7 May 2024

Kate Symons
Chairperson and Commissioner
Essential Services Commission

Dear Kate

WATER PRICE REVIEW 2024 - RESPONSE TO GREATER WESTERN WATER DRAFT DECISION

On behalf of Greater Western Water (GWW) and our customers, we are pleased to share our response to the Essential Services Commission's (ESC) draft decision for GWW's first price submission (2024-2028).

GWW's first price submission focusses on getting the foundations right. We carefully considered what it takes to run the new business, deliver our core services to the region, and maintain financial sustainability. The GWW Board and executive have been deeply involved in the development of the price submission and have continued their ongoing assurance through the development of this response.

The draft decision has accepted many elements of our price submission. It recognised that the integration of City West Water (CWW) and Western Water (WW) fundamentally changed our operations and expenditure, while we continued to meet customer outcomes and save customers money. The draft decision recognises our extensive customer and community engagement program and how our customers and stakeholders have influenced our proposals. It also acknowledged that GWW's Asset Delivery Organisation Review program will support efficient delivery of an increased capital program, which is critical to keep up with the region's rapid growth, work towards equity of service levels and achieve our customer commitments.

The draft decision noted that the expenditure consultant needed more information to confirm the prudency and efficiency of:

- Base year operating expenditure costs associated with integration, compliance obligations, corporate costs, customer and community engagement, field maintenance, labour costs and other base year increases.
- Operational expenditure step change for the proposed Billing and Collection program.
- Capital expenditure for Asset Ecosystem, Stormwater Harvesting and Water Main Renewals programs.

Consequently, the ESC's draft decision removed some of these costs from the revenue requirement.

The reduction in revenue requirement outlined in the draft decision poses a significant risk to our ability to maintain service levels, meet our compliance and regulatory obligations, and deliver our customer commitments. In most cases these reductions have been made based on the expenditure consultant not having sufficient information to assess whether costs were prudent and efficient.

The draft decision did not accept our New Customer Contribution (NCC) charges, requesting additional information on locational costs. The draft decision also requested GWW consider the update to population and dwelling forecasts and reflect that in the financial template.

When considering GWW's PREMO rating, the draft decision noted many positive elements that were aligned with a Management rating of 'Standard'. However, based on the large removal of expenditure and assessment of our proposed NCCs, the ESC's initial view was to assess Management as 'Basic'. We welcome a review of this rating alongside the additional information provided on our expenditure and NCCs proposals.

This response addresses the ESC's request for this further information and provides the ESC with the evidentiary basis it needs to approve our proposed expenditure forecasts. We are also proposing to assume further revenue risk on some components of the capital program, noting that they will be further developed prior to delivery. This approach is consistent with our commitment to our customers and supports our offering under the 'Risk' component of PREMO.

We have collaborated with the ESC in developing our response to ensure that it addresses the draft decision by providing the necessary evidence to support our proposals.

Our response to the draft decision contains:

- Operational expenditure (opex): further evidence that supports the opex baseline and forecast. We have detailed the expenditure adjustments in the baseline as prudent and efficient, and shown that costs are recurrent and certain. We have provided additional evidence of the step change in Billing and Collections as the costs are required to maintain the system.

- Capital expenditure (capex): additional evidence and business cases to justify our capex proposals. Where appropriate we have removed capex from the forecast due to increased program cost uncertainty which has been identified between the GWW price submission and the ESC's draft decision.

- NCCs: reinstatement of the existing western region infill charge in our proposed NCC structure, and demonstration that the tariff structure we have proposed is consistent with the ESC's pricing principles.

We appreciate the ongoing collaboration with the ESC throughout this process, including the opportunity to respond to the draft decision with detail supporting our proposals. The price review process is an essential step in ensuring our customers' values and voices are at the forefront for GWW, and we are committed to providing them trusted water services now and for future generations.

DAVID MIDDLETON
Chair
Greater Western Water

MAREE LANG
Managing Director
Greater Western Water

Price Submission Draft Decision Response

2024-2028

7 May 2024

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1 Customer outcomes

Draft decision

The draft decision accepted GWW's customer outcomes, targets and measures, pending completion of the 'Standard Customer Outcomes template' and proposed GWW and the ESC work together to finalise in line with ESC guidance.

Response

GWW has completed the 'Standard Customer Outcomes template' (Attachment 1) and is working with the ESC to confirm that our customer outcomes, measures, and targets comply with their guidance.

2 Revenue requirement

Draft decision

The draft decision adopts a revenue requirement of $3,439 million, 1.3 per cent (or $44 million) lower than GWW proposed. The ESC's reduction to our proposed forecasted revenue requirement was mainly driven by its cuts to our proposed operating and capital expenditures.

Response

In response to the draft decision, our proposed revenue requirement of $3,528.22 over the four-year regulatory period. A summary of our response is shown in Figure 1 and the breakdown of the updated revenue requirement is outlined in Table 1 and Table 2. Sections 3, 4 and 5 outline our detailed response for each component of the revenue requirement.

Figure 1 – Changes to updated revenue requirement compared to price submission ($m, 2023-24)

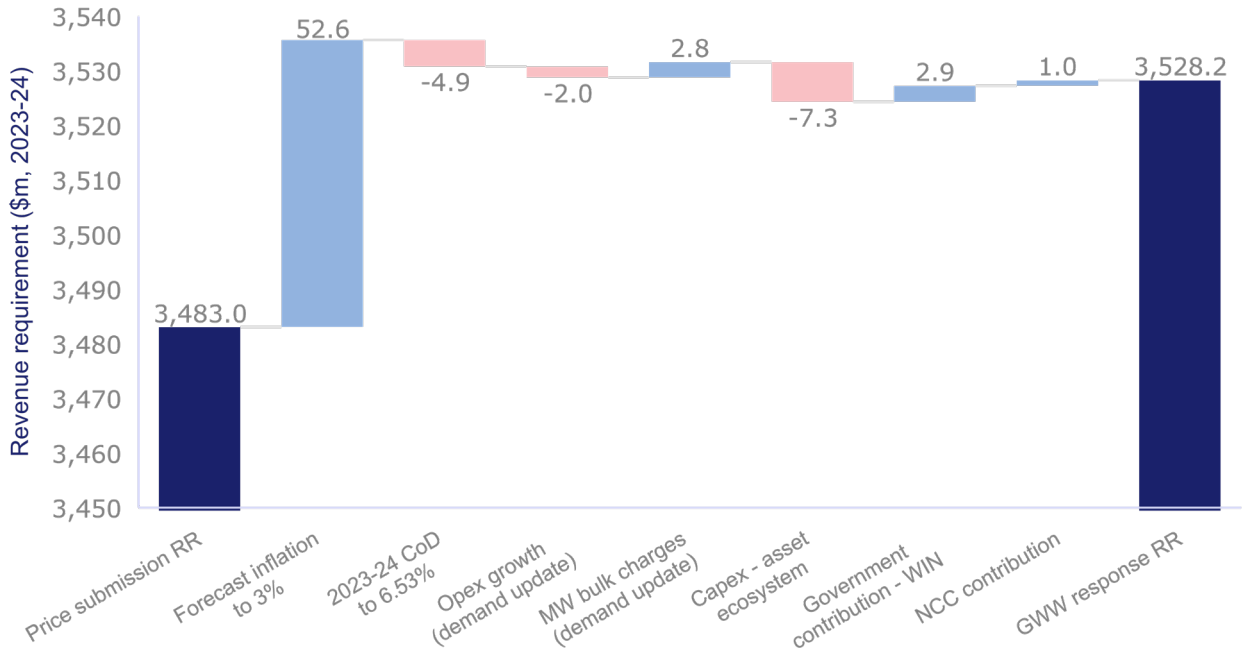


Table 1 – GWW's updated revenue requirement ($m, 2023-24)

	2024-25	2025-26	2026-27	2027-28	Total
Operating expenditure – controllable	217.71	217.73	218.51	220.16	**874.12**
Operating expenditure – non-controllable	411.43	412.31	412.36	413.01	**1,649.11**
Return on assets	94.06	100.95	108.17	115.45	**418.64**
Regulatory depreciation	101.81	107.14	112.53	117.74	**439.22**
Tax allowance	34.07	36.10	37.66	39.31	**147.14**
Total revenue requirement	**859.08**	**874.24**	**889.23**	**905.68**	**3,528.22**

Table 2 – Revenue requirement overall change ($m, 2023-24)

	2024-25	2025-26	2026-27	2027-28	Total
A. GWW price submission	846.75	864.05	877.54	894.69	**3,483.03**
B. ESC draft decision	838.46	853.84	865.32	881.41	**3,439.03**
C. GWW revised response	859.08	874.24	889.23	905.68	**3,528.22**
Overall change (C-A)	**12.33**	**10.19**	**11.69**	**10.98**	**45.19**

3 Regulatory asset base

3.1 Opening regulatory asset base

Draft decision

The draft decision did not accept our opening regulatory asset base as of 1 July 2024 due to ESC's proposed adjustments to our forecast 2023-24 capital expenditure. In addition, the draft decision noted that 'where developer contribution forecasts are higher than the forecast benchmark for 2023-24 in the 2018 and 2020 price determinations, GWW must use the higher amount. In practice, ESC's final decision will use the latest forecast from GWW based on year-to-date actual contributions'.[1]

Response

We have updated the 2023-24 capital expenditure to reflect our response to the draft decision and our year-to-date actual capital expenditure. The main revision compared to our price submission is the update to the Asset ecosystem program, which has been revised down – this is discussed in detail in Section 5.2.

The government contributions over 2023-24 to 2025-26 have been updated to reflect the latest changes to the funding milestones for Western Irrigation Network (WIN) project. For 2023-24, we have already received funds for $6 million and are expecting a further $6 million in 2024-25. Additionally, we expect to receive a further $3.37 million funds in 2025-26. However, funds totaling $16.8 million will not be received at all due to the deferment of the Sunbury to Melton Pipeline.

The 2023-24 customer contribution and proceeds from disposal will remain the same as proposed in our price submission as our year-to-date actual is tracking in line with our original forecast. We have updated the 2023-24 regulatory depreciation to reflect our response to the draft decision on capital expenditure and our updates to the government contribution.

Our proposed opening RAB as of 1 July 2024 in response to the draft decision is $3,407.88 million, as outlined in Table 3.

3.2 Regulatory asset base roll forward

Draft decision

The draft decision did not accept our forecast regulatory asset base (RAB) due to ESC's proposed adjustments to our forecast capital expenditure and non-acceptance of our proposed standard new customer contribution charges.

Response

Our proposed RAB in response to the draft decision is outlined in Table 3. The RAB values reflect our detailed responses on capital expenditure (Section 5) and new

[1] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p.47

customer contributions (Section 7). The regulatory depreciation is updated to reflect our response to capital expenditure and new customer contributions.

Table 3 – GWW's updated regulated asset base ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28
Opening RAB	3,255.48	3,407.88	3,585.68	3,729.71	3,887.93
Plus gross capital expenditure	330.45	363.30	336.96	352.88	309.08
Less government contributions	-6.00	-6.02	-3.37	0.00	0.00
Less customer contributions	-75.53	-76.86	-81.61	-81.32	-85.78
Less proceeds from disposal	-0.81	-0.82	-0.82	-0.81	-0.81
Less regulatory depreciation	-95.72	-101.81	-107.14	-112.53	-117.74
Closing RAB	**3,407.88**	**3,585.68**	**3,729.71**	**3,887.93**	**3,992.67**

4 Operating expenditure

4.1 Our proposal

In our price submission, we proposed a total forecast operating expenditure (opex) of $2,520.9 million. This was comprised of $876.12 million of controllable opex and $1,664.78 million of non-controllable opex (predominately bulk charges to Melbourne Water).

Our proposal included a 0.19 per cent per annum net efficiency over the four years, resulting in a forecast decline of controllable opex per connection from $341 in 2022-23 (the base year) to $310 in 2027-28 (by the end of the regulatory period).

The base year operating expenditure included costs and efficiencies from:

- Integrating CWW and WW, resulted in addition operating expenditure to consolidate people, processes and systems of the two legacy entities. This was a total of $1.19 million of integration costs and $2.93 million of integration efficiencies.
- Transforming our operating expenditure programs across safety, customer service, compliance, asset management and corporate functions. This was a total of $6.81 million in additional net costs.[2]
- Changes in obligations including regulatory, policy and legislative changes. This was a total of $1.33 million in new obligation expenditure.
- External cost drivers that were related to changes in our external operating environment across operations and maintenance, IT, and energy. This was a total of $12.69 million in additional costs.

Our proposal included a trend baseline forecast that reflected customer growth (an average of 2.8 per cent) and an ambitious opex efficiency target of 3.0 per cent.

Our proposal also included an addition $34.49 million over four years in step changes due to new capital works, new obligations, and new customer commitments.

4.2 FTI Consulting's findings

In its review of GWW's operating expenditure, FTI Consulting (FTI) stated (summarised):

- Base year:
  - Unexplained: *we are unable to verify the prudency and efficiency of the remaining $2.55 million of the base year increase.*[3]
  - Integration costs: *it has not clearly demonstrated that the nature of the activities will be recurrent (hence justifying inclusion in the baseline), nor that they are prudent and efficient*. [4]

[2] This total includes the revised amount ($1.03 million) for 'Transformation – Customer'.
[3] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 37.
[4] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 23.

- Labour: *it has not provided sufficient information to verify the prudency and efficiency.* [5]
- Field maintenance: *To provide an opinion on the prudency and efficiency of these costs in accordance with the Guidance Paper (as is our role), we need quantitative information on the underlying cost drivers.* [6]
- Compliance: *unable to verify if the additional $3.3 million for sewer compliance obligations is prudent and efficient. If such costs were to be allowed, in our view this would be better addressed as a step change.* [7]
- Corporate and customer and community: *does not clearly identify:*
  - *all the key activities that either were not, or could not be undertaken with those existing resources*
  - *why it is necessary for Greater Western Water (or important for its customers) to undertake those activities and/or increase its level of service to its required standard*
  - *how this directly relates to these additional costs.* [8]

- Step change for Billing and Collections: *our key concern is that this forecast step change includes a contingency factor, including the 'continuous improvement' element.* [9]
- Efficiency:
  - *Greater Western Water has sought to be transparent in how it has built its efficiency target.* [10]
  - For Billing and Collections: *We also consider that the proposed efficiencies that are forecast to result from this investment should be applied to the step change, rather than be embedded in the efficiency factor.* [11]
  - *if you remove the forecast efficiencies attributable to its transformation and integration, Greater Western Water's net efficiency factor would become 1.4 per cent, which would place it at the bottom of this table* [net average increase in opex per year by business in Victoria]. [12]

4.3 Draft decision

The draft decision proposes a forecast opex of $2,451.54 million, which is 2.8 per cent (or $69.36 million) lower than proposed by GWW. The draft decision removes $16.86 million in controllable costs from the base year and $3.16 million in forecast baseline adjustments. The rationale for the draft decision is that the ESC's expenditure consultant (FTI) was unable to verify these costs as prudent, efficient, and recurring. The draft decision requires our response to provide additional information to allow for the ESC to assess prudency and efficiency.

[5] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 37.
[6] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 33.
[7] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 27.
[8] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 28.
[9] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 42.
[10] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 50.
[11] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 42.
[12] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p 51.

4.4 Response

Our response proposes a forecast opex of $2,523.22 million. This response provides further supporting evidence, as requested by the ESC, to demonstrate that our opex (baseline and step changes) is prudent, efficient, and recurring.

Table 4 and Table 5 provide a response summary for each of the ESC's proposed adjustments to GWW's opex. The slight increase in total opex compared to the price submission is mainly due to the increase in forecast cost for environmental contribution (due to forecast inflation update) and Melbourne Water's variable bulk charges (due to demand update). This was partially offset by decreases to the controllable opex due to updated customer growth data (ViF2023).

