**-2.96**	**-2.57**	**-2.56**	**-2.56**
Adjusted total operating expenditure	**44.38**	**46.60**	**47.18**	**47.85**	**47.79**

4 CAPITAL EXPENDITURE ASSESSMENT

4.1 Overview of assessment approach

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

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

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

Figure 4.1: Criteria used to assess forecast capital expenditure

Assessment of capital program

- 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

- 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 Wannon Water's forecast capital expenditure for the PS5 regulatory period focusing primarily on a review of how asset management, capital planning and prioritisation processes have been applied. We have also reviewed key supporting documentation for a sample of three of the top 10 capital expenditure projects, which account for around 47 per cent of its forecast capital expenditure for the PS5 regulatory period.

[19] Essential Services Commission 2021, 2023 Water Price Review, Guidance paper, 26 October, p.33.

Our assessment is based on a review of the information contained in Wannon Water's PS5 submission and responses to additional information requests we raised based on the above criteria.

Although Wannon Water's submission supporting its proposed capital expenditure program was strong overall, with good context and justification provided in relation to the forecast expenditure increase and associated drivers, we requested additional information to further test the justification for the capital expenditure forecasts for the PS5 regulatory period. The information requested related to the following issues:

- **Warrnambool Sewerage Treatment Plant Upgrade:** basis for project cost escalation, business cases, Board Papers and options considered, total cost and capital proposed.
- **Great Tasting Water:** evidence of the need for this project, including compliance with water quality requirements and customer support, clarifying whether $15.75 million covers the total cost of the project to service one town (Portland / Heywood / Port Fairy) and whether the State Government contribution is still required to service one town.
- **Warrnambool Effluent Management Strategy:** whether expenditure should be treated as operating or capital expenditure.
- **Digital (IT systems):** details of proposed program together with any pre-planning work already undertaken. Given the level of complexity of the program we sought confidence that the forecast expenditure is appropriate and that it can be delivered in the PS5 regulatory period.

A workshop was arranged with the relevant officers responsible for the capital expenditure forecast on 25 November 2022.

Wannon Water responded promptly with all requested additional information and documentation, including detailed documentation setting out the capital planning processes used to develop the program, relevant reports, asset renewal and management plans and strategies, as well as major project and program business cases.

4.2 Assessment of overall capital program

Wannon Water is forecasting that it will deliver most of its capital projects in the PS4 regulatory period for a total cost of $112.9 million. This is $46.77 million (or 29 per cent) less than the Commission's capital expenditure benchmark allowance of $159.67 million. The underspend is predominantly due to the impacts of COVID-19 on contractor availability and tendering some projects later than expected due to delays in gaining approvals.

The proposed capital investment is dominated by the Warrnambool Sewage Treatment Plant Upgrade and Great Tasting Water projects.

The Warrnambool Sewage Treatment Plant Upgrade Project was the largest project proposed in the PS4 regulatory period. However, significant delays in obtaining regulatory approvals for the project have contributed to the underspend in capital in the PS4 regulatory period. Wannon Water has now included the project in the forecast for the PS5 regulatory period.

Wannon Water has forecast capital expenditure of $157.2 million for the PS5 regulatory period, which is 39 per cent more than its actual expenditure (including 2022-23 forecast) in the PS4 regulatory period.

The documents and information submitted by Wannon Water provide good support and explanations for the increased expenditure over the PS4 regulatory period.

4.2.1 Link to customer outcomes and obligations

The key drivers, projects and programs appear to be well linked to customer outcomes and engagement results, and include:

- renewals totalling $44.47 million (28 per cent of the total capital expenditure program)
- growth totalling $59.27 million (38 per cent of the total capital expenditure program)
- top 10 major projects totalling $93.28 million
- seven major programs totalling $52.7 million.

Wannon Water's supporting strategy and business case documents provide strong justification for the projects and programs that underpin the overall capital program and forecasts. They also provide insight into how each element of the program supports Wannon Water's six key customer outcomes, being:

- ongoing reliability of water and sewerage services
- ongoing protection of the environment through action and education, prioritising Country and our communities
- fair and reasonable bills for all
- improved water quality in identified communities
- improved customer experience of our products and services
- active partnerships for healthy and resilient communities.

4.2.2 Underlying processes for developing the program

Wannon Water's capital program is developed based on an Asset Management System consistent with the international ISO 55000 standard for asset management together with a Project Investment Plan Procedure. It has used these documents to identify and prioritise the projects included in its PS5 submission and factors in assessing risk ratings, developing project business cases, determine the appropriate allocation of risk and ensure that the program of proposed projects is deliverable.

Based on our review of the documentation provided, we consider that Wannon Water's processes for developing the capital program are robust and demonstrates that the above factors are considered in the capital projects proposed.

4.2.3 Reliability of cost estimation

The Warrnambool Sewage Treatment Plant Upgrade Project is the largest forecast capital expenditure for the PS5 regulatory period and is informed by tendered costs. The project was initially estimated at $38.9 million but after tendering in June 2022 forecast capital expenditure is now expected to be $84.98 million.

In reports to its Board and the Minister, Wannon Water has cited increased construction costs within the industry due to an influx of work and lack of contractors, and a lack of interest by contractors given the location of the treatment plant. We have sighted various Board papers that demonstrate that alternative options were explored to address the cost issue drivers, with the conclusion being that none were effective in reducing these costs.

The following is an extract of the Board paper dated 16 September 2022 following the receipt of the high tender:

> *The higher tender amount than anticipated is a reason to pause and reflect on the best way forward. The following options have been identified and consulted with the Warrnambool Sewage Treatment Plant Upgrade Board Committee. The option of not moving forward has been assessed as not realistic and therefore not considered below. Also, it has been assessed that any of the previously considered options for the upgrade of the STP would also see similar scale costs increases and therefore not realistic to consider.*
>
> *In summary it is the Managing Director's, General Manager Assets and Service Delivery's and the General Manager People and Business Services view that:*

- *re-tendering of the project presents a high risk of not achieving a lower cost and may result in a higher cost or no submissions*
- *de-scoping of the project presents a significant time delay which could result in the current tenderer being unavailable or major sub-contractors withdrawing. De-scoping also presents risks in relationship to complexity and implementation of future work integration. It has also been assessed that by de-scoping the work now and delivering the ultimate project over a number of phases would result in an overall increase in the cost of 30-50 per cent*
- *continuing the tender assessment and accepting the current tender (subject to usual tender assessment considerations) and higher costs is the appropriate way forward.*

The Great Tasting Water project represents 10 per cent of Wannon Water's forecast capital expenditure for the PS5 regulatory period. Given the relatively early stage of the technical evaluation, Wannon Water has adopted a P90 estimate to forecast capital expenditure for this project. Based on the location of the proposed works and the specialist technology required a higher estimate for this project would appear appropriate.

