


May 2023



Review of new customer contribution- related capital expenditure for Coliban Water

2023 Water Price Review

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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 (the PS5 regulatory period). Each of the Victorian water businesses submitted their proposals to the Commission for assessment on 30 September 2022.

FTI Consulting has been engaged to provide advice on whether the water business' capital expenditure included in the calculation of new customer contributions for Central Highlands Water, Coliban Water, Goulburn Valley Water, Lower Murray Water, South East Water, South Gippsland Water and Yarra Valley Water is reasonable. The commission has indicated that four water businesses have included historical capital expenditure (sunk costs) in their proposed new customer contributions¹, while three water businesses proposed significant increases in their new customer contributions² in the 2023-28 regulatory period compared to 2022-23.

This report sets out our independent expert view of the reasonableness of the capital expenditure included in the new customer contributions for Coliban Water. We have prepared a separate report for each water business.

1.2 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 is required to assess each water corporation's price submission in a manner consistent with the requirements of the regulatory framework, which places an emphasis on efficient delivery of services by water corporations. The assessment of the new customer contributions proposed by water corporations plays an important role in achieving this objective.

¹ Lower Murray Water, South East Water, South Gippsland Water and Yarra Valley Water.

² Central Highlands Water, Coliban Water and Goulburn Valley Water.

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.

1.3 Methodology and approach

Our methodology for assessing the capital expenditure included in proposed new customer contributions for the next regulatory period is consistent with guidance provided by the Commission.⁵ In summary, the scope of our review includes:

- whether the capital expenditure included in the new customer contributions relates to growth and the basis of the cost estimate is reasonable
- whether the methodology used is reasonable for apportioning capital expenditure that serves multiple purposes
- the relative merits of the proposed infrastructure and related capital expenditure in serving specific catchments versus a broader area
- the reasonableness of the incremental operating costs (and their relationship to growth)
- any historical capital expenditure included.

Our process has involved several steps:

- an initial review of PS5 price submissions, new customer contribution models, financial model templates and associated documentation provided by water businesses
- a high-level desktop review of the methodology used by each water corporation to assign capital expenditure, including sunk costs, to new customer contributions
- 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.

⁵ Essential Services Commission 2021, 2023 water price review: Guidance paper, 26 October

2 SUMMARY OF BUSINESSES' PROPOSALS

2.1 Proposed new customer contributions

Water businesses are proposing the following new customer contributions for the forthcoming regulatory period (see Table 2.1). Most of the water businesses have proposed significant increases for new customer contributions in the forthcoming regulatory period, with Lower Murray Water and South Gippsland Water proposing more modest increases. Central Highlands Water, Coliban Water, South East Water and Yarra Valley Water are all proposing new customer contributions that are less than what has been calculated using their new customer contribution models.

Table 2.1: Proposed new customer contributions

Water business	Current NCC	Proposed NCC in year 1 of PS5	Proposed NCC in year 5 of PS5	Model calculated NCC
Central Highlands Water	Water: \$1,504 Sewer: \$0	Water: \$1,300 – 3,000 Sewer: \$1,300 – 3,000	Water: \$2,626 – 4,121 Sewer: \$2,626 – 4,121	Water: \$4,602 – 11,573 Sewer: \$5,287 – 7,210
Coliban Water	Water: \$1,790 Sewer: \$1,790 Recycled: \$895	Water: \$2,148 Sewer: \$2,148 Recycled: \$1,074	Water: \$3,144 Sewer: \$4,453 Recycled: \$1,572	Water: \$3,964 Sewer: \$4,841 Recycled: \$1,476
Goulburn Valley Water	Water: \$2,891 Sewer: \$0	Water: \$3,700 Sewer: \$1,700	Water: \$3,700 Sewer: \$1,700	Water: \$3,702 Sewer: \$1,707
Lower Murray Water	Water: \$2,076 – 4,152 Sewer: \$1,420 – 2,839	Water: \$2,482 – 4,963 Sewer: \$1,429 – 2,857	Water: \$2,482 – 4,963 Sewer: \$1,429 – 2,857	Water: \$4,963 Sewer: \$2,857
South East Water	Water: \$775 – 1,711 Sewer: \$775 – 1,224 Recycled: \$775 – 1,903	Water: \$813 Sewer: \$813 – 1,670 Recycled: \$813 – 2,595	Water: \$988 Sewer: \$988 – 2,030 Recycled: \$988 – 3,154	Water: (\$3,391.87) – (\$103.63) Sewer: (\$1,661.56) – 8,749.78 Recycled: \$6,416.65 – 17,472.93
South Gippsland Water	Water: \$2,518 Sewer: \$2,518	Water: \$2,971 Sewer: \$2,971	Water: \$2,971 Sewer: \$2,971	Water & Sewer: \$5,944
Yarra Valley Water	Water: \$775 – 2,776 Sewer: \$775 – 2,776 Recycled: \$775	Water: \$814 – 2,915 Sewer: \$814 – 2,915 Recycled: \$814	Water: \$989 – 3,543 Sewer: \$989 – 3,543 Recycled: \$814 – 989	Water: \$1969 – 11,815 Sewer: \$3,608 – 11,517 Recycled: \$5,927 – 16,535