Table 4 – GWW's updated forecast operating expenditure ($m, 2023-24)

	2024-25	2025-26	2026-27	2027-28	Total
Controllable OPEX:					
Other base year costs	2.56	2.55	2.55	2.56	**10.21**
Integration costs	1.35	1.35	1.35	1.36	**5.41**
Labour costs	0.91	0.91	0.91	0.91	**3.64**
Field maintenance costs	6.98	6.96	6.95	6.99	**27.88**
Compliance obligation costs	3.31	3.30	3.30	3.31	**13.22**
Corporate and customer costs	1.80	1.79	1.79	1.80	**7.17**
Remaining base year OPEX	193.32	192.65	192.58	193.55	**772.10**
Total base year OPEX	**210.22**	**209.50**	**209.43**	**210.47**	**839.63**
Billing & collection updates	0.77	0.78	0.80	0.81	**3.16**
Remaining step changes OPEX	6.72	7.45	8.28	8.88	**31.33**
Total step changes OPEX	**7.49**	**8.23**	**9.08**	**9.69**	**34.49**
Total controllable OPEX	**217.71**	**217.73**	**218.51**	**220.16**	**874.12**
Non-controllable OPEX:					
Bulk charges	377.61	379.46	380.43	381.99	**1,519.49**
Licence fees	0.89	0.89	0.89	0.89	**3.56**
Environmental contribution levy	32.92	31.97	31.03	30.13	**126.05**
Total non-controllable OPEX	**411.43**	**412.31**	**412.36**	**413.01**	**1,649.11**
Total OPEX - GWW response	**629.14**	**630.05**	**630.86**	**633.17**	**2,523.22**

Table 5 – Operating expenditure overall changes ($m, 2023-24)

	2024-25	2025-26	2026-27	2027-28	Total
A. Total OPEX - price submission	628.35	630.17	630.16	632.22	**2,520.90**
B. Total OPEX - ESC draft decision	610.80	612.78	612.92	615.04	**2,451.54**
GWW revised response:					
C. Controllable opex growth (demand update)	-0.47	-0.78	-0.49	-0.26	**-2.00**
D. Melbourne Water bulk charges (demand update)	1.09	0.35	0.75	0.63	**2.83**
E. Environmental contribution levy (forecast inflation update)	0.16	0.31	0.45	0.58	**1.49**
Total OPEX - GWW response (A+C+D+E)	**629.14**	**630.05**	**630.86**	**633.17**	2,523.22

The detailed response is set out in Sections 4.5 to 4.8. Our response is structured around the key issues identified in the draft decision and provides further evidence on the prudency and efficiency of our opex forecast:

- Base year response on:
  - Method issues and other costs
  - Integration costs
  - Labour costs
  - Field maintenance
  - Compliance obligations
  - Corporate and customer and community costs
- Step changes adjustment to Billings and Collections
- Efficiency forecast

We have also updated the environmental contribution levy and Melbourne Water variable bulk charges in non-controllable opex to reflect the updated forecast inflation and demand forecast (ViF2023), respectively, which are outlined in Sections 4.8.1 and 4.8.2.

4.5 Base year

Draft decision

The draft decision removes $55.09 million over four years due to reductions in the 2022-23 operating expenditure base year.[13] The draft decision is based on the inability of the ESC's expenditure consultant to verify prudency and efficiency based on our price submission, and their subsequent questions.

[13] The $55.1 million was estimated by the ESC following its adjustments to GWW's baseline opex to capture the impact of its removal of Billing and Collection system cost savings from GWW's proposed efficiency rate. ESC reallocated these savings as step change adjustments, representing no overall net change for this adjustment.

Response

The base year is a key component of the Base-Step-Trend (BST) forecasting method. Consistent with the ESC's method, our proposed base year 2022-23 is the most recent year of available actual expenditure and has been adjusted to remove all non-recurrent expenditure. This response restates that our proposed base year of $209.43 million is prudent, efficient, and recurring.

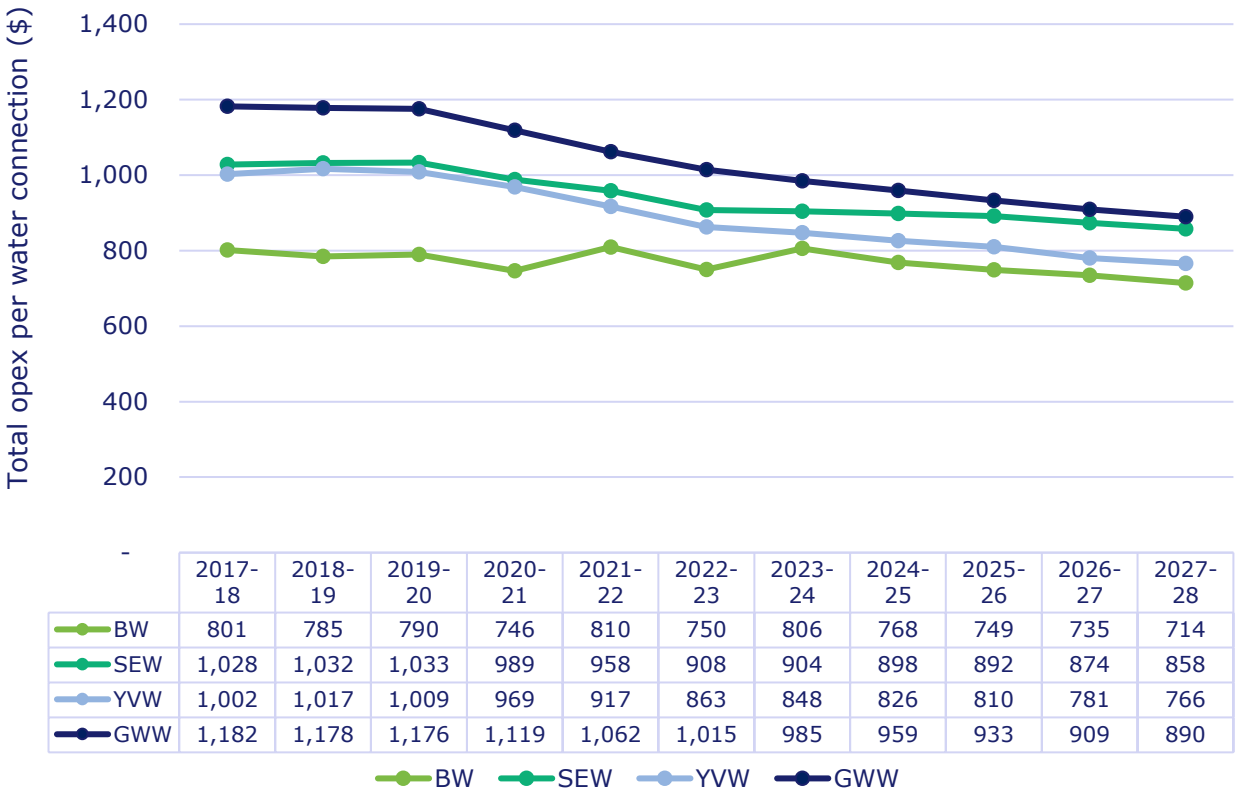
Our proposed $209.43 million base year is the best representation of a typical year of opex to meet our regulatory, service obligations and customer outcomes and represents our best offer under the PREMO framework. Reducing the base year opex expenditure will impact our ability to meet service standards and deliver our customer outcomes in the upcoming regulatory period. It also creates significant financial risk for the business, with the scale of the reductions unlikely to be achieved at the required pace.

We have assessed that our proposed base year is prudent and efficient. This is supported by benchmarking our cost to serve both over time and against our peers where comparable. But meaningful benchmarking needs to account for the fundamental differences in the controllable cost base between GWW, South East Water (SEW) and Yarra Valley Water (YVW).

These differences reflect the relatively vertically integrated nature of the western service region. Compared to SEW and YVW, we provide materially more water and sewer services from controllable opex rather than through bulk services - which is treated by the ESC as uncontrollable opex. These differences mean that direct comparisons of non-controllable opex per connection are not representative of differences in total cost to serve.

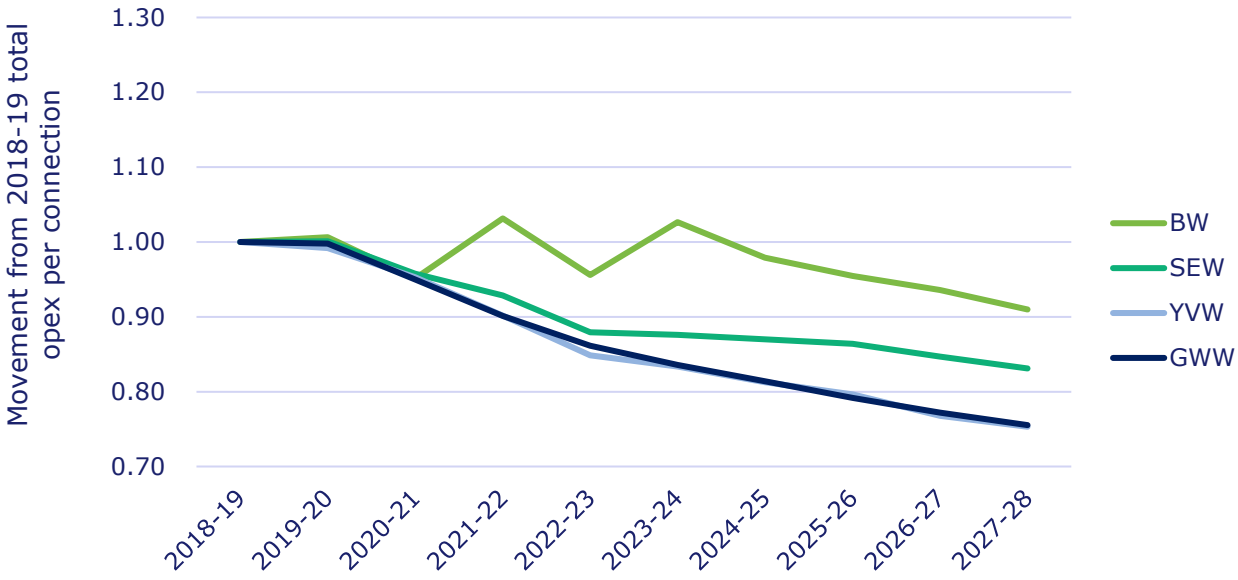
Cost to serve comparisons based on total operating expenditure (controllable and non-controllable) are set out in Figure 2. Historically the aggregated cost to serve associated with CWW and WW has been higher than SEW, YVW and Barwon Water (BW). This is consistent with historical operating expenditure being a composite of two separate businesses that incorporates material cost duplications. From 2021 the integration has led to a relatively strong declining trend in our cost to serve that reflects the economies of scope and scale that the integration has been able to achieve. It is important to note that relative to SEW, YVW and BW, we have achieved the largest decline in total opex per connection over the 10 years (Figure 3).

Figure 2 – Total opex per water connection ($, 2023-24)



	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
BW	801	785	790	746	810	750	806	768	749	735	714
SEW	1,028	1,032	1,033	989	958	908	904	898	892	874	858
YVW	1,002	1,017	1,009	969	917	863	848	826	810	781	766
GWW	1,182	1,178	1,176	1,119	1,062	1,015	985	959	933	909	890

Figure 3 – Total opex per connection (index where 2018-19 is set to 1)



4.5.1 Method issues and other costs

Draft decision

The draft decision proposes to remove $2.55 million of above base year determination costs on the basis that it could not verify prudency and efficiency. The draft decision is based on benchmarking actual operating expenditure outcomes against the aggregated operating expenditure forecasts approved for CWW and WW in their 2018 and 2020 price determinations.

Response

In response to the draft decision, GWW maintains that these costs are prudent, efficient, and recurrent; therefore, should be included in our proposed base year. The exceedances should be viewed as artifacts of the assessment process which focuses on the variance between the aggregated CWW and WW historical decision and the actual base year costs.

The ESC adopts a revealed cost approach for the base year. The precedent set through the ESC's historic determinations give us direction in terms of how to interpret its guidance and how to ensure we are meeting the ESC's expectations in relation to satisfying the requirements of the Water Industry Regulatory Order (WIRO). There is clear regulatory precedent that expenditure (including opex) and demand forecasts should be based on the best available information at the time.

To align with this precedent, we need to acknowledge that the previous determinations are based on 2016-17 and 2018-19 controllable opex for the two anteceded businesses that use outdated (and in hindsight, materially inaccurate) estimates of growth based on Victoria in Future (ViF) forecasts from 2016 for CWW and WW, and included an efficiency forecast of 2.0 per cent. The historical cost forecasts approved by the ESC for CWW and WW, while utilising the best available data at the time, are now materially outdated and do not represent a better source of available information to assess the accurate costs of our base year.

Actual connections figures for the combined entity over the prior regulatory period (1 July 2018 to 30 June 2023) are 5,516 higher than the forecast. This translates to an average annual growth rate of 3.28 per cent – 0.29 per cent higher than the forecast at the last determination of 2.99 per cent for the combined entity (see Table 6).

Much of the higher growth was experienced in the WW catchment, where the cost to serve is much higher (owing to dispersed customer base and localised treatment of water and sewage) and where we have been experiencing constant returns to scale and diseconomies of scale. This is due to assets having reached or exceeding capacity and requiring operational fixes whilst waiting for upgrades (as proposed in GWW's 2024 Price Submission).

To provide a meaningful assessment based on variations with historical approved forecasts we need to account for the shortcomings of the older ViF forecasts. Re-

forecasting from the 2018 and 2020 determinations using actual growth figures, results in a base year of $190.1 million. This shows that BST opex forecasts from the WW 2018 and CWW 2020 price submissions underestimated BST opex by $5.9 million. This method impacts all the comparative assessments undertaken, including labour, field maintenance, sewer compliance, and customer and community.

It is important to note that this analysis accounts purely for actual growth and does not reference upward cost pressures due to integration, workplace safety regulations, COVID-19 impacts, and supply chain interruptions. The true 2016 and 2018 underestimate of BST opex is likely to be much greater.

Table 6 – Connections – forecast and actual

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Forecast combined connections	526,584	543,537	562,400	578,800	594,667	610,103
Forecast combined growth rate		3.22%	3.47%	2.92%	2.74%	2.60%
Actual combined connections	524,025	541,166	560,477	582,181	597,551	615,619
Actual combined growth rate		3.27%	3.57%	3.87%	2.64%	3.02%

4.5.2 Integration costs

Draft decision

The draft decision proposes to remove $1.35 million, comprising $0.95 million for the costs of consolidating GIS systems and $0.40 million for the costs associated with operating and managing customer call centres as it has not clearly demonstrated that the nature of the activities will be recurrent.

Response

GWW maintains that these costs are both prudent and efficient and proposes that $1.35 million of integration costs be included in the base year.

These costs are required for us to comply with our obligations to deliver the CWW and WW integration. The obligations for integration are set out in the Ministerial determinations issued by the acting Minister for Water.[14] These expenditures are also necessary for achieving the integration-related efficiency forecast we are proposing to deliver to our customers over the next regulatory period.

We are committed to delivering the benefits of integration to customers through our forecast cost savings. Our ability to deliver these cost savings is fully dependent on the integration investments we have made and will continue to make during the next regulatory period. Outside of improving productivity with existing assets, investment in new systems, processes, people or procedures is one of the core strategies that

[14] *Restructure of City West Water Corporation and Western Region Water Corporation Determination 2021* and *Abolition of Western Region Water Corporation Determination 2021,* both made by Richard Wynne, Acting Minister for Water on 28 February 2021 and published in the Victorian Government Gazette G10, 11 March 2021.

businesses adopt to deliver efficiency. There is a long history of the ESC approving expenditures where they are shown to deliver net efficiency gains.

Our proposed Geographic Information System (GIS) costs and costs associated with operating and managing the customer call centers are clear examples of investments that will generate net integration cost savings. These expenditures are necessary to deliver the net cost savings that we have proposed. In the absence of these expenditures our long-term opex forecasts will be higher than they need to be, resulting in customers facing higher prices in the future.

The ESC's guidance requirement for GWW to separately identify integration expenditure (as set out in section 4.3 and Appendix H of our proposal) did not extend to requiring the total removal of ongoing integration expenditure from our proposed base year.[15]

We have clearly identified costs associated with transitioning (or integrating) the two legacy businesses into one and have identified opex efficiencies (see Sections 4.2.1, 4.2.2, H.1.1 and H.2.1 of GWW's 2024 Price Submission). Accordingly, we have also only included integration expenditure in the base year that is consistent with the guidance terms of:

- These are recurrent costs throughout the upcoming regulatory period commencing 1 July 2024.16
- These costs form that basis of which efficiencies can be achieved, and the efficiencies are ongoing.17

4.5.3 Labour costs

Draft decision

The ESC draft decision has proposed to remove $0.91 million of labour cost increases. While GWW described the costs captured in the residual category, it has not provided sufficient information to verify the prudency and efficiency of the $0.91 million increase.

Response

GWW maintains that these costs are both prudent and efficient and that the $0.91 million should be included in our proposed base year.

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[15] Essential Services Commission (2022), 2024 Greater Western Water price review: Guidance paper, 20 September, p.v:

> 'We expect that the integration of City West Water and Western Water to form Greater Western Water has resulted in the business incurring additional transitioning costs, and we expect the price submission will clearly identify these costs, and justify any need to recover such costs having regard to our guidance. We also expect that Greater Western Water will identify any operational efficiencies compared to the two former businesses and take these efficiencies into account in assessing forward looking operating and capital expenses.'