Cost estimates for asset renewal projects identified as being at end-of-life are based on previous costs of similar projects and an understanding of the technology required and available for cost effective renewals.

Wannon Water's proposed renewals program assumes a lower estimate than modelling suggests is required, accepting a marginal increase in the risk of asset failure. In accepting this increase in risk, Wannon Water has assumed it will be able to find efficiencies through improvements in technology, materials and techniques to deliver more renewals projects within the forecast budget proposed for the PS5 regulatory period.

4.2.4 Deliverability of capital program

Wannon Water's regional location and remoteness could pose problems with attracting suitable contractors for the larger more complex projects proposed in this PS5 regulatory period, in particular the Great Tasting Water project.

Wannon Water acknowledges that the availability of contractors within the construction environment is currently tight when developing the capital expenditure program and assessing its capacity to deliver. This was also evident with the lack of interest from contractors for the Warrnambool Sewerage Treatment Plant Upgrade, which also appears

to have been a factor in the higher than expected tender price received (as there is less competition for the work).

Wannon Water has adopted mechanisms to deliver, at the very least, the critical asset replacement and regulatory compliance obligations of its program. These include:

- an ongoing agreement with engineering consultants for design and contract management services
- sizing work packages that allow for a broad base of suppliers to offer their services
- entering into scheduled rates contracts.

Wannon Water has engaged a dedicated project manager to oversee the implementation of the Warrnambool Sewage Treatment Plant (STP) Upgrade Project. This project now has been tendered, has all approvals to proceed and the construction contract has been awarded. The timeline for constructing and commissioning these works has been outlined as November 2022 to November 2024 in Wannon Water's letter of 28 September 2022 to the Hon. Harriet Shing, MLC Minister for Water.

While not at the same stage of progression as the Warrnambool STP Upgrade, a similar deliverability approach has been undertaken for the Great Tasting Water project by adopting a dedicated project manager for these works. This is further in section 4.3 below.

In our view, the uncertainties associated with the current stage of development of the Great Tasting Water project (including timing and whether or not external funding contributions might be available), as well as reliance on specialist contractors to undertake the works, pose a significant risk of delay in progressing this project in line with the proposed capital expenditure forecast included for the PS5 regulatory period.

All other projects in the proposed capital expenditure program are much smaller and should not experience the same issues. They should therefore be able to be accommodated within Wannon Water's existing capacity to deliver.

4.3 Assessment of major projects and major programs

4.3.1 Major projects and programs

Due to the forecast capital program being dominated by two complex projects, with the remaining quantum of the capital projects and program proposed by Wannon Water being relatively smaller and routine, only a select number of the projects and programs that account for the majority of its forecast capital expenditure were reviewed in detail. All other projects were reviewed to the extent that they were considered appropriate based on expected efficient expenditure associated with a business of this size.

All projects and programs demonstrated clear linkages to obligations and customer outcomes.

4.3.2 Warrnambool Sewage Treatment Plant Upgrade – $52.89 million

The large spike in capital expenditure in 2023-24 reflects the Warrnambool STP Upgrade. This upgrade was proposed in the PS4 regulatory period but was delayed due to regulatory and planning approvals required for its construction.

The project was initially estimated at $38.9 million but after tendering in June 2022 has now increased to $84.98 million. The drivers of this material increase were outlined above, being the tight conditions in the construction market and the remote location of the plant, reducing contractor interest in bidding. Based on the Board papers we sighted (as discussed above), it is evident that a number of alternative options were explored to address these issues, with the conclusion being that none were effective in reducing these costs.

4.3.3 Great Tasting Water – $15.75 million

Wannon Water has allocated $15.75 million in the PS5 regulatory period to directly address customer concerns in three towns (Portland, Heywood and Port Fairy) about the taste and overall quality of its water supplies. Customer satisfaction with taste in these towns is only 30 per cent.

Wannon Water's supplies are 100 per cent compliant with drinking water safety criteria, but not with customer taste and aesthetics requirements. The supplies have elevated levels of naturally occurring minerals and salts (Total Dissolved Solids - TDS), which impact customers in terms of the taste of water but also longevity of their appliances.

Based on the Australian Drinking Water Guidelines, water in Portland and Heywood is classified as 'fair' (600-900 mg/l TDS) and Port Fairy's water borders on 'poor' (900-1200 mg/l TDS).

Wannon Water is proposing to deliver improvements in at least one town during the PS5 regulatory period. Consultation regarding the location of the first instalment is yet to occur. Wannon Water is also seeking financial contributions from the Victorian Department of Health and a national grant fund to provide additional funding to potentially deliver improvements to all three towns. The total project capital costs and funding sources are set out in Table 4.1.

Table 4.1: Total project capital costs ($ 1 January 2023, millions)

Description	2023-24	2024-25	2025-26	2026-27	2027-28	Total	2028-29
Upgraded water treatment facilities – Wannon Water contribution	4.75	4.75	2.75	2.75	0.75	15.75	0.75
Upgraded water treatment facilities – State and/or Federal contribution	3.00	3.00	2.75	2.75	0.75	12.25	0.75
New fluoridation plants – State contribution	0	1.06	0	1.15	0	2.21	1.15
Total	7.75	8.81	5.51	6.65	1.49	30.20	2.64

Source: Price Submission 2023-28 - Business Case- Great Tasting Water.