2.2 Forecast capital expenditure

Water businesses have included a total of \$9.4 billion in capital expenditure in their new customer contribution models. Most of this spend is for assets that will exclusively service new customers, however, there is a substantial amount of capital expenditure that has multiple drivers and will service both new and existing customers. Water businesses have proposed to allocate the costs of these assets across both new and existing customers.

2.3 Summary of our assessment

In undertaking our assessment of capital expenditure, we reviewed the information provided by water businesses, including from pricing submissions, new customer contributions models and other information that had been provided to the commission during the price review. We then met with each of the businesses to gain a better understanding of their new customer contributions, and how these had been developed.

During these meetings we requested further information from water businesses that would demonstrate that the capital expenditure included in new customer contributions met the criteria as set out by the commission. Businesses were asked to provide documentation that outlined the methodology and approach used to derive new customer contributions, including how capital expenditure is incorporated into the calculation of charges.

The documentation provided by Central Highlands Water, Coliban Water, Goulburn Valley Water, Lower Murray Water, South East Water, South Gippsland Water and Yarra Valley Water was not sufficient to allow for a complete assessment of capital expenditure. It was apparent that no policy documents had been developed by these seven water businesses prior to submitting their pricing proposals to the commission. What was provided by these water businesses was mainly developed in response to our request for supporting information. None of these water businesses could articulate how it had implemented a pre-determined methodology.

In the absence of clearly articulated policy and methodology documentation, we have had to assess the capital expenditure based on a degree of confidence that it would be appropriate. We have rated this confidence level as either high; medium or low. It is important to note that the degree of confidence refers to our view that all the capital expenditure would be appropriate to include. Capital expenditure that is rated medium would likely result in some, and possibly all, the capital expenditure included in the calculation of new customer contributions, once additional documentation and analysis is provided. Capital expenditure that is rated low may still see some of that expenditure included.

In our review we have determined that we have a high degree of confidence that \$6.0 billion of capital expenditure should be included in new customer contributions, a medium degree of confidence in \$0.2 billion and a low degree of confidence in the remaining \$3.2 billion.

3 COLIBAN WATER

3.1 Proposed NCCs

Coliban Water has proposed significant increases for new customer contributions, with the current charge of \$1,790 per lot increasing to \$3,144 for water and \$4,453 for sewer. Recycled water charges will nearly double, from the current charge of \$895 per lot to \$1,572 by the end of the period.

Table 3.1: Proposed new customer contributions

	Current NCC	Proposed NCC in year 1 of PSS	Proposed NCC in year 5 of PSS
Water			
Treated and untreated	\$1,790	\$2,148	\$3,144
Recycled water	\$895	\$1,074	\$1,572
Sewer	\$1,790	\$2,148	\$4,453

3.2 Capital expenditure included in new customer contributions

3.2.1 Methodology and approach

Coliban Water outlined a summary of the methodology used to include capital expenditure in new customer contributions in its pricing submission.⁶ It has also provided a further summary after we met with staff as part of this review.

Coliban Water has separated its capital expenditure into two categories. First, work that is directly attributable to the management of growth in the Integrated Water and Sewer Planning Team and all works expected in greenfield areas, as well as trunk mains, treatment plant upgrades and additional water resources that are required for growth purposes. Second, projects where the costs are shared between developers and customers.