[16] The baseline operating expenditure is consistent with Box 3.2 in Essential Services Commission (2022), *2024 Greater Western Water price review: Guidance paper*, 20 September, p.32.

[17] 'produce longer term operational efficiencies compared to the two former businesses'. Essential Services Commission (2022), *2024 Greater Western Water price review: Guidance paper*, 20 September, p.30.

We proposed not to include an opex step change for payroll tax and superannuation guarantee changes. We are proposing to fund these additional costs through savings associated with our workforce optimisation plan – a component of our sustainable efficiency plan. The plan includes $0.91 million of other labour cost increases that ensure we can deliver the workforce savings that will allow us to absorb the additional payroll and superannuation costs over the next regulatory period.

A full breakdown of the superannuation and payroll tax costs, in addition to our explanation on the workforce optimisation plan, is described in the GWW 2024 Price Submission (Appendix H.2.4).

4.5.4 Field maintenance

Draft decision

The draft decision proposes to remove $6.96 million of field maintenance costs from the base year. This is provided as an opinion based on the prudency and efficiency of the costs in accordance with the Guidance Paper. FTI stated they needed quantitative information on the underlying cost drivers.

Response

In response to the draft decision, we maintain that these costs ($6.96 million) are both prudent and efficient and should be included in our proposed base year.

These expenditures are consistent with trends in the historical average cost of repairs, and increases in the costs associated with external contractors. The following sections 4.5.4.1 through to 4.5.4.3 provide information supporting the prudency and efficiency of these recurring expenditures.

4.5.4.1 Trends in field maintenance costs

Over the last five years, GWW has seen an increase in its asset management costs that is driven by step increases in 2018-19 for:

- **Responsive maintenance**: expenditure associated with unexpected asset failure.
- **Preventative maintenance**: expenditure associated with proactive asset maintenance aimed at minimising likelihood of failure.

Table 7 shows that responsive maintenance accounted for around 74 per cent of the total field maintenance costs (as of 2022-23) and has grown at a compounding average growth rate of 3.6 per cent per annum (to $34 million in 2022-23 from $27.5 million in 2016-17). Preventative maintenance costs accounted for around 20 per cent and grew at a compound average growth rate of 4.4 per cent per annum during the same period.

Table 7 – Responsive maintenance costs has been the main driver of field maintenance costs

Field maintenance cost ($m, 2023-24)	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Condition monitoring	2.3	1.7	1.2	1.2	1.2	1.0	2.4
Preventative maintenance	7.2	5.3	6.5	6.7	6.0	9.3	9.3
Responsive maintenance	27.5	28.2	33.6	37.1	34.2	33.4	34.0
Total	**37.0**	**35.2**	**41.4**	**45.0**	**41.4**	**43.6**	**45.7**

% YoY change	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Condition monitoring		-25.5%	-27.8%	1.8%	-2.0%	-21.7%	149.1%
Preventative maintenance		-25.9%	22.3%	2.3%	-9.3%	54.0%	0.2%
Responsive maintenance		2.5%	19.2%	10.3%	-7.9%	-2.3%	2.0%
Total		**-4.7%**	**17.4%**	**8.8%**	**-7.9%**	**5.3%**	**4.8%**

% contribution	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Condition monitoring	6.2%	4.8%	3.0%	2.8%	2.9%	2.2%	5.2%
Preventative maintenance	19.4%	15.1%	15.7%	14.8%	14.6%	21.3%	20.4%
Responsive maintenance	74.4%	80.1%	81.3%	82.4%	82.5%	76.5%	74.4%

Note 1: Following integration, the accounting systems were re-aligned and streamlined, which resulted in movements of how costs are allocated between condition monitoring, preventative and responsive maintenance. Hence the reason for a shift in % contribution between these categories from FY22.

Note 2: Condition monitoring had a sustained decrease over 2017 to 2022 due to under delivery of planned activities and under resourcing of planned programs. However, in 2022-23, we returned to normal levels of operation, which accounted for the abnormal jump in condition monitoring costs.

This sustained increase in responsive and preventative maintenance costs resulted from:

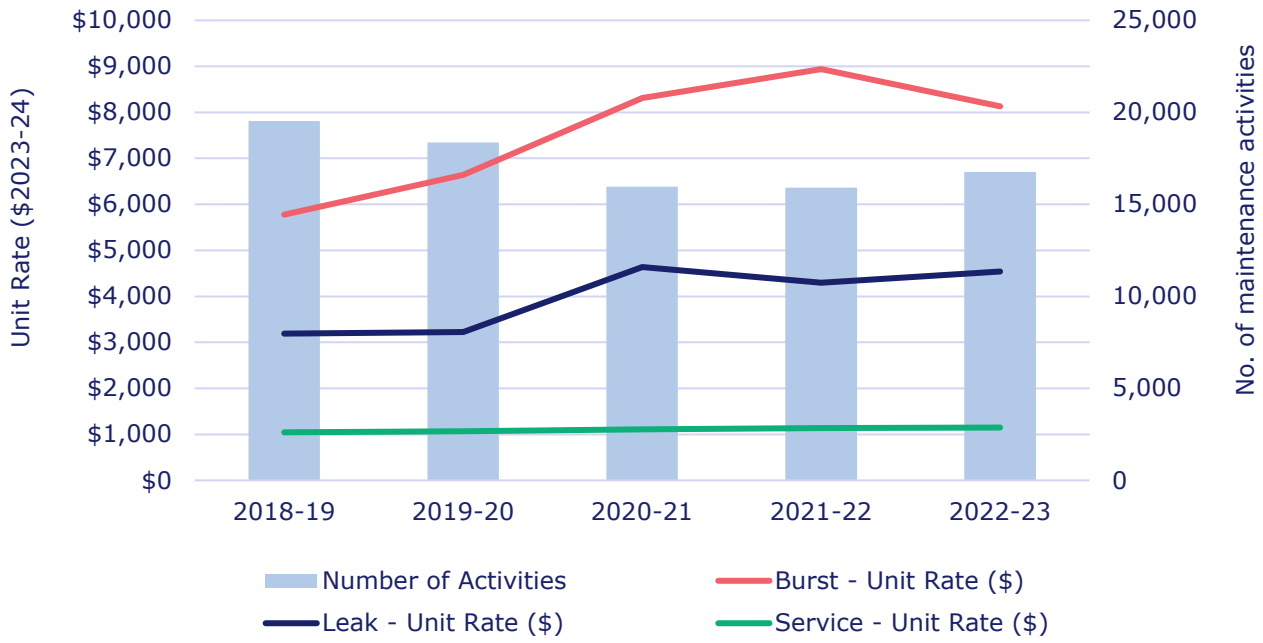
1. Increase in the **average cost of repairs**: this accounted for around $5.8 million or 83 per cent of the $7 million above determination costs.
2. Increase in the cost from **external contractors for field maintenance services**: this accounted for around $1.2 million or 17 per cent of the $7 million above determination costs.

Each of these drivers is discussed below.

4.5.4.2 Average cost of repairs

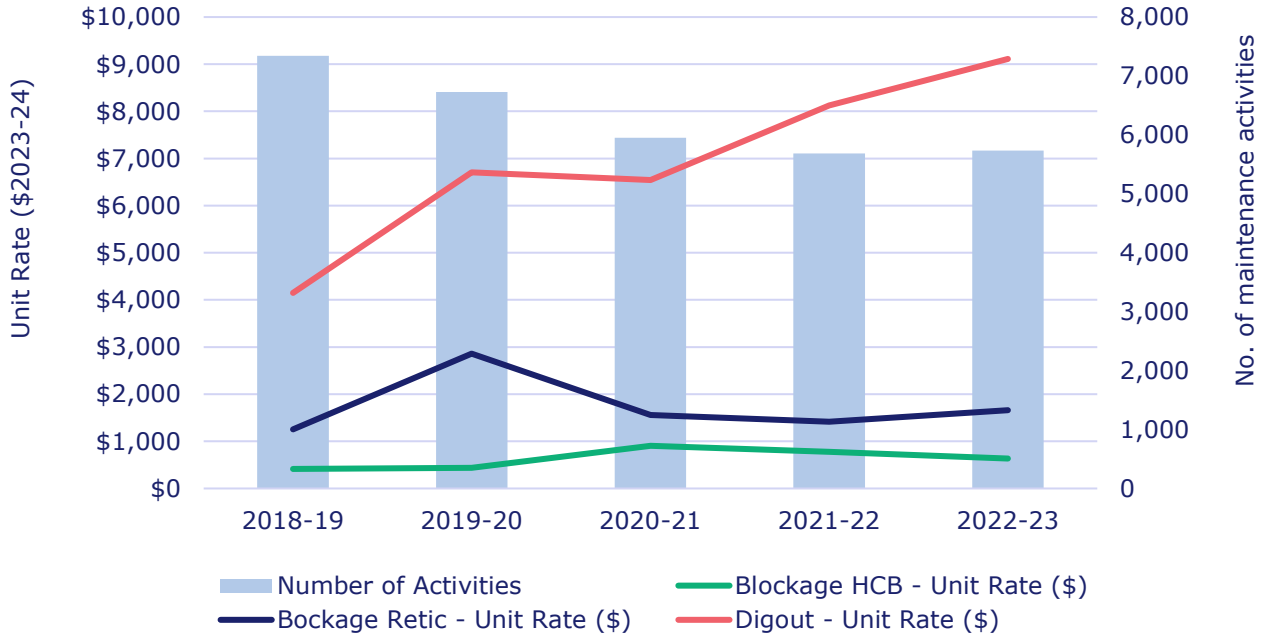
Average unit costs have been rising over the current regulatory period across the top three responsive maintenance activities by water (Figure 4) and sewerage (Figure 5) services.

Figure 4 – Water service: number of activities and unit rates ($, 2023-24)



Note: FY21 and FY22 experienced wet summers resulting in less frequency of water bursts and leaks

Figure 5 – Sewerage service: number of activities and unit rates ($, 2023-24)



The increases observable in average cost of repairs are driven by a broad range of factors:

- **Input cost changes**: there have been increases in fuel, materials and contract labour costs that have driven up input costs, reflecting the macroeconomic environment during the current regulatory period.
- **Safety requirements**: there have been increases in safety requirements, particularly with the additional traffic management requirements imposed on GWW by Council and VicRoads.
- **Customer expectations**: to continue meeting customer expectations on response and rectification times has come with an additional cost, particularly with the trend of faults in inner suburbs resulting in high transport time (especially around peak hours).
- **Reinstatement costs**: reinstatement costs have increased over the regulatory period. This has been partly driven by the higher number of bursts and leaks in the inner urban and CBD area where there is a concrete sub-base and asphalt on top. Furthermore, with many services now competing for space in the street pipes are often in asphalt roadways, and not on nature strips thereby increasing costs.
- **Network growth**: There have been several instances where newer assets have failed or have been damaged and needed to be repaired. In growth areas, the volume of temporary assets has increased due to out of sequence development, resulting in a more complex system that requires more maintenance and management of pumps when there is a failure (such as a power outage or high rainfall event). The growth in our network is shown in Figure 6.
- **Customer growth**: Higher than expected customer growth has increased the number of customers connected to an asset. This means when failures occur, they are more likely to impact a larger number of customers and GWW will prioritise these to minimise customer disruption. This prioritisation imposes additional administrative burden on GWW.
- **High cost/complex water activities:**[18] There has been an increase in high cost/complex water activities compared to the determination years for CWW and WW. Melbourne experienced large variations in weather across 2018 to 2020. 2018-19 saw above-average temperatures and below-average rainfall and was recorded as the hottest and driest year on record (see Table 8). Then in 2019-20, Melbourne saw above-average rainfall. These extreme shifts in weather patterns have affected our ageing network.

This in turn contributed to an increase in activity rates due to factors such as ground movement, thermal expansion, pressure fluctuations. Comparing key primary repair actions in the water space alone, there has been a significant increase in activity levels and costs. As shown in Table 9, there has been a significant increase in the

[18] A high-cost job typically exceeds standard expectations, often involving multiple assets situated on top or in close proximity to the repair site. Examples of this include a water main being located at a greater depth than anticipated, such as 2-3 meters compared to the usual 1-1.3 meters, necessitating additional trenching. Moreover, consequential damage to adjacent assets, including roadways, pavements, and bluestone curbing, significantly escalates both the complexity and cost of the repair process.

number of high cost/complex water activities - reaching 258 per cent in 2022-23 relative to 2017-18.

Figure 6 – Water and sewer networks have experienced a compounding annual growth rate of 3.3 per cent and 2.8 per cent, respectively, over 2016 to 2023

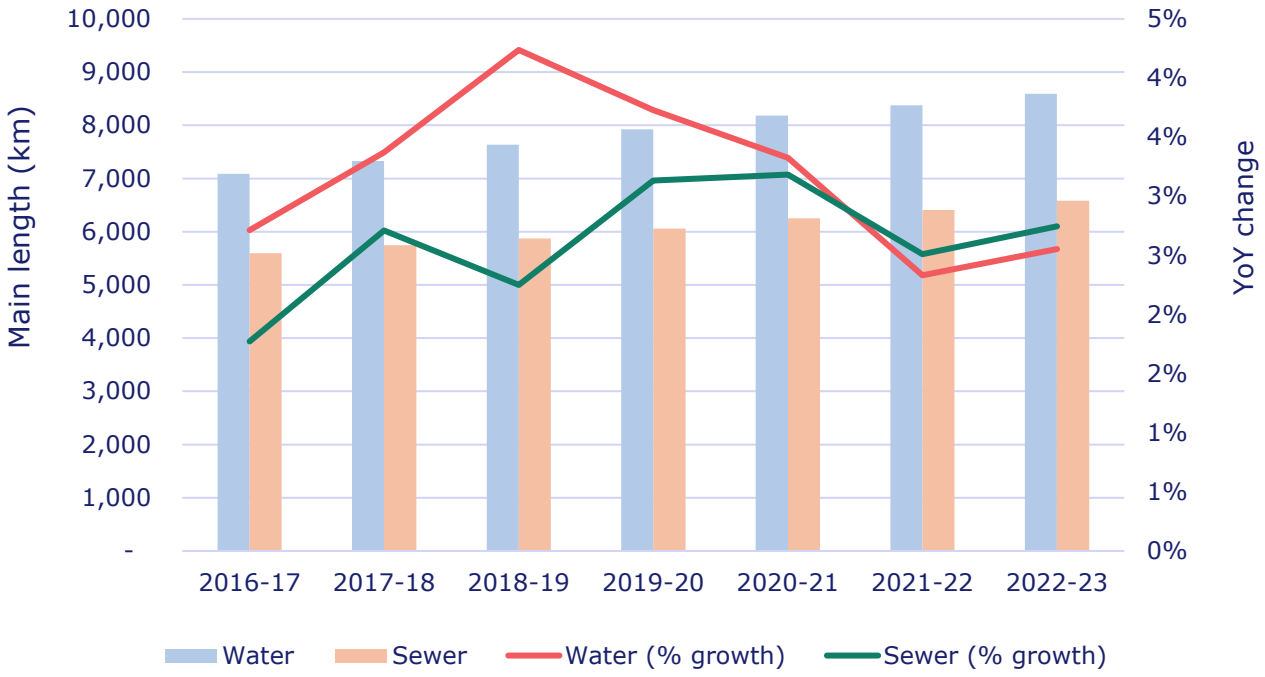


Table 8 – Rainfall data for Melbourne from the Bureau of Meteorology (BoM)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2016	53.8	3.4	26.2	40.6	47.4	58.4	66.8	50.4	98.0	66.0	50.0	54.6	**615.6**
2017	27.4	33.0	34.6	108.6	15.6	21.6	19.4	43.2	33.6	33.8	30.4	150.4	**551.6**
2018	68.6	1.2	27.8	8.6	56.0	47.4	14.6	26.2	14.6	23.0	105.4	69.8	**463.2**
2019	19.0	29.2	6.8	6.6	77.2	55.2	35.6	58.0	43.8	25.4	42.8	6.4	**406.0**
2020	115.2	43.6	71.2	127.0	54.6	28.0	32.0	62.6	29.2	71.4	46.0	29.8	**710.6**