Wannon Water has advised that, if no other funding becomes available in the PS5 regulatory period, the $15.75 million that it is proposing to fund itself should be sufficient to potentially service at least one of the three towns.

The project provides clear linkages to obligations and customer outcomes but in our view, is still in a very early stage of development. The Centralised Reverse Osmosis treatment plant technology required to achieve the desired outcomes in water quality is a specialist field not delivered by most construction contractors.

Our review has noted the current uncertainties associated with final selection of the first town for water treatment upgrades as part of this project, as well as the uncertainties in relation to potential external funding contributions and recent issues with attracting suitable contractors to the region (as referred to in Section 4.2.4 above).

Although Wannon Water has advised that the selection of the first town for upgrade should be resolved by mid-2023, our expectation is that significant additional planning and development work would still need to be progressed ahead of moving into the final design and delivery phases, including:

- assessment of additional land acquisition needs
- necessary land purchases
- regulatory assessments and approvals
- cultural heritage engagement and assessments.

This adds additional uncertainty regarding likely delivery timelines. As such, although the drivers for this project appear to be well justified and well aligned with expressed customer

needs, our view is that we cannot appropriately assess the prudency and efficiency of the proposed capital expenditure forecast included for this project over the PS5 regulatory period due to this current level of uncertainty.

We therefore recommend that the forecast $15.75 million capital expenditure over the PS5 regulatory period for this project should be removed at this point in time. As work on the project progresses further and these uncertainties (including refined timing and any external funding contributions) are resolved, this will provide a better basis for assessing the prudency and efficiency of including the associated costs in Wannon Water's regulatory asset base in the future.

4.3.4 Warrnambool Effluent Management Strategy

The Environment Protection Authority (EPA) development licence for the Warrnambool STP Upgrade requires Wannon Water to develop an evaluation study report that identifies alternative longer term wastewater disposal methodologies for the plant. The project involves the selection and preliminary design of an effluent management solution required to meet the EPA Development Licence requirements. This project is considered prudent.

4.3.5 Renewals program

The proposed renewals program is segmented by expenditure for known specific renewal projects, as well as forecast expenditure for predicted renewal projects developed through iterative modelling.

Wannon Water uses the Assetic Predictor Modelling program for projecting renewal requirements for asset classes. Assets are modelled within the program using a selected decay curve to estimate the remaining life of each asset and select the most appropriate time for intervention. Cost estimates associated with specific asset renewal projects (those assets identified as being at end of life) are based on previous costs for similar projects and an understanding of the technology required and available for cost effective renewals.

Our assessment is that Wannon Water's approach provides an effective mechanism for planning its renewals program. This approach has resulted in a 0.5 per cent increase in expenditure for watermain renewals and a 5 per cent decrease in expenditure for sewer renewals compared to the PS4 regulatory period. This is considered reasonable.

4.4 Summary of capital expenditure assessment

Wannon Water's PS5 submission provides a detailed breakdown of its forecast capital expenditure for the PS5 regulatory period. The capital forecast submission is well developed and provides, along with the additional information reviewed, a high level of

confidence that most of the proposed capital expenditure program is appropriate and robust and can be delivered.

The further information provided to us by Wannon Water provides a reasonable level of confidence that the majority of the proposed capital expenditure program is consistent with the actions of a prudent business operating efficiently.

However, due to the current levels of uncertainty regarding the Great Tasting Water project, we cannot appropriately assess the prudency and efficiency of the proposed capital expenditure forecast at this point in time. We therefore recommend that the forecast $15.75 million capital expenditure over the PS5 regulatory period for this project should be removed from the capital expenditure forecast.

Table 4.2: Recommended adjustment to Wannon Water's benchmark allowance for capital expenditure ($ 1 January 2023, millions)

Great Tasting Water	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Forecast capital expenditure	4.75	4.75	2.75	2.75	0.75	15.75
Recommended adjusted capital expenditure	**-4.75**	**-4.75**	**-2.75**	**-2.75**	**-0.75**	**-15.75**

APPENDIX A: CROSS-INDUSTRY OPERATING EXPENDITURE ISSUES

Overview

There are several drivers of increased operating expenditure over the current PS4 regulatory period and/or forecast for the PS5 regulatory period that are common across water businesses. While the base-step-trend methodology does not involve a 'bottom up' or category-by-category assessment of expenditure, we consider it important to ensure that we have regard to the key drivers and trends in baseline increases and/or proposed step changes in assessing each business's proposal.

This appendix reviews some of those expenditure drivers in more detail, being:

- energy
- IT
- labour.

It also presents some comparative data submitted to the Commission by each of the water businesses as part of their respective Price Review Models. Section 3.2 of this report outlines the implications of this analysis for our approach.

Energy expenditure

Background

Energy costs have been increasing in recent years. This has been driven by several factors, including increases in the wholesale price of electricity, the impact of the Ukraine war on global energy prices, increasing network costs and the costs associated with the transition to renewable energy. This has impacted actual energy costs for the water businesses over the current PS4 regulatory period. The uncertainty and volatility in the electricity market has also made it more challenging for water businesses to forecast electricity costs for the PS5 regulatory period. The Victorian water businesses have also all committed to sourcing their energy requirements from 100 per cent renewable sources by 2025.

The Schneider report

The Intelligent Water Network is a collaboration between the Victorian water businesses, VicWater and the Department of Energy, Environment and Climate Action (DEECA, formerly the Department of Environment, Land, Planning and Water (DELWP)). The Intelligent Water Network engaged Schneider Electric Energy and Sustainability Services (Schneider) to provide forecast electricity prices for the PS5 regulatory period.

Victorian Government Purchasing Board reforms have mandated use of the State Purchase Contracts for electricity (large and small market) managed by the Department of Treasury and Finance and Schneider. We understand that some water businesses are already using these contracts while others are in the process of transitioning to these new contracts.

The Schneider report, finalised in March 2022, addressed the following key assumptions:

- energy commodity rates (peak and off-peak)
- Large-scale Generation Certificates
- Small-scale Technology Certificates
- Victorian Energy Efficiency Certificates
- network forecast charges
- market operator charges.