Coliban Water provided detailed project information in a model it developed to reconcile the difference between growth capital expenditure in its pricing submission model and that used to determine new customer contributions. We sought further information from Coliban Water that summarised the capital expenditure by these drivers, which was provided and is summarised in table 3.2.

⁶ Coliban Water 2022, Price Submission 2023-28, 29 September

Table 3.2: Capital expenditure included in new customer contributions allocations

Category	Water	Sewer	Recycled	Total
Growth as primary driver				
Network assets	74.8	58.7	-	126.8
Water share purchases	26.0	-	-	26.0
Water resource projects	6.6	-	-	6.6
	100.8	58.7	-	159.5
Growth as shared driver				
Network assets	2.3	32.4	-	34.6
Treatment plants	15.3	66.2	2.5	84.1
SCADA	-	3.3	-	3.3
	17.6	101.9	2.5	122.0
Grand total	118.4	160.6	2.5	281.5

3.2.2 Fully allocated to new customer contributions

Coliban Water has included \$159.5 million of capital expenditure in its new customer contributions calculations for this cost category.⁷ This includes the following projects/programs:

- Water and sewer assets that are exclusively provided for new customers, such as in greenfield developments - \$56.4 million
- Network and treatment plant upgrades where growth will impact the ability of Coliban Water to meet service standards in the future - \$42.3 million
- The purchase of water shares to cater for future supply and demand conditions - \$26.0 million
- Water resource projects to meet future demand - \$6.6 million
- Water network upgrades that are needed for new developments but will help serve the broader catchment - \$28.2 million

⁷ Coliban Water removed \$11.56 million of capital expenditure on the purchase of water shares in response to the commission's Draft Decision.

3.2.3 Growth as a shared driver

Coliban Water has used two approaches to allocate the capital costs of these projects to new customer contributions. First, it has allocated costs based on a simple extrapolation of ten years of growth, depending on the area where the growth is forecast to occur. These include the following projects/programs and totals \$44.3 million:

- Bendigo trunk and outfall sewer - \$10.3 million
- Bendigo WRP recycled water upgrade - \$2.5 million
- Bendigo WRP sludge handling upgrade - \$10.5 million
- Bendigo, Castlemaine, Kyneton WTP water quality upgrades - \$1.1 million
- Castlemaine WRP upgrades - \$5.7 million
- Cohuna WRP capacity upgrades - \$0.9 million
- Goornong treated water supply upgrade - \$1.7 million
- Trentham WTP capacity upgrade - \$4.4 million
- West Bendigo sewer growth & compliance – \$7.0 million

Second, for other projects Coliban Water has used various allocation methodologies to estimate the costs attributable to new customers. The projects/programs in this category includes the following and totals \$77.8 million:

- SCADA hardware - \$3.3 million
- Sewer network renewals - \$1.5 million
- Water reclamation plant renewals - \$15.2 million
- Sewer network improvement/compliance - \$13.5 million
- Water reclamation plant improvement/compliance - \$8.5 million
- Water main renewals - \$1.7 million
- Water treatment plant renewals - \$2.6 million
- Water network improvement/compliance - \$0.2 million
- Water network renewals - \$0.4 million
- Water treatment improvement/compliance - \$5.4 million
- Bendigo WRP upgrade & tertiary filter expansion - \$25.4 million

3.2.4 Capital expenditure across different regions

Coliban Water has separated the capital expenditure included in new customer contributions between growth regions as outline in table 3.3.

Table 3.3: Capital expenditure by region

Region	Capital expenditure (\$ million)
Coliban Northern	222.6
Coliban Southern	42.7
Elmore	0.2
Loddon/Wimmera	0.3
Goulburn	0.5
Murray	7.4
Trentham	6.0
Campaspe	1.7
	281.5

Most of the capital expenditure is expected to be incurred in the Coliban Northern region, which includes the town of Bendigo. Coliban Water has proposed to apply the same new customer contribution across its entire region, despite some regions not forecast to incur substantial expenditure. In response to the commission’s Draft Decision, Coliban Water has proposed a small lot infill development charge of \$1,790.⁸ It is expected that this charge will apply to the majority of new customer contributions from those regions without significant forecast capital expenditure.