Key	
	2018-19
	2019-20
Red text	Less than 10 mm or more than 100mm of rainfall

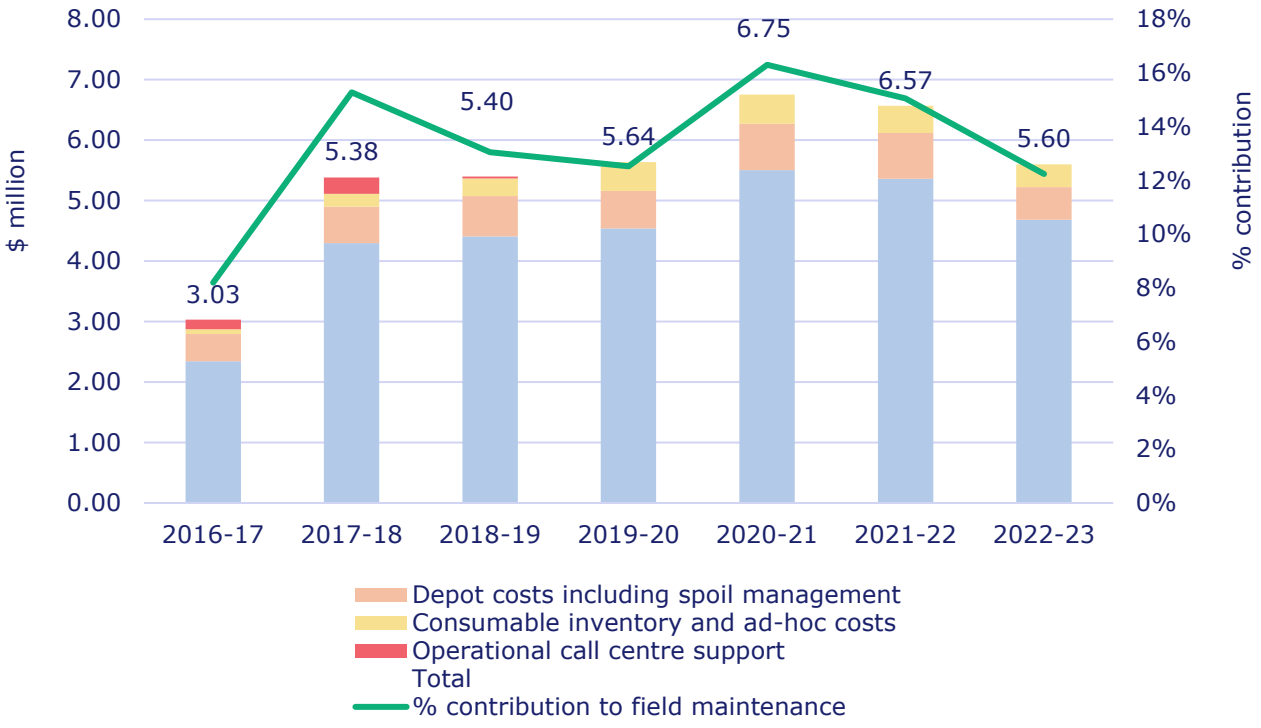
Table 9 – Significant uplift in high cost/complex cases relative to 2017-18

Financial Year	Count of cases	Cases greater than $50k	High cost /complex case increase relative to 2017-18
2017-18	25,924	43	
2018-19	30,842	82	191%
2019-20	29,307	95	221%
2020-21	29,310	105	244%
2021-22	29,596	108	251%
2022-23	28,875	111	258%

4.5.4.3 External contractor costs

GWW outsources a significant portion of its field maintenance service to external contractors. Over the last six years, this accounted for around 14 per cent of the total field maintenance costs (see Figure 7). This proportion increases to 18 per cent of the total field maintenance costs once the smaller recurring and non-recurring conditional monitoring, preventative and responsive maintenance activities are removed. Since 2016-17, the costs related to external contractors has grown at a compounding average growth rate of 11 per cent per annum.

Figure 7 – External contractor costs have almost doubled since 2016-17 ($m, 2023-24)



Note: Left hand side – breakdown of external contractor costs; right hand side - % contribution to the total field maintenance costs

Table 10 provides a description of each of the cost components that make up the external contractor costs.

Table 10 – External contractor cost breakdown

Service provider cost breakdown	Description
Support fees and office costs	Covers the service provider's office costs as well as costs of the office personnels such as the contract management team, operation supervisors and dispatchers.
Depot costs including spoil management	Covers the facilities costs of two operation depots and the management of spoil at these depots.
Consumable inventory and ad-hoc costs	Relates to inventory that is classified as consumable items and other ad-hoc costs as required under the contract.
Operational call centre support	Services related to providing to the call centre support afterhours.

We determined that these costs are prudent and efficient as:

1. They are the outcome of a **competitive procurement process,** and as such represent competitive market outcomes for these services. The contractual agreement that manages these services is meticulously governed, with rigorous scrutiny and confirmation of all invoice components and performance indicators aligning with ESC service standards and current customer requirements. The commercial model used has a defined reimbursable rate of remuneration, as such the contract costs are not fixed and, for example, if transport time increases to attend a fault the cost to repair increases.
2. The contracts used to manage our ongoing relationship with service providers explicitly **incentivise the delivery of ongoing efficiency**. The reimbursement rate for field-based components is predetermined, while actual support costs are assessed against a target rate. Failure to meet these targets puts the contractor's profit margin at risk, thereby fostering a strong incentive for operational efficiency. Note that while the reimbursement costs are predetermined for cost, it is not fixed for effort hours per task. Therefore, if a task takes up much longer to complete, the total cost will increase.

Competitive outsourcing to deliver efficient customer outcomes is established good practice. There is clear ESC precedent for the acceptance of competitive outsourcing as a legitimate strategy for achieving efficient outcomes. It is a key component of our field maintenance program and allows us manage risk and pursue a more efficient flexible cost structure while at the same time leveraging the specialised capabilities of our contractors. The competitive procurement process ensures that our outsourcing costs reflect lowest cost service options available in the market and is therefore efficient.

This response provides the following detailed information on the governance arrangements we have implemented for contract management with maintenance service providers. If necessary, we can provide a copy of the contract with our

service provider for your reference. Please note that this document is considered commercial in confidence.

4.5.4.3.1 Competitive procurement process

GWW's water, sewer, and alternative water maintenance services (responsive, preventative and condition monitoring) have been delivered by Programmed Facility Management (Programmed) within GWW's Central Region service area under a contract that was executed following a competitive tender process conducted in 2015-16. The current maintenance services contract with Programmed commenced in 2016 and had an initial term of five years. With subsequent term extension options exercised under the contract, the arrangement is currently in year eight of a nine-year contract term.

The competitive procurement process was undertaken as an initial EOI process followed by a formal tender process that resulted in shortlisting of suppliers and ultimately award of the contract to the current provider. The maintenance contract is a large and significant contract for GWW and therefore, the tender was undertaken in accordance with the CWW procurement guidelines for significant projects.

4.5.4.3.2 Incentivising efficiency in the operating contract

Our principle outsourced maintenance contract incorporates continuous improvement provisions that obligate the service provider to continuously seek to identify improvements in the way it provides the services as well as implementing any service improvements identified and directed by GWW. The contract also has an annual guaranteed business as usual efficiency target of two per cent reduction for jobs in the primary categories.

Table 11 – Contract terms and conditions

Key stages	Description
1. Invoice verification and validation	The contract has extensive provisions around invoicing and payment including consideration for performance; invoices; late invoice; time for payment; correction of payments; payment on account; deductions from payment; method of payment; and recipient created tax invoices. GWW has robust contract and commercial management processes that focus specifically on regularly (weekly, monthly) validating service provider invoicing and payment in accordance with the provisions of the contract.
2. Performance measures that align to ESC service standards	The contract contains performance measures and KPIs that align to ESC service standards and GWW's customer obligations.
3. Periodic monitoring and reporting of performance outcomes	Performance outcomes are monitored, measured, reported, and discussed on a monthly, quarterly, and annual basis. This includes technical oversight by the maintenance team and commercial management by the commercial and contract management team.
4. KPI performance and penalties	Each KPI comprises of one or more KPI Performance Measures and KPI performance is incentivised through financial penalties that apply for KPI performance that is poor or unsatisfactory.

	Such poor/unsatisfactory performance attracts fault points that are accumulated and will result in abatement of the service providers margin (financial penalty). This KPI performance assessment is performed quarterly and annually.

The contract also incorporates performance-based payment arrangements. Contract pricing for field-based services is based on reimbursable rates that were established as part of the original competitive procurement process and escalated annually in accordance with contract provisions. The contract award to the successful service provider in 2016 was primarily based on lowest cost (most competitive offer) to GWW.

The contract comprises a Performance Regime that includes KPI Performance and a Target Cost Regime for Category 1 and Category 2 activities. Under the arrangement, Target Costs are set at the beginning of each year (with reference to the previous year's Target Costs) and must be approved by GWW.
The Target Costs form part of the contract Performance Regime and are effectively a pain/gain mechanism. Performance is assessed quarterly and annually.

If the service provider **exceeds** the Target Costs, then the service provider attracts a financial penalty in the form of a 'margin abatement'. These are capped at 70 per cent of the cost overrun. If the service provider delivers services **below** Target Cost, the service provider's margin would be adjusted upwards. These are capped at 70 per cent of the cost saving and up to a maximum of 30 per cent of the annual contract margin.

If there is a performance failure, GWW may terminate or default - including not satisfying material obligations and certain breaches of contract. On the expiration of any field services contracts, GWW will use an objective based approach to determine a fit-for-purpose future state model. All activities that are deemed to be sourced from the market as part of this approach will follow a strategic and competitive procurement process.

Our contractual performance terms are effective in ensuring that the costs associated with field maintenance reflect of the lowest cost to serve over time.

4.5.5 Compliance obligations

Draft decision

The draft decision proposes to remove $3.3 million of compliance obligation costs from the base year. This is on the basis that the expenditure consultant could not verify if embedding an (average) annual amount of $3.3 million in baseline expenditure for the PS5 regulatory period is prudent and efficient with the information provided.

Response

In response to the draft decision, we maintain that these costs are both prudent and efficient, and we expect these costs to be ongoing for the next regulatory period (2024-25 to 2027-28).

Upon integration, we experienced a step change of $3.3 million in 2021-22 for wastewater treatment activities to manage historical compliance issues and address Environment Protection Authority (EPA) obligations. Many of our treatment plants will not be fully upgraded to meet compliance within the current regulatory period or will be commissioned at the end of the regulatory period. As such, the step increase in cost observed from 2021-22 is forecast to continue throughout the next regulatory period as these plants are upgraded.

The following are the primary EPA compliance drivers underlying our proposal.

Water balance issues

Over the past few years, increased rainfall events, combined with growth exceeding the capacity of most of our plants, has increased the operating costs necessary for maintaining compliance with EPA licence and General Environmental Duty (GED) obligations. These cost pressures have resulted from:

- Increases in temporary water solutions, pumping solutions, and moving water to the best locations, all leading to higher opex needed to manage full water storages.
- High flow related increases in wastewater treatment processes to meet higher quality standards.
- Delays in the expansion of recycled water customer usage to manage water balance (low demand for recycled water during high rainfall periods).
- EPA licences require our plants to comply with discharge volumes, in years where rainfall is at or below the 90th percentile. This has required us to operate in above normal conditions to manage effluent volumes. In some instances, where there are high inflows, and low demand for recycled water, we treat water to a higher quality in order to meet our GED requirements. This results in greater energy and chemical consumption as we manage the excess recycled water at the plants.
- Excess recycled water due to lack of demand from irrigators in wet weather, resulting in non-compliant discharges causing an increase in emergency incident response activities.

We expect these base year costs to continue over the regulatory period as we experience more storms with higher intensity due to the impacts of climate change.

Backlog of major capital investment

There is a significant backlog of major capital investment in the Western Region. This is the result of deferral of capital investments due to uncertainty in growth forecasting and deliverability concerns due to recent global supply chain issues. The backlog has increased our compliance risk for our EPA licence and GED. The resulting reliance on temporary assets has required material increases to our opex to maintain compliance.

In the next regulatory period, the current additional opex spent on operational levers for managing compliance will be replaced with additional opex for managing the new treatment plant upgrades.

As the reduction of compliance opex is subsequently picked up by increased opex requirements to run new plants, we included the existing costs of sewer compliance in our price submission baseline - rather than include new opex step changes to account for higher new plant costs.[19]

The proposed treatment plant upgrade will increase the core operating costs of the plant to meet the new water quality objectives being applied in EPA licences and, along with carbon naturality, will be equal to, or require a greater than, existing additional compliance spend in some cases. We have not included the instances where the new plant opex is greater than the current state and are taking this risk on behalf of customers.

General Environmental Duty

With the new GED, we have shifted towards a GED-preventive based approach. This proactive approach has led to increased opex aimed at enhancing our knowledge base through Quantitative Microbial Risk Assessment studies and bolstering environmental risk management practices. These efforts are particularly vital in an operational context characterised by growing inflows and surplus recycled water with limited discharge points.

Research and development

We are continuing to invest in research and development to improve wastewater treatment efficiency over the long term. This allows for strategic capex investment to transition to emerging technology at pace in a low-risk environment.

[19] The only exception was for Romsey plant:

1. Romsey Recycled Water Plant upgrade: The additional opex is required once the plant is commissioned in 2026-27. The additional opex of $0.14 million p.a. due to increase in energy used, chemicals used and regular maintenance because of the upgrade.
2. Romsey Water Filtration Plant upgrade: The water filtration plant at Romsey will be commissioned in 2025-26 to improve the water treatment process and ensure that it complies with the Health Based Targets for drinking water. The delivery of safe drinking water requires additional opex of $0.22 million per annum to maintain the plant along with small additional costs for chemicals and power.

4.5.5.1 Specific treatment plant cost drivers

In response to the draft decision, we have broken down the $3.3 million and the above drivers at a plant level in Table 12.

Table 12 – Cost drivers by plant ($m, 2023-24)

Treatment /RW Plants	Ongoing annual costs	Description of cost drivers
General (for all plants)	$0.5m p.a.	• Since introducing changes in the EPA act and implementing the GED, we have shifted our focus from a reactive to a preventive-based approach. We are now proactively identifying and managing environmental risks. This means we are spending more operational expenses on conducting Quantitative Microbial Risk Assessment studies to understand the impact of our waterway discharges better. Using the findings of these studies, we are planning for the future and developing solutions that prioritise the environment (**$0.3m per annum**). • We are dedicated to researching and developing new methods to improve the efficiency of wastewater treatment. We work closely with industry partners, universities, and research institutions to achieve this goal. Recently, we have participated in several trials, including the Blue Green Algae control trials, the use of Oxygenated Nano Bubble in lagoon treatment, and the Biosolid to Biochar trial. These trials have incorporated the latest online analytical tools to understand better the discharge impact and emissions generated from water waste processes. We will continue to spend on research and development over the next regulatory period (**$0.1m per annum**). • Emergency labour: In response to the recent surge in emergency situations, we have determined it necessary to engage an operational assistant to lend support to emergency operations and ensure the safety and well-being of all involved. This will be an ongoing opex (**$0.1m per annum**).
Romsey	$0.3m p.a.	• The existing treatment plant is designed to treat sewage to Class C quality only for irrigation. However, due to the increased inflow and limited on-site irrigation opportunities, it is necessary to treat the sewage to Class B quality before discharging out of licence conditions it to waterways. To achieve high water quality, additional chemicals and energy are required. Also, it will be necessary to monitor the waterways more closely to ensure that our actions have minimal to no impact during emergency discharges. This is demonstrating GED through what is reasonably practicable to provide the lowest environmental harm. Working with downstream property owners to provide assurance on waterway health.

		• At the plant, we are also managing blue-green algae (cyanobacteria) outbreaks. This will require ongoing opex on temporary solutions to treat this bacterium.

Melton	$1.3m p.a.	• The Melton Treatment Plant was designed to treat for 14 ML per day (MLD), however with recent growth in the area inflows into the plant are 19 MLD.
		• We have been managing the plant with irrigation to avoid excess discharge to waterways. However, the significant increase in recycled water produced along with wet irrigation seasons, means that we need to undertake additional treatment to remove phosphorus before discharging. This is because the plant is not designed to produce water that is suitable for discharge and was never intended to operate in this function. The additional cost of chemical treatment to produce water to a quality that is suitable for discharge has been **$1 million**.
		• With a delay in the investment, we are spending an additional **$0.3 million** on:
		  ○ More on laboratory costs due to the treatment plant operating above capacity. We have increase water quality monitoring to better understand the risk of harm and enhance our knowledge statement as required under the GED.
		  ○ Introduction of new irrigation pumping assets to the WIN scheme will introduce new maintenance and power costs. Additional sampling will also be needed to monitor water quality and impact on soils as part of the Health Environmental Management Plan (HEMP) to manage recycled water schemes.

Bacchus Marsh	$0.15m p.a.	• The Bacchus Marsh Treatment Plant is undersized for inflow, resulting in nutrient levels in treated effluent to be higher leading to blue-green algae. We are spending in opex to manage and treat blue green algae. • We are undertaking a nano-bubble trial to get greater treatment efficiency from the aeration ponds. • Under our GED responsibilities, we are reviewing our ecological risk assessments and using temporary storages basins increase of ground water monitoring to increase our statement of knowledge.