It appears that all the water businesses have used the Schneider report as the basis for their forecast electricity costs for the PS5 regulatory period. We have undertaken a high level review of the Schneider report and the methodology and assumptions used (including data sources) appear reasonable. We have also examined how it has been applied by each business.

Industry emissions reduction target

Under the Water for Victoria Plan, the Victorian water sector has committed to achieving net zero emissions by 2035. The sector has also committed to sourcing 100 per cent of its electricity needs from renewables by 2025. The Statement of Obligations (Emission Reduction) made pursuant to the *Water Industry Act 1994* requires all Victorian water businesses to:

- prioritise the implementation of actions that avoid or reduce emissions resulting from its operations
- achieve emission reductions efficiently, making full use of the time available to do so.[20]

In pursuing these reductions, Section 3.2 of the Statement of Obligations (Emission Reduction) encourages water businesses to:

- pursue actions and targets at the lowest possible cost, seeking to minimise any impact on water customer bills
- have regard to any price impacts on their vulnerable customers.

[20] Statement of Obligations (Emission Reduction), Section 3.1.

Five yearly targets have been set under the Statement of Obligations on the transition to net zero by 2035. This means that a business that has committed to achieving an annual emissions target in a target year (for example, by 1 July 2030) must ensure that it keeps its emissions at or below that level in all subsequent years leading up to their next five-yearly emissions target (for example, 1 July 2035). The requirement to source 100 per cent of their electricity from renewable sources applies from 2025 onwards.

Table A1 shows the baseline level of emissions for each water business and the reductions required by the 2024-25 financial year. It shows that the reductions required by each business vary materially depending on their current baseline.

Table A1: Victorian water businesses emission reduction targets

Business	Emissions baseline	Annual reportable emissions 2024-25 (tonnes CO2 e)	% reduction from baseline
Barwon Water	42,986	15,926	-63
Central Highlands Water	18,351	14,738	-19.6
Coliban Water	33,604	29,304	-12.8
East Gippsland Water	8,272	6,496	-21.5
Gippsland Water	42,021	32,080	-23.7
Goulburn Valley Water	49,575	37,416	-24.5
Grampians Wimmera Mallee Water	20,017	16,244	-18.8
Lower Murray Water	44,188	24,708	-44.1
South East Water	41,744	23,016	-44.9
South Gippsland Water	7,663	6,480	-15.4
Southern Rural Water	1,559	0	
Wannon Water	31,626	18,976	-40
Westernport Water	6,062	5,598	-7.7
Yarra Valley Water	32,004	11,664	-63.6

Source: https://www.water.vic.gov.au/climate-change/reduced-emissions-in-the-water-sector/net-zero-emissions-by-2050

The businesses must then transition over the following five years to their next target (for the 2029-30 financial year). All businesses are required to achieve net zero by 2034-35, although some businesses are forecasting to achieve net zero by 2029-30.

It is evident from water businesses' PS5 submissions and discussions with them that different initiatives are being employed to achieve the 2025 target including one or more of the following:

- direct capital investment in 'behind the meter' renewable capacity (for example, installing solar photovoltaic (PV) at water treatment plants)
- purchasing energy generated from renewable sources (green power), which can involve an additional cost compared to conventional sources
- purchasing offsets, such as Large Generation Certificates.

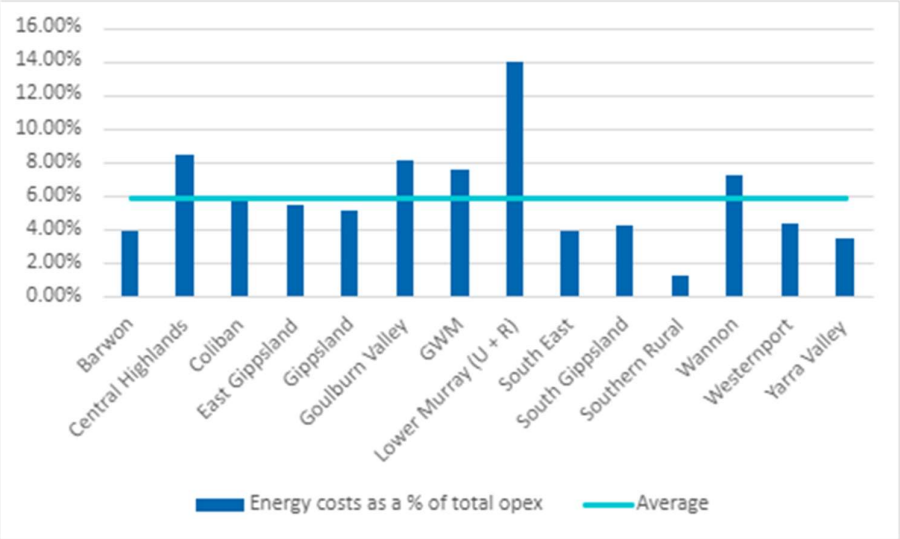
The most appropriate strategy depends on the needs and circumstances of the business, including the feasibility (and cost) of direct action measures such as solar PV.

Some businesses have proposed step changes in operating expenditure for additional costs associated with the above initiatives.

Cross-sector expenditure trends

Overall, proposed electricity expenditure for the PS5 regulatory period accounts for a relatively small proportion of controllable operating expenditure, averaging around 6 per cent, as shown below.