3.2.5 Incremental operating costs

Coliban Water has not included incremental operating costs in its calculation of new customer contributions.

⁸ Coliban Water 2023, Response to Coliban Water Price Submission draft decision, 18 May, page 48.

3.3 Our assessment

In assessing the capital expenditure included in the calculation of new customer contributions we have had regard to the guidance provided by the commission (as outlined in section 1.3). We have also established criteria for assessing how the capital expenditure is apportioned to new customer contributions, particularly where the assets have more than one driver (e.g. an upgrade to a treatment plant that is required to meet compliance requirements but will also cater for future growth in volumes of water treatment). The criteria we have used is as follows:

1. Whether the methodology and approach used to allocate the capital expenditure to new customer contributions is well explained and approved by senior management and the Board
2. Whether there is clear documentation of how the methodology and approach has been applied to establish new customer contributions for this pricing submission
3. Whether the allocator used to apportion capital expenditure is reasonable
4. Whether the allocator value is verifiable

In future assessments we would also consider whether the methodology and approach has been applied consistently from one period to the next, and if there were any changes that they were comprehensively explained.

The commission's guidance requires the capital costs included in new customer contributions should be incremental.⁹ This means those costs that are required only because of there being new customers. In a situation where there is more than one driver for capital expenditure, one method to estimate this incremental cost is to estimate what the cost would be with and without any new customers, with the difference between the two estimates being attributable to the new customers, and therefore being the incremental cost. We have assessed capital expenditure that is attributable to more than one driver against the principle of incremental cost.

⁹ Essential Services Commission 2021, 2023 water price review: Guidance paper, 26 October, page 59.

Table 3.4 below summarises our assessment of the capital expenditure included by Coliban Water.

Table 3.4: Assessment of new customer contributions allocations

Category	Capital expenditure (\$m)	Methodology explained	Methodology applied & documented	Allocator	Allocator verifiable
Fully allocated to growth					
Network assets	126.8	Yes	No	Fully allocated	Yes
Water share purchases	26.0	Yes	No	Fully allocated	Yes
Water resource projects	6.6	Yes	No	Fully allocated	Yes
Growth as a shared driver					
Projects/programs with 10-year growth component	44.3	Yes	No	10-year growth	Yes
SCADA hardware	3.3	Yes	No	Comparative costs	No
Sewer network renewals	1.5	Yes	No	Nominal	No
Water reclamation plant renewals	15.2	Yes	No	Sewer flows	Yes
Sewer network improvement/compliance	13.5	Yes	No	Sewer flows	No
Water reclamation plant improvement/compliance	8.5	Yes	No	Sewer flows	No
Water main renewals	1.7	Yes	No	Water demand	No
Water treatment plant renewals	2.6	Yes	No	Water demand	No
Water network improvement/compliance	0.2	Yes	No	10-year growth	Yes
Water network renewals	0.4	Yes	No	Water demand	No
Water treatment improvement/compliance	5.4	Yes	No	10-year growth	Yes
Bendigo WRP upgrade & tertiary filter expansion	25.4	Yes	No	Sewer flows	No

The methodology and approach provided by Coliban Water describes the approach to allocating capital expenditure to new customer contributions. However, it does not outline how Coliban Water has had regard to the commission’s pricing principle as outlined in its guidance.¹⁰

¹⁰ Essential Services Commission 2021, 2023 water price review: Guidance paper, 26 October, page 59.

In the absence of evidence of how Coliban Water has had regard to the commission's pricing principles, we have had to assess the capital expenditure based on a degree of confidence that it would be appropriate. As outlined in section 2.3, we have rated this confidence level as either high; medium or low.

3.3.1 Fully allocated to new customer contributions

The capital expenditure in this category has assets that are provided exclusively for new customers; upgrades to network assets and treatment plants; purchases of water shares and additional water resources.

An assessment on those assets that only service new customers is relatively straightforward. The amount provided by Coliban Water for this review (\$56.4 million) is consistent with the capital expenditure provided in its pricing submission. As the assessment of this category was undertaken as part of the review of capital expenditure for the Draft Decision, and no changes were recommended, we would conclude that there is a high degree of confidence that this capital expenditure should be included in new customer contributions.