Woodend	$0.25m p.a.	• Woodend Treatment Plant is under capacity to cope with growth and this is resulting in challenges in managing treated effluent nutrient levels. In particular we have,
		  ○ Introduction of Magnesium Hydroxide Liquid dosing for better treatment compliance outcomes.
		  ○ Increased chemical treatment for the management of blue-green algae, PH correction and E.coli using sodium hypochlorite

		• We have commenced transporting sludge to Melbourne Water's Western Treatment Plant as interim risk control due to delayed capex work for dewatering plant
Gisborne	$0.5m p.a.	• Gisborne Treatment Plant is under capacity to cope with growth and we have implemented measures to manage treated effluent levels. This has also resulted in a step-change in sludge management practices as a result of the additional chemicals. • We have proposed an upgrade will result in step change of assets, operational costs and chemical consumption due to higher flows through plant and higher water quality outcomes. The incremental costs of the upgrade equate to the additional chemical and sludge management costs we have incurred over the last regulatory period.
Sunbury	$0.25m p.a.	• Sunbury Treatment Plant has had an increase in nutrient load flowing into the plant. As a result we have had to increase sugar dosing costs related to achieving lower total nitrogen, in addition to increases in power and general chemical costs to manage discharges.
Riddells Creek	$0.05m p.a.	• Riddles Creek Treatment Plant is currently managing blue-green algae issues. It is necessary to continue to spend to treat the algae as there are no permanent solutions available to fix the problem. • Over the last regulatory period, we have successfully implemented a new aerator at Riddles Creek. This has enhanced the water quality in the primary lagoon. This upgrade has required an increase in operational and maintenance expenses. • We are also currently constructing a new inlet step screen which will have higher operating expenses than 2022-23 base year and are managing this cost within the existing opex forecast (i.e., no step change).
Total Cost	**$3.3m p.a.**	Total costs related to sewer compliance obligation in the base year (2022-23) that will be ongoing over the next regulatory period (2024-25 to 2027-28)

4.5.6 Corporate costs and customer and community engagement

Draft decision

The draft decision proposes to remove $0.76 million of corporate costs and $1.03 million of customer and community engagement costs on the basis that the following was not clear in the documents provided:

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

Response

GWW maintains that these costs are prudent, efficient and recurring and therefore, should be incorporated in our proposed opex baseline. We propose that $1.79 million be included in the base year, supported by the additional evidence addressing the draft decision queries.

These costs are driven by an upgrading of our Community Engagement Framework to be consistent with IAP2 engagement levels. The upgrade ensures we take a customer-centric approach that allows us to align customer priorities to our services and meet customer outcomes more effectively.

The investment recognises the importance of ongoing engagement under the PREMO regulatory framework and reflects WW customer feedback in the 2020 price review seeking increased community engagement. The need to focus on improving engagement was acknowledged by the ESC in its 2020 final decision for WW.[20]

This level of engagement was necessary to reach our broader customer base, understand their values and preferences as well as developing trust and deliver on customer outcomes. Through our engagement program on the framework, customers confirmed they supported our upgraded Community Engagement Framework.

During the expenditure review we provided a table which attributed five new FTE to our Transformation - Corporate program and seven new FTE to our Transformation - Customer and Community Engagement program, along with a business case supporting the recruitment drivers (confidential). The documents provided the justification for the FTE business drivers based on an independent investigation conducted by Alchemy Pty Ltd (confidential).

4.5.6.1 Review into community and engagement function

The customer and community categories identified through the Alchemy Pty Ltd investigation led to the recruitment of 12 permanent roles to undertake core

[20] Essential Services Commission 2020, Western Water final decision: 2020 Water Price Review, 10 June, p6.

functions (many of which were was previously being undertaken by contractors), to deliver our community and engagement framework and newly inherited complex region.

While water business structures differ, the GWW FTE count is comparative and slightly lower than metropolitan partners. South East Water's comparative function organisation chart shows 24 positions, and Yarra Valley Water includes 20.

The customer benefits provided by the new roles, and articulation of the previous deficit are outlined below.

Transformation: Corporate

One FTE Government Advisor

Prior to integration, our government relations and advocacy efforts were reactive across both businesses. This gap was highlighted by the Alchemy investigation. By dedicating skilled resources to this role, we enhance our ability to collaborate effectively with state, local, and federal government entities. This ensures that the interests of our customers are prioritised in our responses to government policies and legislation. The FTE plays a pivotal role in fostering relationships with government bodies, enabling smoother progress on complex projects that require multi-party approvals and oversight, delivering benefits to customers sooner.

The resource delivers the following value to customers:

- Advocacy for customers interests: Direct representation to government entities on critical policies such as water security, waterway health, and provision of essential services to growth areas. This ensures that the voices and needs of our customers are heard and considered in policy decisions.
- Strengthened relationships: Strengthening relationships and partnerships with local government authorities, facilitating smoother collaboration and alignment on initiatives that impact our customers directly.
- Key relations advisor for complex partnerships and projects:
    - For example, acting as a liaison for the critical telecommunications tower construction in the Macedon Ranges. By streamlining approval processes and coordinating between various stakeholders, we mitigate risks and expedite the delivery of essential infrastructure, ultimately improving service reliability and safety for our customers efficiently.
- Timely community engagement: With the integration resulting in increased public awareness and correspondence, dedicated resource ensures timely responses to community inquiries and concerns. This includes addressing topics such as environmental impacts, climate challenges, and industry-related issues, demonstrating our commitment to transparent and responsive communication with our customers.

Three FTE Brand and Content Advisors and Communication Advisor

Prior to integration, social media activity had no strategic direction for appropriate and relevant content aligned to our customers interests and Community Engagement Framework.

Brand recognition and trust is a critical business requirement for a business that holds customer data and receives payments. In particular, brand recognition and trust are important for the success of any digital communication.

Following integration, GWW needed to establish and build recognition and trust from the community to ensure communications with customers were received. Trust building was done primarily through engagement communication aligned to customers interests and preferred engagement channels, which required additional resourcing support.

Customers are increasingly turning to social media for rapid, up to date information, and expect to be able to find information about GWW's activities online, and on social media.

WW's response to the ESC review of its 2020 price submission included a commitment to make services accessible online to more customers (across multiple channels and frequency, and not just focusing on online billing).

The resourcing delivers the following value to customers, which is supported by the recommendations of our price submission's deliberative panel around additional communication of our activities:

- Increasing promotion of our customer support options, including financial counsellors.
- Increased use of social media channels to communicate with customers quickly and more effectively than the previous approach of using bill inserts (billing was previously three times a year).
- Development of consistent GWW branding and materials to ensure our public communication, signs, digital communication is instantly recognised, providing the community with confidence in our services.
- Building brand recognition, acceptance and trust through increased activity on social media channels, which takes time and resources. We are continuing to work on brand recognition and acceptance as we mature as a business.
- Producing accessible, accurate and timely delivery of critical information, regulatory reports and documents for various customer and community audiences (annual reports, web content, fact sheets, newsletters, etc.) aligning with the new brand and business tone.

The 2024 GWW Price Submission engagement reflects the importance of brand and content to customers:

- Our engagement in 2021 (early engagement focus groups) found that our residential customers want us to cater for diversity in communication techniques (including paper, online, text and currently utilised social media channels). These groups also focused on the need for GWW to 'build trust'

before asking for feedback, and to 'avoid confusing or conflicting messaging'. Non-residential customers asked for communication to be targeted and focused, using existing channels and online options.
- 44 per cent of customers surveyed in our exploration stage (2022) felt that for us to deliver value for customers, we must provide 'excellent customer service with fast response times'.
- Our deliberative panel (2023) developed an extra fifth recommendation area: improved communication. This focused on 'notifying and communicating with customers in a more proactive and customized way to ensure greater accessibility for everyone'. The panel also asked for clearer publishing of our 5- and 10-year plans so customers can clearly see what we are delivering and can easily monitor performance.

Transformation: Customer and community engagement

Two FTE Engagement Advisors

We inherited a complex network with an increased capital program that required new skills to engage on key capital programs to support delivering on time and aligned with customers' expectations.

The adoption of an IAP2 level engagement framework has required increased resourcing to support engagement, ensure that critical projects meet customer and stakeholder outcomes, support technical/subject matter experts to ensure expectations are included in operational decision-making.

The resourcing delivers the following value to customers:
- Setting up the YourSay page to encourage customers to engage online and to be consistent with other public sector entities and responding to keep customers informed. This page was heavily used during our price submission engagement and provides an ongoing tool for engaging with customers on key projects.
- Using tools such as Consultation Manager (online engagement site) to effectively collect and share insights between the business and customers.
- Increased capital program requiring resources to engage with stakeholders and deliver projects safety and timely with customer and community support.
- More on-ground events and targeted engagement. An example of our framework in action was through our Macedon Ranges Water Futures, where we included community directly to understand their values on the storage, use and disposal of recycled water across our western plants (Romsey, Woodend, Riddells Creek). Customer and community feedback directly influenced our plans and provides an ongoing set of valued to guide our decision making.
- Proactive and reactive project incident notifications to customers in an accurate and timely way across various communication channels that align with customer expectations.
- Targeted engagement in areas that we know are underperforming to ensure customers are heard and expectations managed.

One FTE Community Engagement Advisor

Prior to integration, there were no dedicated roles within WW or CWW leading community engagement; activities were ad hoc and not aligned to strategy. The adoption of a IAP2 level community engagement framework required a dedicated role for leading community events at this increased standard and customer engagement expectations.

The resource delivers the following value to customers:

- Customers seeing an uptake in community events aligned to customer interests and community engagement framework.
- Face-to-face events to support GWW being a known community business and provide information on customer interests (water conservation, account enquiries, project or programs of interest).
- Events to support the local community to come together to reduce loneliness, increase community connectivity, strengthen bonds and celebrating the diversity of our service area.

Three FTE Partnership Advisors

The adoption of a IAP2 level engagement framework required the appointment of FTEs dedicated to the management of strategic partnerships. These FTEs cover the following partnerships:

- Education - Following integration, we needed to review and consolidate pre-existing water education programs into a single, unified program, to adapt to the needs of our rapidly growing population and meet our obligations outlined in the Statement of Obligations (general) (SoO).
- Policy and Industry - Prior to integration, a basic Memorandum of Understanding (MOU) with Victoria University was in place, but no dedicated role managing the partnership to realise the maximum customer benefits and strategically deliver similar partnerships to support economic development in the west. Memberships of industry organisations (AWA, WSAA, waterRA etc.) were managed by individuals in different teams with little co-ordination, which did not provide the best value from memberships. These have been centralised and are co-ordinated to align with business strategic goals in support of customer outcomes.
- Community Partners - CWW or WW did not have a First Nations Policy for Traditional Owner engagement and relationship building. Further, CWW and WW had individual Reconciliation Action Plans (RAP) which were on different levels. These required a coordinating role to review business maturity and develop the new RAP and business uplift to align with increased government commitments through Water is Life and the Central and Gippsland Region Sustainable Water Strategy.

The resource delivers the following value to customers:

- Education:
    - Customers benefit from a cohesive and relevant education program that meets the needs of the community and our requirements under the

SoO. The GWW combined education program ensures community water literacy is delivered efficiently and equitably. This means that all members of our community have equal access to high-quality educational opportunities, regardless of their location within our full-service region. This supports a deeper understanding and appreciation of water resource and water conservation.
    - Customer feedback highlights education and community liveability as top priorities. With an enhanced education function, we're able to meet these expectations, providing resources and programs that contribute to the overall well-being of our communities.

- Policy and Industry:
    - Through improved engagement in external forums like the Western Metropolitan Partnership, WoMEDA, Vic Water, and the Tarneit Revitalisation Board, customers benefit from increased representation and advocacy for their interests. This involvement translates into tangible on-ground benefits such as economic development projects, community initiatives, water efficiency and security measures, and advocacy efforts that directly impact the well-being of the community.
    - Research outcomes focusing on sustainable infrastructure, First Nations knowledge, graduate and career opportunities, and climate adaptation knowledge exchange inform better policies that prioritise customer needs. By leveraging these insights, GWW ensures that regulatory decisions align with customer expectations and contribute to their overall welfare.
    - Collaborations with industry stakeholders enable GWW to leverage broader resources for the development of its people and the sharing of knowledge on critical issues such as climate change adaptation and engagement with First Nations communities. These partnerships support the creation of career development opportunities in the west, ultimately benefiting customers by the resilience and sustainability of the region.

- Community Partners:
    - By developing a First Nations Policy and meaningful relationships with First Nations communities and Traditional Owners, GWW demonstrates its commitment to reconciliation and customer-centricity. This leads to outcomes such as the implementation of innovative Reconciliation Action Plans (RAP), the development of policies that prioritise First Nations engagement, and an uplift in Traditional Owner relationships and engagement.

4.6 Step changes

The draft decision stated that the majority of our proposed operating expenditure step changes ($34.49 million over the regulatory period) are appropriately tied to the operation of new assets, changes in customer expectations about service levels, changes to obligations. These cannot be met within the existing baseline opex and are mostly prudent and efficient.[21]

However, the ESC considered that an annual contingency amount ($3.16 million across the four-year period) be removed from our forecast billing and collections system costs.

4.6.1 Billings and Collections

Draft decision

The draft decision proposes to exclude $3.16 million of opex over four years on the basis that it is not tied to a specific business activity and that the risk in forecasting the operating costs of the Platypus system should be managed within the business and not passed on to customers.

Response

We maintain that these costs are both prudent and efficient and should be incorporated in our proposed opex.

Our new billing and customer platform is based on Oracle Utilities Customer Cloud Service (CCS) for the Energy and Water industry. This software is a service product that has been capitalised for regulatory purposes, as it provides benefits to customers over more than one regulatory period. The ongoing opex is comprised of licence fees and annual updates.

The annual updates include mandatory updates and process enhancements and security controls. GWW acknowledges that in preliminary documentation these mandatory updates were identified as contingency, and unfortunately this language has carried over into our final business case. Our original proposal and the supporting business cases have incorrectly characterised these expenditures as contingencies. These expenditures are not subject to uncertainty, and are correctly characterised as recurrent opex.

The associated mandatory updates, process enhancements and security controls which are outlined in Table 13 and explained further below.

[21] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p.33

Table 13 – Total cost of annual updates to Oracle CCS[22] ($m, 2023-24)

	2024-25	2025-26	2026-27	2027-28
Mandatory updates	0.43	0.44	0.44	0.45
Process enhancements and security controls	0.35	0.35	0.35	0.36
Total	**0.78**	**0.79**	**0.79**	**0.80**

*We note that there may be slight differences between the figures in Table 13 and those figures presented in financial template due to minor rounding.

4.6.1.1 Mandatory updates

The incorrectly categorised contingency expenditure included three mandatory annual updates for Oracle CCS which must be applied for continued support and availability of the system. The updates are designed to stabilise and enhance the overall platform for Oracle CCS SaaS customers globally. These updates typically occur around April, August, and November every year. Each of these updates necessitate essential activities to ensure the entire platform continues to work in an acceptable manner.

Our system integrator has identified the type of mandatory updates, the time and effort required as they impact hundreds of business process activities across areas such as (but not limited to):

- the processing of bill calculations across residential, trade waste, multi tenancies along with servicing many other water and waste water service billing applications;
- scheduled handling of billing delivery processes to all customer cohorts;
- managing all forms of payment collection and processing, process extensions;
- ensuring we maintain secure and accurate customer data with PCI compliance;
- processing all meter reads for new, cyclical and move out processes;
- tracking installation and replacements of meters (both fresh and recycled water);
- securely manage and validate change of ownership and change of tenancies;
- handling of hardship requests per customer, family and community needs and meet all regulatory standards;
- manage customer and data management for life support and the protection of vulnerable and family violence customers; and
- data exports and system integrations to finance, property systems, field operations including monitoring, statistics and regulatory reporting.

Essential activities for every mandatory update include:

- Impact assessment: Evaluating the effects of the update on current operations and customisations.

[22] The total cost is based on the number of days required to implement each process enhancement and security control, or mandatory update multiplied by a daily rate, increasing at one per cent above inflation as per the business case provided to FTI. GWW can provide ESC with a commercial in confidence workbook if required.

- Regression testing and associated deployment costs: Ensuring the system functions seamlessly post-update through thorough rigorous testing and deployment activities.
- Potential code changes to customisations: Adapting any customised features to align with the new version.

Our system integrator has advised that it takes a total of 90 effort-days to deliver a mandatory update.[23] We have used this to forecast this cost to be $0.43 million in 2024-25.

4.6.1.2 Process enhancements and security controls

The incorrectly categorised contingency expenditure included the following process enhancements and security control expenditures.