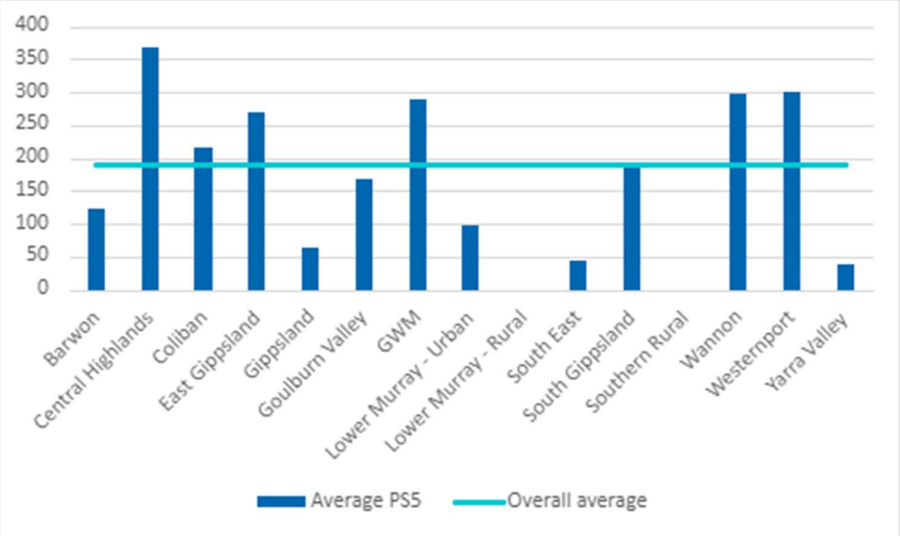
Figure A1: PS5 forecast total energy expenditure as a percentage of total controllable operating expenditure (%)



Source: Victorian water businesses, 2023 Price Review Models.

For the urban businesses, Figure A2 shows electricity expenditure per volume of water delivered (in ML).

Figure A2: PS5 forecast energy costs per volume of water delivered ($ per ML, 1 January 2023)

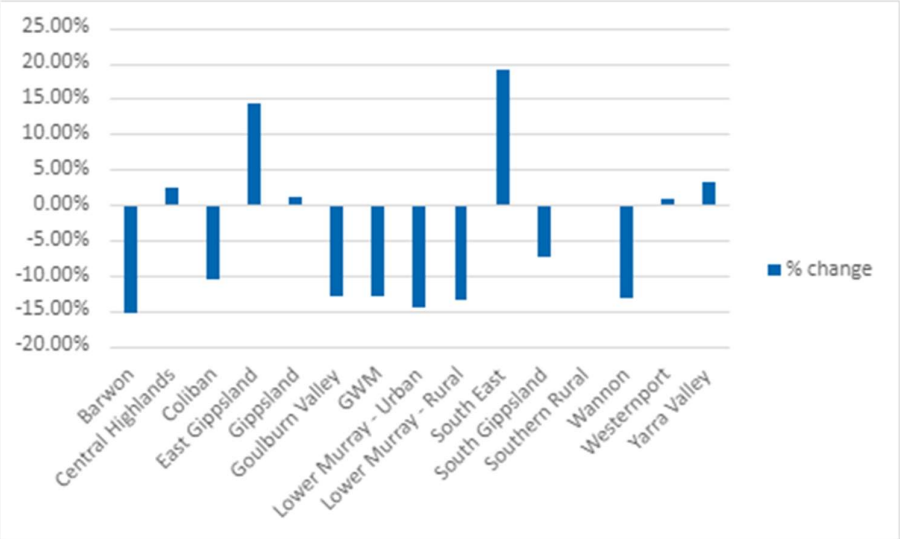


Source: Victorian water businesses, 2023 Price Review Models.

As noted above, energy costs have been increasing over the current PS4 regulatory period. However, most businesses are forecasting a decline in energy costs in the PS5 regulatory period for several reasons, including efficiency initiatives and targets. Figure A3 shows the change between total actual PS4 energy expenditure[21] and proposed PS5 energy expenditure for each business.

[21] Note that the water businesses' Price Review Models submitted to the Commission for this PS5 review include updated forecasts for financial year 2022-23.

Figure A3: Total energy expenditure: total proposed for PS5 regulatory period less total actual for PS4 regulatory period (%)



Source: Victorian water businesses, 2023 Price Review Models. Note PS4 actuals include an updated forecast for the 2022-23 financial year.

IT expenditure

Background

Several businesses have experienced increases in IT-related operating expenditure in the PS4 regulatory period, which have impacted the 2021-22 baseline, and/or are proposing step changes for IT expenditure in the PS5 regulatory period. This is reflected in three main categories:

- Cloud-based services
- cyber security
- other IT expenditure.

Cloud-based services

Consistent with trends in other businesses and industries, most of the water businesses are either in the process of transitioning, or have transitioned, to Cloud-based services (also referred to as Software as a Service (SaaS)). Rather than each business having all its own hardware and software infrastructure on-site, this is a software distribution model where key applications are centrally hosted via a third-party provider. Services are then delivered via the Cloud and the third-party provider manages all hardware and software

requirements. Users then contract and pay for services based on a licence or subscription fee model.

Several water businesses source key applications from Technology One. In 2021 Technology One announced that it will commence transitioning all on-premises customers to its SaaS platform. Based on its timetable, it will cease providing on-premises support services to customers on 1 October 2024.[22]

A key implication of the change to this different service delivery model is that expenditure formerly categorised as capital expenditure will now be characterised as operating expenditure (i.e. relevant licence and subscription fees). Holding all else constant, this will be reflected in a reduction in capital expenditure and an uplift in operating expenditure (noting that this is not a 'dollar for dollar' substitution and that the profile for capital expenditure will have depended on the investment needs of the business). In terms of the impact on operating expenditure, this is evidenced by several businesses either attributing SaaS costs as a driver of the baseline uplift or proposing as a step change.

Additional costs may be incurred in the process of transitioning to Cloud-based services. In this regard, we understand that the Commission has advised the water businesses that it will consider capitalising transition-related expenditure where appropriate. Where proposed, this is considered as part of the review of each business's capital expenditure.

Cyber security

The need to upgrade cyber security has accelerated over the PS4 regulatory period and is also now 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 protecting customer data.

Victorian water businesses are required to comply with several requirements and standards including:

- the Victorian Protective Data Security Framework established pursuant to the *Privacy and Data Protection Act 2014,* which sets out mandatory standards for Victorian public sector agencies and bodies
- Victoria's Cyber Security Strategy 2021
- the Victorian Critical Infrastructure Resilience Framework, with water one of the eight critical infrastructure sectors. This has driven the requirement for a Water Sector Resilience Plan. Cyber security is one of several risks identified under that

[22] https://technologyonecorp.com/saas/pathway-to-saas# {Accessed 13 December 2022}.

framework, which also extends to climate-related risks, pandemics and key supply chain disruptions. DEECA now leads the Water Sector Resilience Network, which aims to collaborate on matters relating to resilience by sharing information and experiences

- implementation of the recommendations of the Victorian Auditor-General's Office's performance audit of Security of Water Infrastructure Control Systems.[23]

Cyber security initiatives can be expected to continue to develop and evolve over the PS5 regulatory period.