For upgrades to network assets and treatment plants (\$70.5 million), it is not clear why these projects/programs have been fully allocated to new customers. We would expect that in most instances these types of assets would be utilised by both new and existing customers, although that is not necessarily the case. Coliban Water has not provided a detailed rationale for why these assets should be fully allocated to the calculation of new customer contributions. We acknowledge that there is likely to be a large amount of this capital expenditure that is due to growth, therefore we have a medium level of confidence that this capital expenditure is appropriate to include in the calculation of new customer contributions.

For the capital expenditure that has been proposed to be spent on the purchase of water shares and water resources (\$32.6 million), we have been provided with a detailed explanation as to why this should be fully allocated to new customer contributions. At our meeting with staff of Coliban Water, it was stated that without growth in new customers there would not be a need to purchase more water shares and that this was reflected in its 2022 Urban Water Strategy. However, Coliban Water's pricing submission states the following:

"Climate change is a growing risk. Over the past 25 years, inflows to Upper Coliban catchments have fallen by 53%. Investment is needed for more water shares, to investigate alternative sources of water and to reduce system losses, as outlined in our Urban Water Strategy."

In response to the commission's Draft Decision, Coliban Water has suggested that climate change and growth are not mutually exclusive drivers for expenditure and citing both as drivers does not

lead to an inconsistency.¹¹ It provided further information that demonstrated that growth is the primary driver for water purchases and that, based on its forecast costs, was adopting a relatively conservative approach.¹²

We acknowledge that growth is a key driver in the need to augment water supplies, and in this case, it may be possible that it is entirely attributable to new customers. However, we have not been provided with sufficient detail to be entirely confident that this is the case. Documentation that provides deep analysis on water supply and demand projections over the medium to long term, both with and without new customers, would be helpful to explain the allocation approach for this cost category. Given this lack of a fully documented methodology and approach, we have a medium level of confidence that this capital expenditure is appropriate to include in the calculation of new customer contributions.

3.3.2 Growth as a shared driver

For the assets that have been apportioned between growth and other drivers of capital expenditure, we have assessed this approach against the principle of incremental costs. Coliban Water provided documentation that explained how these projects and programs have been allocated and has undertaken some analysis to estimate the increase in costs for upsizing assets to meet growth. However, it has not provided detailed analysis that specifically assesses the incremental costs for each of these categories of projects/programs.

Given that Coliban Water has not provided this level of detailed analysis, we have assessed the projects/programs based on what it has provided.

For those projects/programs that have been allocated based on 10 years of growth, we are of the view that the results of this allocation approach would likely be conservative (results range from 10 to 22 per cent) and therefore we have a medium level of confidence that this capital expenditure is appropriate to include in the calculation of new customer contributions.

For the other projects/programs we have assessed the approach used by Coliban Water and have a high level of confidence that the capital expenditure should all be included in the calculation of new customer contributions. These include the following:

- Sewer network renewals - \$1.5 million
- Water reclamation plant improvement/compliance - \$8.5 million
- Water main renewals - \$1.7 million
- Water network renewals - \$0.4 million

¹¹ Email from Executive General Manager Strategy of Coliban Water to Senior Regulatory Manager of the commission on 18 May 2023.

¹² Coliban Water 2023, Section 4G Notice to provide information and documents, 10 May, pages 1-2.

- Water treatment improvement/compliance - \$5.4 million

For the remaining projects/programs we have a medium level of confidence that all of the capital expenditure should be included in the calculation of new customer contributions, as the results of the allocation approach appear to be high based on the level of information provided:

- SCADA hardware - \$3.3 million
- Bendigo WRP upgrade & tertiary filter expansion - \$25.4 million
- Water reclamation plant renewals - \$15.2 million
- Sewer network improvement/compliance - \$13.5 million
- Water treatment plant renewals - \$2.6 million
- Water network improvement/compliance - \$0.2 million

3.3.3 Summary of assessment

In summary we have a high level of confidence that \$73.9 million of assets associated with growth should be included in the calculation of new customer contributions, and a medium level of confidence that all the remaining \$207.6 million of capital expenditure should be included.

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