The roll out of the new billing and collections system will need to address a significant backlog of necessary enhancements over the coming regulatory period. These are not dissimilar to the updates to our own customers portals and security of Gentrack and Aquarate made during the previous regulatory period.

In total, we have 117 backlog enhancements that require investment over the regulatory period. Eight examples of these enhancements include:[24]

- SMS notifications to alert customers regarding impending bills or changes to their account, such as Change of Tenancy.
- Updates to our Self-Service Portal aimed at enhancing user experience and enabling customers to independently access a diverse range of services.
- Refinements to our Property Information Management System to streamline processes, minimising manual interventions and increasing straight-through processing, thereby reducing the need for exception management.
- Portal enhancements tailored for various stakeholders including businesses, Trade waste customers, plumbers, and managing agents which include the ability to upload sample or pump out results, submit site visit information.
- Advancements in our Interactive Voice Response (IVR) system to incorporate additional self-service functionalities, particularly for setting up payment arrangements, thereby mitigating potential PCI risks.
- Trade Waste enhancements within CCS to reduce FTE and allow straight through processing.
- Enhancement to how we communicate with customers through a range of options and structured approach i.e., SMS, email, and letter.
- Improvements in Security Controls to facilitate continuous improvement to Multi-Factor Authentication (MFA) for the Self-Service Portal offering.

A little over one-third of these enhancements are deemed major and require 136 effort days. The remainder are deemed to be minor requiring 40 effort-days. On advice from our systems integrator, GWW has developed its forecast based on this

[23] An effort-day is one full 8-hour day of work to complete the task. These tasks may be completed by multiple people.
[24] Full list of enhancements can be made on request that identifies whether it is major or minor.

split of one major and three minor per year at a total annual cost of $0.35 million in 2024-25.

4.7 Efficiency forecast

Draft decision

The draft decision states that only 1.4 per cent of the 3.0 per cent figure is properly considered efficiencies which are expected to be delivered through economies of scale and scope. An efficiency improvement rate of 1.4 per cent per annum is consistent with a 'Standard' PREMO rating, and similar to other water businesses during the 2023 price review.

Response

Under the ESC's Base-Step-Trend (BST) method, a compounding interim efficiency factor (based on the two per cent approved for the 2018 CWW and 2020 WW determinations) is applied to the base year to escalate opex to 2023-24, a separate compounding efficiency factor is then applied from 2023-24 onwards.

In response to the draft decision, we maintain that our proposed 3.0 per cent efficiency factor is appropriate for the base year expenditures that we have proposed. The draft decision separation of integration and transformation efficiencies is not consistent with regulatory precedent and will materially impact on the comparability of our proposed efficiency factor with other businesses under the PREMO framework. In effect it will not allow for like-with-like comparison.

The ESC's draft decision is that base year opex be materially reduced while the associated proposed opex efficiency factor applied from 2023-24 onwards is to be split between a 1.4 per cent efficiency factor which represents economies of scale and scope and the remaining 1.6 per cent efficiency that relates to transformation and integration programs be treated separately.

The draft decision does not provide guidance in terms of how transformation and integration efficiency should be treated within the BST framework. We assume that the ESC intends to treat them as baseline adjustments (step adjustments).[25] In effect the draft decision significantly reduces our base year while simultaneously retaining our proposed efficiencies while redistributing these efficiencies between the efficiency factor and baseline adjustments.

We are also conscious that significant reductions in the base year of expenditures that are aimed at creating efficiencies undermines our ability to deliver these efficiencies. Ideally the ESC's final decision should be symmetrical and recognise the dependencies between expenditure and efficiency. As recommended by FTI in its advice to the ESC, the ESC should consider the impact of reductions in base year expenditure on our ability to deliver our proposed efficiency.

[25] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p.33

4.7.1 Regulatory treatment of efficiency

We have applied the ESC's guidance in developing our BST efficiency and step changes in a manner that is consistent with the regulatory precedent set by the ESC in the 2018 and 2023 PREMO price reviews.

The ESC guidance paper explicitly addresses efficiency in Section 3.8:

> *Forecast operating expenditure to be presented relative to a reference or baseline operating expenditure with allowance for growth and cost efficiency improvements over the regulatory period.* [26]

More broadly, the regulatory precedent set by historical PREMO reviews is that the efficiency factor is not broken into its sub-components by the ESC. Instead, it provides a separate assessment of the constituent underlying drivers for achieving the efficiencies as baseline adjustments.

It's reasonable to assume that a significant portion of approved efficiency gains in the broader Victorian water sector stem from businesses investing in structural and procedural changes aligned with our integration and transformation programs.

We are unaware of any regulatory precedent that requires businesses to separately account for these efficiency gains as baseline adjustments (step changes).

We also note that there are potential inconsistencies between the draft decision and the ESC's guidance. For example, in relation to billing and collections efficiency, the guidance paper does not require GWW to treat known efficiencies as a negative step change, rather it refers directly to the efficiency factor by stating that GWW must:[27]

> *'identify and explain operating expenditure savings or new operating expenditure arising from capital expenditure and projects, and how they relate to the forecast cost efficiency improvement rate'*

The efficiency benefits of our proposed base year for our new billing and collections expenditure are realised through the compounding efficiency factor applied to the base year. The efficiencies associated with the expenditure are not certain, and as such form part of our broader efficiency commitment to customers that is captured by our proposed efficiency factor.

Our proposed efficiency factor separately accounts for efficiencies from integration. This is consistent with the guidance that required separate identification of integration related efficiencies. [28]

[26] Essential Services Commission 2022. 2024 Greater Western Water price review: Guidance paper, 20 September, p.34.
[27] Essential Services Commission 2022. 2024 Greater Western Water price review: Guidance paper, 20 September, p.34.
[28] Essential Services Commission 2022. 2024 Greater Western Water price review: Guidance paper, 20 September, p.32.

We note that the draft decision refers to economies of scale and scope. The draft decision states: [29]

> *'our preliminary view is that only 1.4 per cent of the 3.0 per cent figure is properly considered efficiencies expected to be delivered through economies of scale and scope (as compared to the 1.6 per cent that comprise the integration and transformation efficiencies).'*

Our proposed efficiency factor is intended to capture all forecast cost reductions, including economies of scale and scope.[30] Our treatment of scale and scope economies does not conflict with the ESC's guidance, regulatory precedent or the principles and requirements of the WIRO.

The ESC stated that residual efficiency is based on a 1.4 per cent efficiency for a 'Standard' business, captures economies of scale and scope, and is the only component of the efficiency for GWW.[31] GWW disagrees with this statement and maintains that the approach we have adopted for our efficiency factor is consistent with the ESC guidance, both in terms of its application and definition and with regulatory precedent set in the 2018 and 2023 PREMO price reviews. As such the full 3.0 per cent efficiency forecast proposed which incorporates the baseline adjustments should be used when comparing GWW's proposal with other proposals.

4.7.2 Efficiency forecast and the base year

The total proposed forecast efficiency applied to base year opex is 3.0 per cent per annum compounding. The draft decision on the base year significantly reduces it to below what we proposed, and without the corresponding adjustments to the proposed efficiencies is unsustainable. Our view is consistent with the review by FTI.[32]

GWW has included all forecast known and unknown cost efficiencies in its proposed BST efficiency factor. These are separately identified in dollars in Table 83 of GWW's 2024 Price Submission (reproduced as Table 14 below). The ability to deliver these efficiencies is materially dependent on the investments we have made in process and procedure that are reflected in our base year expenditures and in the resulting extrapolated baseline (see Table 14).

[29] Essential Services Commission 2022. 2024 Greater Western Water price review: Guidance paper, 20 September, p33.
[30] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p32.
[31] Essential Services Commission 2022. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p32.
[32] FTI Consulting 2024, Greater Western Water: Review of expenditure forecasts, February 2024, p23-24.

Table 14 – Forecast year on year efficiencies proposed relative to the 2022-23 baseline ($m, 2023-24)[33]

	Base year opex inclusion	2024-25	2025-26	2026-27	2027-28
Integration efficiencies	1.19	1.17	1.17	1.69	1.69
Identified transformation efficiencies	6.81	4.43	5.53	6.62	6.66
Forecast further transformation efficiencies		0.98	4.00	5.36	7.05
Residual efficiencies		5.80	9.02	12.35	15.79
Total efficiency proposed		**12.39**	**19.73**	**26.02**	**31.19**

Any material reduction of the proposed base year expenditure undermines our ability to undertake the activities being funded. The expenditure necessitates a corresponding reduction in the cost savings the expenditure is intended to generate. This is particularly true for separately identified transformation and integration items. If investment in transformation and integration is not included in the base year, the efficiencies associated with these programs will not be delivered during the regulatory period.

4.8 Non-controllable expenditure

Draft decision

The draft decision accepted our proposed non-controllable opex forecast. However, the decision revised the long-term inflation rate from 3.5 per cent per annum, down to 3.0 per cent per annum. This resulted in an increase to the forecast real value of the environmental contribution by $1.49 million across the next regulatory period.

Further, the draft decision noted prior to making its final decision, the ESC will:

- Update the forecast licence fee and environmental contribution values with the relevant regulatory bodies and adjust where necessary for the latest inflation data (CPI March quarter 2024).
- Update the forecast bulk charges to reflect its approved 2024-25 tariffs for Goulburn-Murray Water, Melbourne Water, and Southern Rural Water.

4.8.1 Environmental contribution levy

Response

We have updated the forecast environmental contribution levy (ECL) in the financial template to reflect the change to the forecast inflation to 3.0 per cent, which resulted in a $1.49 million increase over the four years. This is shown in Table 15.

[33] Greater Western Water 2023, 2024 Price Submission, 28 September, Table 83, p.241.

Table 15 – Environmental contribution levy ($m, 2023-24)

	2024-25	2025-26	2026-27	2027-28	Total
ECL - price submission	32.77	31.66	30.59	29.55	**124.56**
ECL - updated for forecast inflation	32.92	31.97	31.03	30.13	**126.05**
Overall change	**0.16**	**0.31**	**0.45**	**0.58**	**1.49**

We note that this estimate may need to be updated if the ESC's inflation forecast changes.

4.8.2 Melbourne Water bulk charges

Response

We have updated the Melbourne Water variable bulk charges to reflect the updated volumetric consumption forecast from the change in connections in ViF2023. This resulted in a $2.83 million increase over the four-year regulatory period to the Melbourne Water bulk variable charges, as shown in Table 16.

Table 16 – Melbourne Water bulk charges ($m, 2023-24)[34]

	2024-25	2025-26	2026-27	2027-28	Total
MW bulk variable charges - price submission	58.39	59.98	60.49	62.13	**240.99**
MW bulk variable charges - updated for ViF2023	59.48	60.33	61.25	62.76	**243.82**
Overall change	**1.09**	**0.35**	**0.75**	**0.63**	**2.83**

GWW looks forward to working with the ESC to finalise tariffs and prices once our bulk charges for Goulburn-Murray Water, Melbourne Water, and Southern Rural Water are approved.

[34] The updated demand only impacts the MW bulk variable charges for water and sewerage services (i.e., bulk water charge for transfers and bulk sewage charges for BOD, TKN, ITDS, SS, treatment and transfers).

5 Capital expenditure

Draft decision

The draft decision accepted most of GWW's capital forecast, stating that we have a robust approach to developing project scopes, work timing, and cost estimates.[35] The ESC also agrees that GWW's proposed capital program is deliverable, largely prudent and efficient, and necessary given customer growth rates and compliance obligations.[36]

The draft decision raises questions about three programs within the total capital program and requires further evidence to assess their prudency and efficiency against the ESC guidance.

Response

This section outlines additional information, data, and evidence for:

- Water main performance renewal program
- Asset ecosystem program
- Stormwater harvesting program

In response to the draft decision, GWW provides an update of the Asset Ecosystem program forecast cost and further information to justify the Water Main Renewal Program and the stormwater harvesting fund. This is detailed in Sections 6.1, 6.2 and 6.3 and cost forecasts summarised in Table 17 and changes summarised in Table 18.

Table 17 – GWW's updated forecast capital expenditure ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Water main renewal program	38.68	39.86	39.18	39.79	39.72	**197.23**
Stormwater harvesting fund	0.21	0.86	4.28	4.28	3.21	**12.84**
Asset ecosystems	8.24	12.85	8.43	5.55	4.32	**39.38**
Remaining CAPEX	283.31	309.74	285.07	303.26	261.83	**1,443.21**
Total CAPEX - GWW response	**330.45**	**363.30**	**336.96**	**352.88**	**309.08**	**1,692.67**

[35] Essential Services Commission, Greater Western Water Draft Decision, 2024, p40.
[36] Essential Services Commission, Greater Western Water Draft Decision, 2024, p43.

Table 18 – Capital expenditure overall changes ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
A. Total CAPEX - price submission	334.35	370.86	348.77	357.92	309.52	**1,721.42**
B. Total CAPEX - draft decision	306.11	333.72	308.37	327.17	285.64	**1,561.01**
GWW revised response:						
C. Asset Ecosystems	-3.90	-7.56	-11.80	-5.04	-0.45	**-28.75**
Total CAPEX - GWW response (A+C)	**330.45**	**363.30**	**336.96**	**352.88**	**309.08**	**1,692.67**

5.1 Water main performance renewals program

5.1.1 Our proposal

The 2024 Price Submission proposed a total five-year capital program of $197.7 million for the water main performance renewals program. This program is comprised on three components – water main renewals, water property service connection renewals, and water site renewals.

The water main performance renewals program has been developed to meet the following objectives:

- Meet service standard target of:
  - 25 customers on five interruptions in a year (no individual customer be subject to more than five unplanned water outages in any 12-month period).
- Harmonisation and consistency of service across legacy networks, such that no customer is worse off.
- Address the highest-risk renewals first.
- Maintain responsive maintenance costs associated with water main failures at current levels.

The targets set in the program were supported by customers through our customer engagement program and deliberative forum. Our proposal reflects the current investment required to deliver the same level of service to customers as the previous regulatory period aligned with the programs three objectives.

The total program forecast breakdown is shown in Table 19.

Table 19 – Price Submission 2024 Water Main Performance Renewal Program ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Water main	33.93	34.93	34.27	34.87	34.77	**172.77**
Water property service connections	2.35	2.35	2.35	2.35	2.35	**11.75**
Water sites	0.42	0.43	0.44	0.46	0.47	**2.22**
Other programs	1.98	2.25	2.23	2.22	2.24	**10.92**
Total	**38.68**	**39.97**	**39.29**	**39.90**	**39.82**	**197.66**

5.1.2 FTI Consulting's findings

In its review of GWW's water mains renewals program, FTI Consulting (FTI) stated the following (summarised):[37]

- *Our review of the program justification and supporting documentation indicates that the project justification is strong.*
- *The proposed timing is appropriate.*
- *The proposed scope is greater than required to achieve the proposed target, which can be achieved by adopting an alternative more efficient option.*
- *A review of the data also shows that renewing 20km of mains in the Central region (from option '20km Central + 15km Western') and 6km of mains in the Western region (from option '33km Central + 6km Western') also achieves the target.*
- *The information it (GWW) provided suggests that adopting an option of 20 km in the Central region and 6 km in the Western region is the lowest cost option and could potentially be delivered at an estimated cost of $93.34 million ($130.96 million – ($4.18 million x 9km)).*
- *As Greater Western Water did not provide an estimated cost for this option, we have derived a cost estimate based on the average cost of all options, resulting in an estimate of $4.18 million per km.*
- *While we understand that this option may lead to a higher average failure rate, we consider it the most appropriate to achieve the desired outcome of no more than five water supply interruptions in a 12-month period.*

As a result, FTI recommended to the ESC to reduce the program funding to $93.34 million, a reduction of $79.43 million.

5.1.3 Draft decision

The ESC accepted the advice from FTI Consulting, that a lower level of combined renewals across the Central region would deliver the service standard target of no more than five in a rolling 12-month period, at a lower cost than proposed by GWW. As a result, the ESC's draft decision removed $79.4 million from the forecast because its preliminary view is that the stated objective can be achieved more efficiently.

[37] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, pp65-67.

FTI's analysis was only completed on the water main (pipeline) renewal component of the broader program. Therefore, GWW have interpreted the proposed expenditure reduction to be only against this component of the total program.

The annual variances for the water main renewals component are shown in Table 20.

Table 20 – ESC Draft Decision on Water Main (Pipeline) Renewals ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Price submission	33.93	34.93	34.27	34.87	34.77	**172.77**
Draft decision	18.05	19.05	18.39	18.99	18.86	**93.34**
Variance	**-15.88**	**-15.88**	**-15.88**	**-15.88**	**-15.91**	**-79.43**

5.1.4 Response

GWW maintains that our proposal is the most prudent and efficient investment to deliver this program and meet service standard target levels in line with customer outcomes. We propose that the expenditure adjustment of $79.4 million be returned to GWW's capital forecast.