Other IT-related expenditure

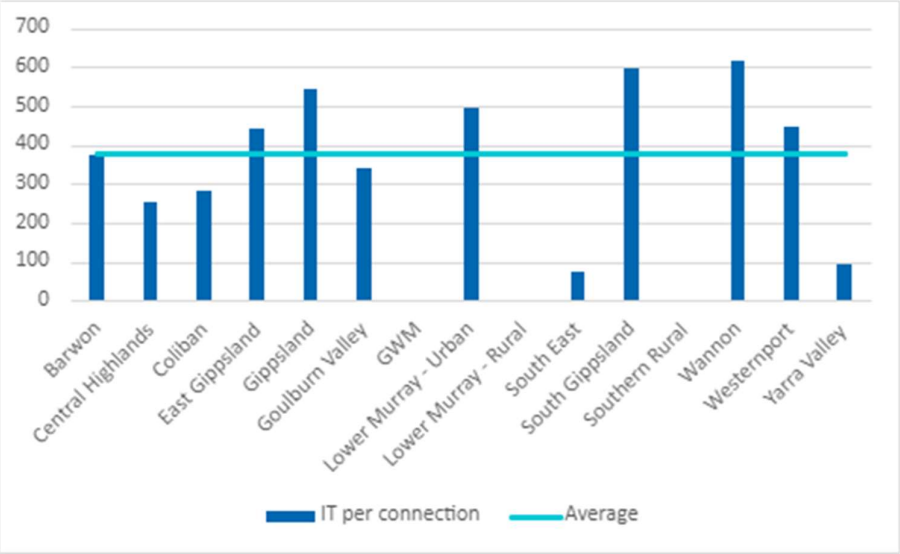
Depending on the functionality and maturity of each water business's current IT-architecture, other business-specific expenditure may be incurred in reviewing and upgrading this capability.

Cross-sector expenditure trends

As part of the Commission's Price Review Model, water businesses are required to report on total IT expenditure. For urban networks, this includes metrics such as IT expenditure per average water connection. Figure A4 shows that most of the water businesses with a higher average expenditure per water connection are smaller organisations, suggesting the presence of economies of scale.

[23] Victorian Auditor-General's Office 2019, *Security of Water Infrastructure Control Systems*, 9 May.

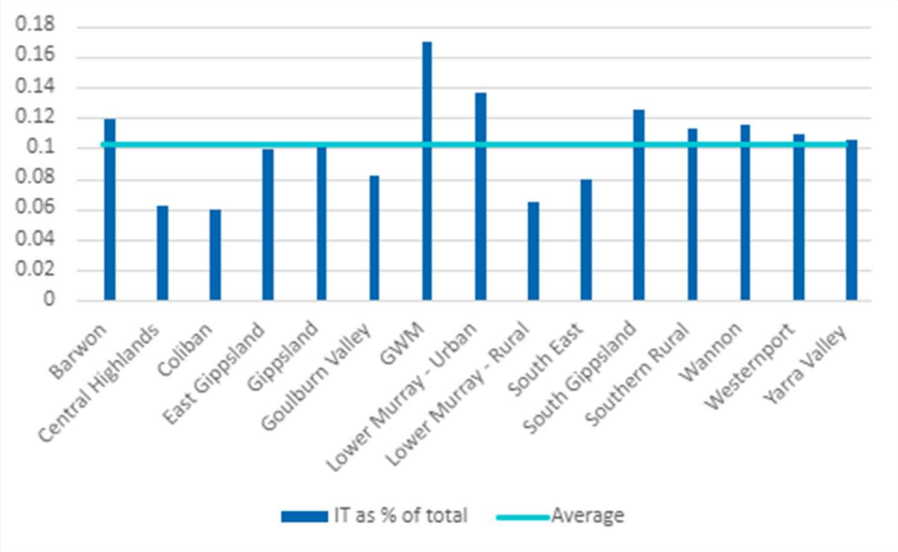
Figure A4: PS5 forecast: ICT operating expenditure per water connections ($ per average number of water connections, 1 January 2023)



Source: Victorian water businesses, 2023 Price Review Models.

Figure A5 shows total forecast PS5 IT operating expenditure as a percentage of total controllable operating expenditure. This includes the rural businesses.

Figure A5: PS5 forecast: ICT operating expenditure as a percentage of total controllable operating expenditure (%)



Source: Victorian water businesses, 2023 Price Review Models.

Labour costs

Background

Labour costs tend to account for the largest proportion of operating expenditure for the water businesses. On average across the businesses, labour costs account for just under 50 per cent of total forecast controllable operating expenditure for the PS5 regulatory period (see Figure A9 below).

Labour costs are a function of employee numbers (measured in terms of FTEs)[24] and the costs of remuneration (including salaries, wages and other employee-related expenses).

Labour force

The size of each organisation's labour force varies according to their business and operating environment, including their geographical location and service area (which, amongst other things, will influence the size and dispersion of field staff).

Some businesses supplement internal labour resources with external contractors – this can be a temporary response to labour shortages, a need for specialist expertise that does not

[24] Full-time equivalent employees.

reside in-house and/or decisions to outsource certain activities. The optimal balance between internal and external labour will be a management decision for the business.

Remuneration

A key driver of remuneration is the water business's Enterprise Agreement (EA), which typically have four-year terms. Each water business is likely to have an EA expiring and a new EA commencing during the PS5 regulatory period. As a result, each water business needs to forecast the impact of any anticipated change in EA terms.

Some common themes have emerged in terms of labour costs over the PS4 regulatory period.

- First, Victorian public sector entities must ensure that executive remuneration complies with any determinations and guidelines issued by the Victorian Independent Remuneration Tribunal. They must also continue to comply with the requirements of the Public Entity Executive Remuneration Policy (PEER).[25] The Premier typically announces an annual adjustment guideline rate for adjustments to executive remuneration. For 2021-22 and 2022-23, that rate was 1.5 per cent. Several businesses refer to the application of this rate in their PS5 submissions.
- Second, several of the regional water businesses have commented on challenges in attracting and retaining staff. This appears to have become a more significant problem for some businesses as the labour market tightens following the economic recovery from the COVID-19 pandemic. Some businesses have cited the need to offer higher salaries (including above the EA rate) to attract and retain staff. This appears to have underpinned increases in baseline expenditure as well as step changes for the PS5 regulatory period. Changes have also occurred in terms of employee expectations and practices around flexible working.

These challenges appear to be consistent with overall labour market trends in recent years, as well as the outlook. This reflects a material shift relative to the subdued outlook for wages that prevailed at the time of the last price review, as summarised below.

Labour market conditions and wage growth pressures

When the Commission made its determinations for the water businesses in 2018, Victoria had been experiencing a period of subdued wages growth, consistent with the experience

[25] Refer: https://vpsc.vic.gov.au/executive-employment/victorian-public-entity-executive-employment/public-entity-executive-handbook/4-remuneration/ {accessed 14 December 2022}.

of most other advanced economies.[26] The forecasts underpinning the 2018-19 State Budget was for wages to grow by 2.5 per cent in 2018-19 and 2.75 per cent in 2019-20.[27]

Actual growth in the Victorian Wage Price Index (WPI) was 2.6 per cent to 30 June 2019. It then contracted as COVID-19 impacted the economy, falling to 1.5 per cent for the year ended 30 June 2021 and then recovering to 2.3 per cent to 30 June 2022.[9] In terms of industry trends, for Australia, the annual change in total hourly rates of pay for the Electricity, Gas, Water and Waste Services sector was 2.9 per cent to 30 June 2022, compared to 3.2 per cent for all industries.

The most recent 2022-23 Victorian State Budget forecast was for an increase in the WPI of 2.75 per cent in 2022-23. It is then expected to increase further to 3.00 per cent per year to 2025-26 as the economy expands and labour market conditions remain tight.[28] The Reserve Bank of Australia (RBA) is forecasting stronger growth in the WPI for Australia, increasing to 3.7 per cent by 30 June 2023 and then rising to 3.9 per cent by December 2024.[29]

This presents a mixed picture of wages growth over the current PS4 regulatory period, which was significantly impacted by the COVID-19 pandemic. The current outlook is more bullish, driven largely by the tight labour market and high inflation, with spare labour market capacity at record lows.[30] In its November 2022 Statement on Monetary Policy, the RBA also observed that job mobility is higher than the years preceding the pandemic and is now around the levels observed prior to the Global Financial Crisis. It also noted the considerable uncertainty associated with the current economic outlook.

Overall, this highlights the current wage growth pressures that many of the water businesses has observed. The data doesn't enable any insights into the trends in regional labour markets in Victoria or specific pressures that might emerge for the skillsets required by the water businesses. However, the duration and extent of these wage growth pressures is also highly uncertain.

[26] State of Victoria 2018, Strategy and Outlook 2018-19 Budget Paper No. 2, Department of Treasury and Finance, p.23.

[27] State of Victoria 2018, Strategy and Outlook 2018-19 Budget Paper No. 2, Department of Treasury and Finance, p.22.

[28] State of Victoria 2022, Strategy and Outlook 2022-23 Budget Paper No. 2, Department of Treasury and Finance, p.32.

[29] Reserve Bank of Australia 2022, Statement on Monetary Policy, November.

[30] Reserve Bank of Australia 2022, Statement on Monetary Policy, November.

Superannuation Guarantee Charge

The compulsory Superannuation Guarantee Charge (SGC) has been progressively increasing to a rate of 12 per cent by 1 July 2025. This has been identified by some businesses as contributing to increases in labour costs.

The extent to which this will result in an increase in labour costs for employers depends on the nature of the employment arrangement. For example, for salaried workers whose salary package is inclusive of superannuation, the increase in the SGC may be offset by a reduction in take-home pay, which would result in no net change in costs to the employer. In other cases, where employees are on a 'salary plus superannuation' arrangement, it will result in an increase in total remuneration for the employee, which will increase the cost to the employer.

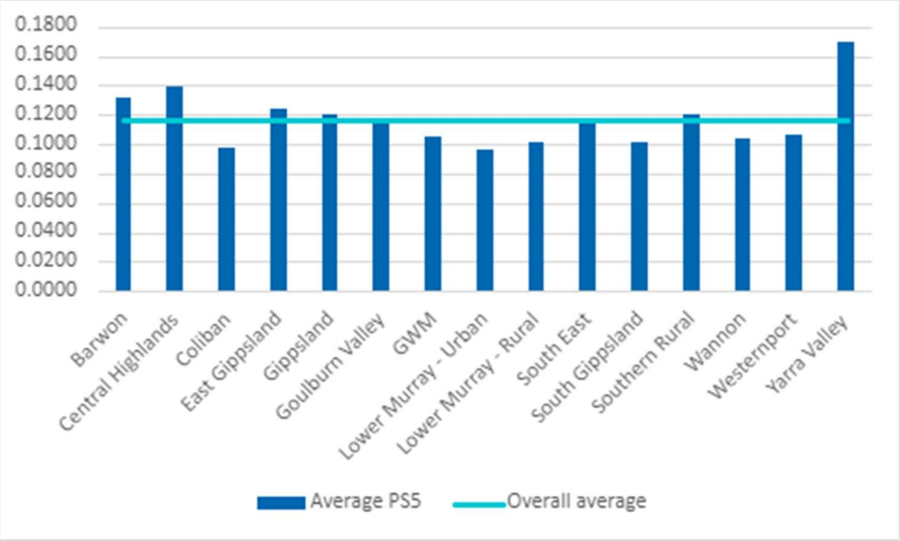
The impact of this will therefore vary between businesses and potentially within businesses given employees may be subject to different types of arrangements.

Cross-sector expenditure trends

Businesses are required to report several metrics on labour costs in the Commission's Price Review Model, including FTEs and unit labour costs. Key metrics are summarised below.