Cutting the program investment so significantly (by almost half) will result in renewal backlogs, increased unplanned outages, unfunded operating expenditure increases in responsive maintenance and customer service level decline. GWW aims to maintain the above factors in a 'steady state' where the number of failures, outages and responsive maintenance remain at a constant level year after year (no increases or decreases).

Our modelling shows that the option developed by FTI is not appropriate to meet the desired outcome, and that the cost estimate developed is incorrect. We also note that the recommendation put forward by FTI draws from a high-level analysis that did not undergo the same rigour as the robust options analysis undertaken by GWW to arrive at our proposed option.

The total investment proposed is $172.8 million for the water main (pipeline) renewal component of the program, an increase of $79.4 million from the draft decision as per Table 21. The total expenditure proposed for the Water Main Performance Program is $197.7 million.

Table 21 – GWW's response to the Draft Decision on Water Main (pipeline) Renewals ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Draft decision	18.05	19.05	18.39	18.99	18.86	**93.34**
Response	33.93	34.93	34.27	34.87	34.77	**172.77**
Variance	**+15.88**	**+15.88**	**+15.88**	**+15.88**	**+15.91**	**+79.43**
Total	**38.68**	**39.97**	**39.29**	**39.90**	**39.82**	**197.66**

The program takes a long-term investment approach to continue running the network at a steady state – this means, we continue down our current service path and things will not get worse with the investment outlined in Table 21.

5.1.5 Appropriateness of the scope of work

The scope of work within the water main renewals program was designed to meet KPIs over the short, medium, and long term, which is to maintain the same level of service. We also considered the impact of our decisions on service levels in each of our two legacy regions. This was to ensure that there was no degradation in service in one region when compared to the other, in accordance with the outcomes of our customer engagement.
We examine how each option performs against the three key KPIs over three timeframes to maintain the same level of service:

- **Immediate regulatory period**: to see if the investments will have an impact in the short term. This analysis can highlight any acute consequence of any significant change in investment profile.
- **10 year**s: to see if the investments we are making today lead to a change in service outcomes, either improved or deteriorated in line with customer expectations, and asset performance. The analysis is typically targeting this investment horizon.
- **10+ years:** to see if the investments we are making will lead to long term changes in service outcomes and asset performance. This can help inform if decisions we make today are leading to a significant change in service and asset performance over a longer time period that results in drastic changes in investment profiles in the future.

In total, six options were considered that could meet some or all of our criteria to differing degrees. Some options were able to meet short term targets, but unable to meet long term targets without a significant change in expenditure in future years. Others were unable to meet short term targets but could meet long term targets over time.

Table 22 presents Options 1 to 6 that we developed in our business case, and Option 7 that was developed by FTI. FTI's Option 7 appears to have been combined from data sets within the business case.

Table 22 – Options for investment in Water main (pipeline) renewal program only (this excludes the other two programs

	Options	Budget (2022-23, $m)	Expected number of customers on 5 interruptions per year	Expected to achieve the target of number of customers on more than 5 interruptions
1	0km central + 0km Western	$0	47	No
2	10km Central + 2km Western	$42.78	31	No
3	33km central + 6km Western **(Proposed)**	$172.77	23	Yes
4	50km Central + 10km Western	$264.52	19	Yes
5	35km Central + 0km Western	$166.35	29	No
6	20km Central + 15km Western	$130.96	24	Yes
7	20km Central + 6km Western **(FTI's Option Draft Decision)**[38]	Estimated to be $93.34 m	27	No

The options assessment we presented in the price submission did not include FTI's Option 7. In response to the draft decision, we have assessed FTI's option against the criteria. Noting that the draft decision does not fully specify the option and that we have had to make assumptions regarding the option.

5.1.6 Difference in water main renewals

The watermain pipeline renewal program is a targeted renewal program. It is applicable to old and failing assets within the network (collectively known as 'problematic assets'). These often continue to fail after an initial failure has occurred (repeat failures).

Renewals can be performed either proactively, before failures occur (referred to as a 'cohort renewal'), or reactively after failures have occurred (referred to as a 'KPI renewal').

- A cohort renewal is less disruptive, as it is a planned activity.
- A KPI renewal is instigated when multiple failures have occurred and often happens in a rapid turn-around with less planning.

The complete water main performance program contains a combination of KPI and cohort renewals.

Since KPI renewals are responsive to network conditions, they take precedence over planned cohort renewals to ensure service levels are being met. When expenditure is insufficient this pushes out cohort renewals, which increases the risk of failure in assets that should have been proactively renewed.

[38] FTI Consulting 2024. Greater Western Water: Review of Expenditure Forecasts - 2024 water price review, February pp65-67. It is important to note that this option was excluded early in the options assessment in GWW's business case.

5.1.7 Option analysis to meet Water Main (pipeline) Renewal Program

GWW provides the following analysis against each of the water main (pipeline) renewal program key objectives:

1. Meet service standard target.
2. Harmonisation and consistency of service across legacy networks.
3. Address the highest-risk renewals first.

The fourth objective, to maintain responsive maintenance costs is achieved by achieving the other three objectives, so not highlighted in this section. These objectives are strongly supported by the price submission customer engagement (detailed in Section 5.1.9).

Note that the following analysis is focused on the Central region as the draft decision supports GWW's Western region proposal.

5.1.7.1 Objective 1 - Meeting service standard target

Customers told us 'Reliability of services was a top priority'

GWW performs 'KPI Renewals' on assets whose ongoing failure is resulting in repeated unplanned water outages. These renewals aim to prevent any customer from being subject to more than five unplanned water outages in any 12-month period.

The KPI Renewal process involves:

- The identification of assets to be renewed through daily monitoring of bursts across our network;
- The awarding of works to a delivery partner;
- The installation of temporary supply (an above ground temporary network which allows water to continue to be supplied to the customer whilst the problematic main is renewed);
- The construction of the new main;
- The return of service of the new main.

To meet a customer service target of no more than five unplanned water outages in any 12-month period, GWW identifies renewal works once three unplanned outages have occurred.[39]

In most cases, the awarding of works and the installation of temporary supply happens prior to further bursts occurring, however this is not always the case, and it is not uncommon for a fourth or fifth unplanned outage to occur.

The water main renewals program justification modelled the number of customers expected to receive three unplanned outages, and uses historical ratios to predict the

[39] Once three unplanned outages have occurred it is highly likely more will continue to follow.

number of customers who will experience four and five outages. These ratios are only appropriate for 'steady state scenarios' and change when the number of customers experiencing three outages increases.[40] However, reviewing the number of customers that are likely to experience three unplanned outages provides an indication of a true renewal requirement as this is when GWW actually intervenes with its renewal works.

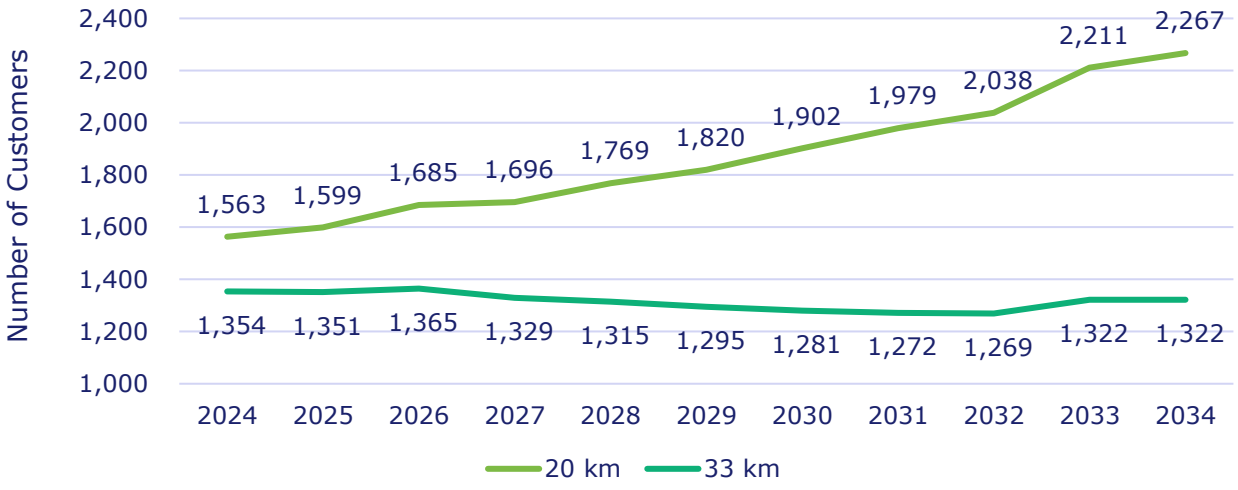
There is a significant difference in the outcomes between the FTI proposal of 20km of Central renewal vs GWW's recommended 33km of Central renewal. Figure 8 and Table 23 provide GWW's modelled outcomes of FTI's proposal. The modelling shows that by the end of the next regulatory period an additional 454 customers would be subject to three or more bursts (which can rapidly lead to four, five or more interruptions) and there is a strong trend of increasing number of customers experiencing several interruptions in the future.

The increase in the number of customers experiencing interruptions represents an accumulation of renewal works needing to be performed, and a departure from a steady-state scenario. That is, the renewal rate is not keeping pace with the renewal need. In this non steady state scenario, the outage/customer ratio assumed by GWW in its submission (and adopted by FTI) used to approximate the number of customers subject to four, five or more unplanned outages is unlikely to be reliable.

Appendix A shows why the ratio for unplanned outages changes when the amount of renewal activity reduces.

In contrast, GWW's proposal continues to keep customers experiencing three unplanned outages steady, under this condition the ratio is likely to continue to be valid.

Figure 8 – The number of customers expected to experience three unplanned interruptions.



[40] A steady state scenario is one where the rate of renewal is equal to the rate of renewal need, i.e., there is no accumulation of works needing to be done.

Table 23 – The number of customers expected to experience three unplanned interruptions

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
FTI Proposals (20km)	1,563	1,599	1,685	1,696	1,769	1,820	1,902	1,979	2,038	2,211	2,267
GWW proposals (33km)	1,354	1,351	1,365	1,329	1,315	1,295	1,281	1,272	1,269	1,322	1,322
Increase in customers impacted	+210	+248	+320	+367	+454	+524	+621	+707	+769	+889	+945

Under the FTI proposal, it is likely GWW could still intervene to prevent customers experiencing five or more unplanned outages for a period through the installation of temporary supply.

However, given the ever-increasing number of customers being impacted, this position would not remain sustainable for long. An ongoing increase in temporary supply would be required and when this no longer becomes manageable and unplanned outages would result.[41]

5.1.7.2 Objective 2 - Harmonisation and consistency of service across legacy networks

Our customers told us to 'work to harmonise the system across GWW service region'

There is an inconsistency of service across GWW's network, primarily because of the age of the network. Over time, various construction materials, obligations, regulatory standards, and quality control have existed, managed by a variety of legacy operators, and now managed by GWW.

Over the past five years, more than 70 per cent of the central region's failures have occurred to assets with similar characteristics, and it is these problematic assets that the water main renewal program targets. Failure rates in these assets are very high compared to our other more modern assets (such as, plastic and ductile iron pipe cohorts), demonstrating the need for problematic assets to be renewed as soon as possible to improve service level consistency. Table 24 compares failure data between 'poor performing assets' and 'other assets'.

Table 24 – Failure rates of poor performing assets vs other assets (average from past five years)

	Poor performing assets	Other assets
Average failures per year	1,139	434

[41] Although temporary supply can be used to manage unplanned outage numbers, it is not a long-term solution and does not represent a good outcome for customers. It is an above ground network which is visible to the public, can be subject to vandalism, accidental breakage, presents a potential trip hazard, and can result in high water. temperatures during summer periods. It has its own ongoing maintenance and costs associated with it. Temporary supply is not always available and eventually the solution becomes unsustainable as the length of temporary supply in the catchment increases.

Failure Rate (failures/yr/100km)	87	10

GWW currently has almost 1,200km of problematic assets across its Central region. The renewal program has been successful in reducing this length over time. Table 25 provides data for the problematic water main assets and length repaired over the past five years.

Table 25 – GWW's problematic water main assets and their length over the past five years.

Problematic Water Main material of construction	Pipe diameter (mm)	Asset Length (km)				
		2018-19	2019-20	2020-21	2021-22	2022-23
Asbestos Cement	80, 100, 150 and 225	199.11	194.04	185.08	171.89	165.13
Cast Iron	80, 100, 125, 150, 175, 225	15.47	14.75	13.88	13.54	12.99
Cast Iron, Cement Lined	80, 100, 125, 150, 175, 225	1208.19	1173.33	1121.5	1055.53	1017.76
Total		**1,422.81**	**1,382.14**	**1,320.43**	**1,240.94**	**1,195.89**

By reducing expenditure in the Central region program - which specifically targets the poor performing assets - the length of renewals each year will decrease and discrepancies in customer service levels will continue for a much longer period. Delaying the removal of problematic assets further exacerbates the issues they present. As they deteriorate more with time, failure rates increase resulting in greater renewal urgency in future years.

Under FTIs proposal, it would take 60 years to renew the problematic assets that still exist within GWW's Central region. GWW's proposal reduces the timeframe to 46 years. While both these outcomes are still likely to see a future increase in failures (many of these assets are already at end of life (Appendices C and D), the GWW proposal is more suitable.

5.1.7.3 Objective 3 - Address the highest-risk renewals first

Customers told us to focus on the 'highest risk areas' to harmonise service levels

GWW services high profile and highly populated areas. Major industry, sporting stadiums, State Parliament and Melbourne's Central Business District, all fall within our Central service region.

It is not acceptable to adopt a run-to-failure model approach for assets that serve such critical industries and high populations. Failures in such assets result in:

- High disruption to the public and amenity.
- Disruption to traffic and public transport.
- Disruption to business and high insurance costs.
- Elevated health and safety risks to work crews and the public as assets are in complex areas with many other nearby services.

- Complex and often expensive reactive repair and reinstatement.

Many of these renewals are complex, in central business areas, with high foot and car traffic, which takes additional time to plan and deliver (Appendix D shows the location of our problematic assets). The complex nature of these renewals leads to higher renewal expenditure compared to our Western region, which does not experience the same level of risk type.

Planning complex renewals ahead of time, allows our work to be delivered seamlessly and more efficiently. Proactive renewal avoids the acute disruption that a failure can bring (known as cohort renewals).

When expenditure is insufficient, KPI renewals take precedence over planned cohort renewals to ensure service levels are being met. This pushes out cohort renewals, which increases the risk of failure in assets that should have been proactively renewed.

FTI's proposal to reduce the Central region's water main renewal program from 33km to 20km, which effectively halves GWW's Central renewal budget, puts GWW's entire cohort renewal program at risk. Proactive renewals cannot be planned for with certainty due to the lack of expenditure and the water main renewal program becomes highly reactive.
GWW's proposal enables cohort renewals to continue to occur. The ensures problematic assets in our highest risk areas are renewed in a controlled fashion before their imminent failure.

5.1.8 Overall efficiency of the program

The draft decision expenditure reduction will result in greater reactive maintenance OPEX costs for GWW. Despite a reduction of almost 50 per cent in water main renewal expenditure no additional OPEX was included in the draft decision.

Modelling for objective 1 (Figure 9) shows the number of customers experiencing three (and subsequently four, five or more unplanned outages will increase), which leads to increases in responsive maintenance to try and meet the objective.

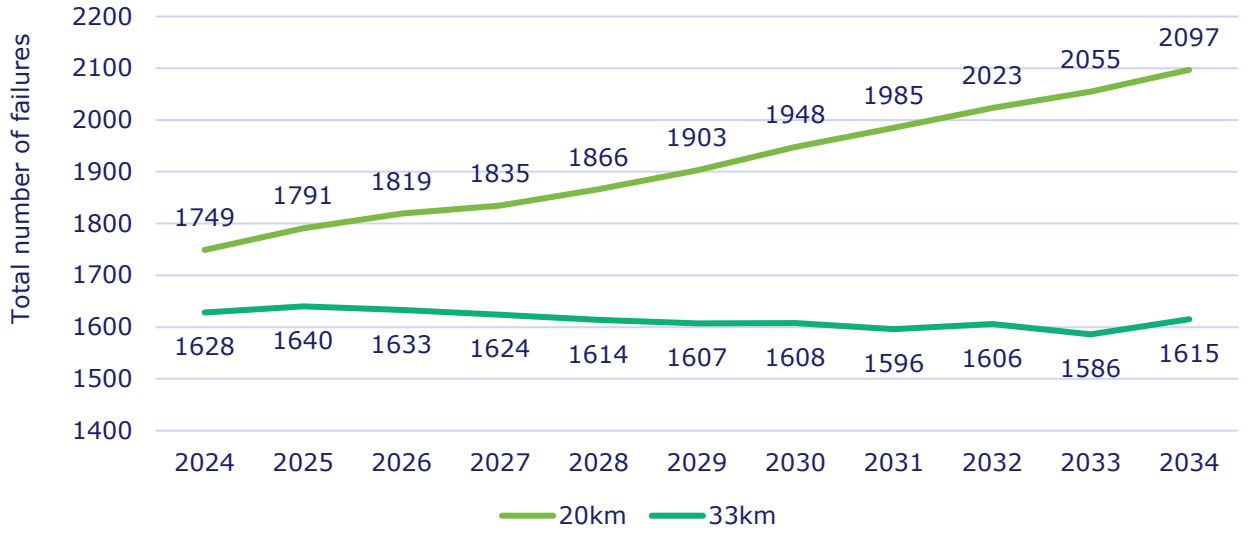
When modelling the total number of bursts that can be expected, which are all rectified with responsive maintenance, the true impact on responsive demand can be better understood.