Figure A6 shows average unit cost per FTE as forecast for the PS5 regulatory period, as reported by the businesses.

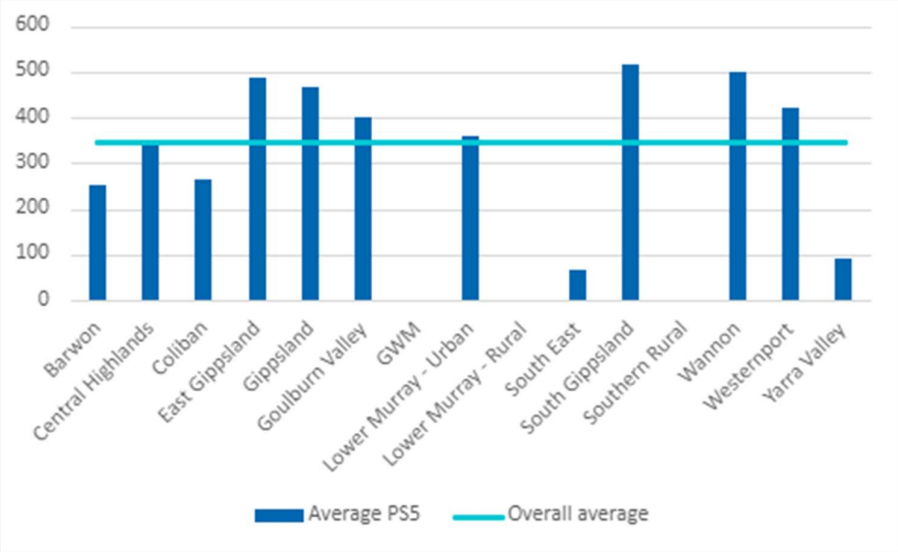
Figure A6: PS5 forecast average unit cost per FTE ($ million per FTE, 1 January 2023)



Source: Victorian water businesses, 2023 Price Review Models.

Based on forecast labour costs for the water businesses for the PS5 regulatory period, Figure A7 shows the average labour cost per water connection (based on the average of the forecast number of connections over the period). It shows that most of the water businesses with a higher average expenditure per water connection are smaller organisations, suggesting the presence of economies of scale.

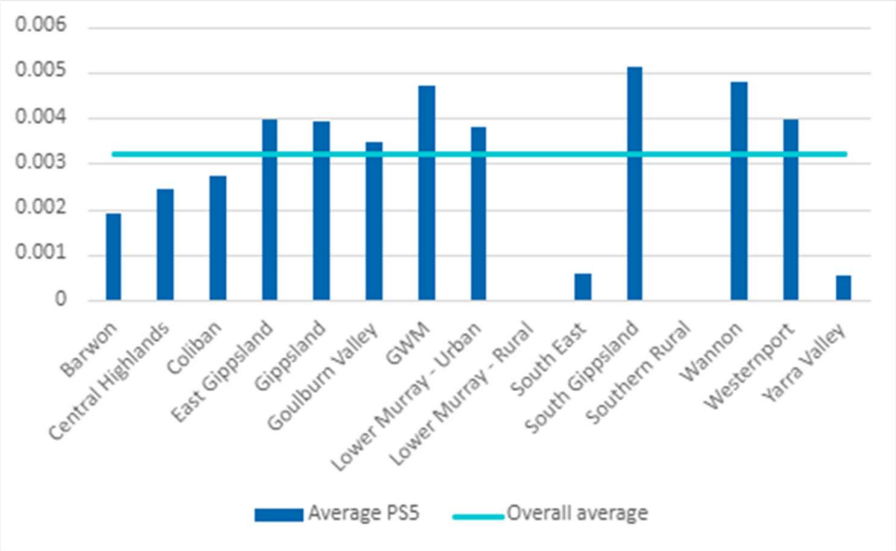
Figure A7: PS5 forecast: Average labour cost per water connection ($ per average number of water connections, 1 January 2023)



Source: Victorian water businesses, 2023 Price Review Models.

These scale economies are similarly evidenced based on the average number of FTEs per water connection (see Figure A8).

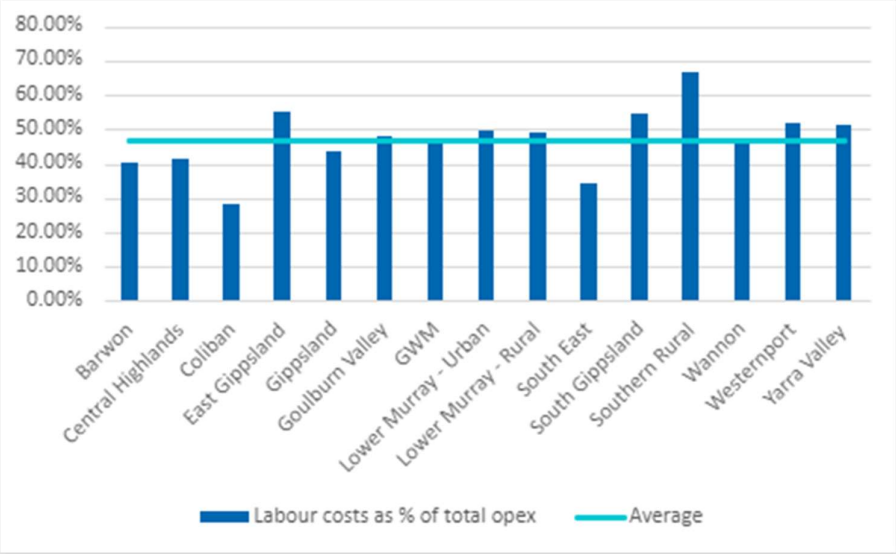
Figure A8: PS5 forecast average number of FTEs per water connection



Source: Victorian water businesses, 2023 Price Review Models.

Figure A9 shows forecast labour costs as a percentage of total controllable operating expenditure for each of the water businesses over the PS5 regulatory period.

Figure A9: PS5 forecast labour costs as a percentage of total controllable operating expenditure (%)



Source: Victorian water businesses, 2023 Price Review Models.