Figure 9 shows under FTI's proposal by the end of the price review period in 2028 GWW's water network is failing approximately 250 times more per annum, this increases to almost 500 times more per annum if not corrected in the next price review period. While the GWW proposal demonstrates ability to maintain the same level of service with total failure numbers tracking steady.

Appendix C highlights the responsive maintenance risk of not maintaining renewals expenditure. A large portion of GWW's problematic assets were installed in the decades immediately following Word War 2. These assets are now reaching the end

of their expected life and, if not renewed, will serve to put increased pressure on responsive maintenance expenditure.

Figure 9 – Total failure numbers in the Central region FTIs proposal (20km) vs GWW's proposal (33km)



5.1.9 Customer support

Throughout our extensive engagement program, customers supported us working to maintain the same level of service, harmonising service levels and addressing the highest-risk areas and assets first. Reducing the proposed investment would mean levels of service would decrease and we will not deliver our customer commitments. An overview of engagement findings relating to this topic is provided in Table 26.

Table 26 – GWW 2024 Price Submission engagement findings

Engagement stage	Feedback
Exploration (Supports Objectives 1 and 2)	• Reliability of services was the top priority for residential and non-residential customers, providing feedback in our exploration phase – above affordability. • This early, values-focused engagement found that 72 per cent of customers surveyed and all focus groups felt that for GWW to 'deliver value for our customers', we must 'deliver reliable services even in the face of climate change and a rapidly growing population'. • 55 per cent of customers surveys said that customers 'regardless of where they live, receive the same level of service' was 'more important than affordability'.
Valuation (Supports Objectives 1, 2 and 3)	• Customers were comfortable with paying slightly more for fewer unplanned disruptions – suggesting at $25.88 million revenue requirement increase over the regulatory period. • Harmonising service levels across our region is still important to customers, but there was no consensus between groups on how much they were willing to pay. On average, customers did support an increase of $15 million revenue requirement. • 60 per cent of customers surveyed in this stage felt that the maximum number of unplanned outages a customer should

	experience is three for water or two for sewerage (a lower amount than the current KPI). • 47 per cent of customers surveyed asked us to address 'highest risk areas' to harmonise service levels, and 42 per cent asked for us to 'make [harmonizing service levels] a priority by spending money as soon as feasible'. Only 10 per cent of customers wanted GWW to 'do nothing' and therefore allow service levels to decline.
Deliberation (Supports Objectives 1, 2 and 3)	• Our deliberative panel provided six recommendations around harmonising service levels and limiting unplanned disruptions. • Panel recommendations focused on disruptions being addressed in a timely manner, work to harmonise the system across GWW service region, ensuring drought resilience of the network, ensuring highest quality of water for everyone across our service region, providing clear plans to customers around long-term system improvements, upskilling of staff to ensure service levels are improved.
Confirmation (Supports Objectives 1, 2 and 3)	• Only seven per cent of customers surveyed in our confirmation period did not agree with the panel's recommendation around unplanned interruptions – with 52 per cent strongly supporting the panel's recommendation. 48 per cent of customers surveyed felt that the proposal we planned to address the panel's recommendations would deliver on the recommendation. • For harmonizing service levels, 58 per cent of customer strongly supported the panel's recommendations, with only seven per cent disagreeing. 10 per cent of customer's disagreed with our proposal to address the panel's recommendation (47 per cent strongly supporting, 43 per cent supporting to an extent).

5.2 Asset ecosystem program

5.2.1 Our proposal

The 2024 Price Submission proposed a total five-year capital investment of $68.13 million for the asset ecosystem program. It will deliver an uplift in capability to collect, analyse and visualize data, providing timely insights into the operation of the physical network and assets. This program is comprised on seven components:

- **Geospatial**: Combining the data contained in two outdated GIS platforms currently used by GWW into Esri ArcGIS, to comply with the Asset Management Accountability Framework, as required under the *Financial Management Act 1994*.
- **Field service management system:** Field services are currently managed using two separate systems Kern and Clarity. This project migrates all field services management from Kern onto Clarity, to move forward with a single field services management system.
- **Enterprise and asset works**: Transitions GWW to a single asset and works management system by updating OracleEAM to support new asset classes (e.g. dams, water treatment assets) and transfers asset data from AssetMaster into OracleEAM.
- **Growth and development**: The current development application software, DAMS and property plus are reaching end of life and sit on unsupported IT infrastructure and do not meet business requirements. This project will replace

them with a secure, automated system with modern customer interfaces that will support rapid processing of the large number of development applications expected over the next 15 years.

- **Project and program management for assets**: As recommended through the Asset Delivery Operational Review, procure, and implement a fit-for-purpose project management tool that supports appropriate data collection for project reporting and compliance with AMAF.
- **Operational intelligence and visualisation**: Improves operational insights throughout the GWW water and sewer networks to make better decisions for responsive and planned maintenance.
- **Content management**: Procure and implement a scalable content management system that supports compliance with AMAF information management requirements.

Table 27 includes the total capex proposed for the Asset Ecosystem Program.

Table 27 – Price submission 2024 Asset Ecosystem program ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Geospatial capability uplift	2.14	6.42	3.21	3.21	1.07	**16.05**
Enterprise asset and works capability uplift	3.19	4.51	7.73	1.76	1.28	**18.47**
Field service management capability consolidation	3.56	0.45	0.00	0.00	0.00	**4.02**
Growth and Development capability uplift	2.14	5.35	4.82	3.21	1.07	**16.59**
PPM (asset) capability consolidation	0.90	1.58	1.00	0.00	0.00	**3.48**
Content management (asset) capability uplift	0.00	0.80	2.41	1.07	0.00	**4.28**
Operational intelligence and visualisation capability consolidation	0.21	1.28	1.07	1.34	1.34	**5.24**
Total Asset Ecosystem	**12.15**	**20.41**	**20.23**	**10.59**	**4.76**	**68.13**

5.2.2 FTI Consulting's analysis

In its review of GWW's Asset ecosystem program, FTI Consulting (FTI) stated the following (summarised):[42]

- *The project justification document provided by Greater Western Water did not contain sufficient detail to assess the prudency and efficiency of the projects.*
- *GWW has not prepared business cases for these programs despite the significant investment required.*
- *GWW has not quantified the potential savings nor indicated how they have been accounted for in operational or capital savings in the future.*
- *GWW had itemised risks, compliance issues and benefits of each system to justify its upgrade.*
- *GWW did not include a quantification of the benefits.*
- *We would expect detailed business cases for totalling nearly $70 million to sufficiently identify the need and quantify the financial benefits of the upgrades.*

5.2.3 Draft decision

In their draft decision, the ESC note the benefits of the Asset Ecosystem program and that it reflects the priorities of our customers.

However, the ESC proposes to remove the full $68.13 million forecast capex. This reflected their consultant's inability to assess the prudency and efficiency of the proposed program, sighting the lack of detailed individual project business cases and quantification of benefits.

Table 28 – ESC draft decision on Asset Ecosystem program ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Price Submission	12.15	20.41	20.23	10.59	4.76	**68.13**
Draft decision	0.00	0.00	0.00	0.00	0.00	**0.00**
Variance	**-12.15**	**-20.41**	**-20.23**	**-10.59**	**-4.76**	**-68.13**

5.2.4 Response

There is one key issue presented as the justification for FTI's recommendation, and the ESC's Draft Decision – that no sufficiently detailed business cases were provided that identify the need and quantifies the financial benefits of the upgrades.

The following response addresses FTI's key issue by providing a summary of business cases, articulating project drivers, scope, timing, and options analysis. Due to new information for project costs and resourcing requirements, project costs have

[42] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, pp 73-74.

changed slightly from the original estimates. Business cases and a more detailed summary have also been shared with the ESC.

While we recognise FTI's intention in requesting quantification of the financial benefits of these projects, the projects are driven by renewal of unsupported systems, compliance and customer outcomes, rather than future efficiencies and savings, and do not have significant financial benefits in the short term. Where these exist, they have been identified and quantified. Future program benefits may arise from better use of data.

In response to the draft decision, GWW is proposing a revised program of work that reflects additional information that has become available since our initial submission. The refined program contains six projects (two have been combined into a single project).

Due to uncertainty of the delivery mechanism and cost estimates of three of the six projects included in the refined program, we propose to move those projects into uncertain expenditure, and to push out recovery of the costs to the next regulatory period.

Table 29 – GWW asset ecosystem program response to the draft decision ($m, 2023-24).

	2023-24	2024-25	2025-26	2026-27	2027-28	Total	Variance relative to 2024 Price Submission
Geospatial capability uplift	3.00	6.00	5.00	3.00	3.00	**20.00**	**+3.95**
Program Concordia (previously Enterprise and Asset Works &Field service management)	4.49	5.27	2.43	2.55	1.32	**16.05**	**-6.43**
Project and program management for assets	0.75	1.58	1.00	0.00	0.00	**3.33**	**-0.15**
Growth and Development	0.00	0.00	0.00	0.00	0.00	**0.00**	**-16.59**
Content Management	0.00	0.00	0.00	0.00	0.00	**0.00**	**-4.28**
Operational intelligence and visualisation	0.00	0.00	0.00	0.00	0.00	**0.00**	**-5.24**
Revised Asset Ecosystem Program	**8.24**	**12.85**	**8.43**	**5.55**	**4.32**	**39.38**	**-28.75**

5.2.4.1 Asset Ecosystem Program summary

During the expenditure review, GWW provided a program level business case that identified seven pieces of work making up the total program. This program level business case identified a need to deliver an uplift in capability for GWW to maintain, analyse and visualise data, providing timely insights into the operation of the physical network.

Since our initial submission, GWW has received the results of our first external asset management audit, which has further highlighted the need for system improvements to comply with the Asset Management Accountability Framework (AMAF), as required under the *Financial Management Act 1994.*

The Asset Ecosystems Program is strongly linked to our customer outcome – 'When things go wrong, we fix them'. It provides the ability for us to manage, report, analyse and improve asset condition and performance through more timely and efficient data analysis, as well as better communicate with our customers.[43] The ability to have strong data to support network performance and deliver against customer outcomes was acknowledged in the draft decision.[44]

The Asset Ecosystems Program provides key improvements to several foundational asset management and information systems across GWW. Table 30 outlines the current systems in use and condition and the proposed improvements.

Table 30 – Current systems, condition and the proposed improvements

Function	Systems performing the function	Current status (including age, installation, last update)	Proposed Asset Ecosystem outcome PS2024
Geospatial Information System (GIS)	Munsys, Enlighten	Both former organisations last updated their GIS system 12+ years ago.	Procure, integrate and implement Esri ArcGIS to aid compliance with AMAF (required under *Financial Management Act*) and Victorian Digital Asset Strategy
Field services management	Clarity, Kern	Kern – system limitations & scalability issues. Cost prohibitive licensing model. Not compliant with AMAF requirements	Consolidate onto Clarity to aid compliance with AMAF (required under *Financial Management Act*)
Asset & Works Management	Asset Master, Oracle eAM, Excel	Asset Master – system limitations and scalability issues. Excel – not fit for purpose. Not compliant with AMAF requirements	Consolidate onto eAM as an interim state to aid compliance with AMAF (required under *Financial Management Act*), assessment of the need for a new platform in future

[43] Further information is found in Memo from Jakin Ravalico, Price Submission and Regulation Manager to FTI Project team 8 December 2023 titled 'GWW PS2024 – Asset Ecosystem additional information'. Henceforth this will be referred to as Memo 8 December 2023.
[44] Essential Services Commission, 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p.17

Program and project management	Project 365, Excel	Disjointed project management across duplicate systems. Issues with reporting and contract management, not compliant with AMAF requirements. Project 365 doesn't meet current needs.	Consolidate project management data into Project 365. Evaluate Project 365, potentially procure and implement new PPM tool to aid compliance with AMAF (required under *Financial Management Act)*
Growth and Development	Property Plus, DAMS	Security risks, sits on unsupported IT infrastructure, approaching end of life, does not meet business requirements.	Procure and implement new platform to meet customer outcomes
Content Management	Excel, SharePoint, Records 365	Current systems are not scalable to support the growing asset information management needs at GWW	Procure, integrate and implement a fit for purpose asset content management solution for central storage of asset digital content

5.2.4.2 Taking on additional risk for our customers

The main concern identified in the draft decision was the lack of provision of individual business cases through the expenditure review. Detailed business cases exist for three of the projects, with other business cases under refinement.

In response to the draft decision, GWW will take on the additional risk on behalf of our customers and move the costs for three projects from the asset ecosystem program into uncertain expenditure, opting not to recover those costs from customers this regulatory period.

Costs associated with our growth and development capability uplift, content management and operational intelligence and visualisation components of the program have been removed.

5.2.4.3 Business case development and governance

The FTI report states that GWW should have provided individual business cases for the Asset Ecosystem Program. GWW was not asked to provide individual business cases for this program. GWW was asked for information to summarise the program, which was provided. The expenditure report incorrectly claims that a GWW memo advises that business cases had not been prepared for these projects. There is no such statement in the memo.

The Asset Ecosystem program, as part of the overall price submission capital program was endorsed by the GWW Board in July 2023. A program level approach is appropriate as each work component delivers improvements to asset management and ensures GWW meets its regulatory obligations.

The Asset Ecosystems Program is critical to delivering our core services and communicating in line with customers expectation, so detailed business cases have

been developed for the larger components of the program. The business cases further demonstrate the importance of the projects, the urgency and prudency and efficiency.

GWW executive staff play a pivotal role in business case development, approval and in program delivery governance. The Asset Ecosystems Program delivery is overseen by a steering committee, comprised of key executive members, alongside GWWs usual capital investment governance, which includes endorsement by the Business Investment Committee and Board approval.

5.2.4.4 Asset Ecosystem Revised Program

We propose to recover costs for three of the initial seven projects this regulatory period. Two of those projects have been combined, leaving three projects which are at the following stage of development:

Table 31 – Asset Ecosystem Program – revised

Project	Business case development
Geospatial Information (GIS system)	Board approved business case
Program Concordia (previously two separate projects – Enterprise asset and works, and field service management):	Business case developed
Program and Project management capability consolidation (previously referred to as Project and Portfolio Management):	First year delivery business case developed

For the purpose of GWW's response to the draft decision, we have collated information from the program level business cases, information provided to FTI as part of the review process and from the approved and in development business cases to address the draft decision queries.

Our response focuses only on the three projects to be recovered in this regulatory period. Geographical Information Systems, Program Concordia and Program and Project Management Capability Consolidation.

5.2.4.4.1 Geospatial Information

The two Geographical Information Systems (GIS) from CWW and WW have not been updated in more than 12 years. In that time significant changes to functional requirements and standards for GIS has occurred and technology improvements. These systems are now outdated, not fit for purpose, and are creating a barrier to regulatory compliance.

This project will deliver a single, compliant GIS for GWW and is required for compliance with:

- Victorian Digital Asset Strategy, spatial data requirements, digital cadastre modernisation and GDA2020.
- Asset Management Accountability Framework (AMAF) - contributes towards compliance against 13 (currently non-compliant) of 47 requirements.
- AS5488 and ISO55001

Table 32 – GIS System project capex forecast ($m, 2023-24).

Geospatial information costs	2023-24	2024-25	2025-26	2026-27	2027-28	Total
GWW Labour	1.06	1.91	2.10	1.69	1.49	8.24
Licensing	0.32	1.75	0.00	0.00	0.00	2.08
Suppliers	1.38	2.00	2.61	1.11	1.30	8.40
Overheads	0.24	0.34	0.30	0.21	0.21	1.30
Total	**3.00**	**6.00**	**5.00**	**3.00**	**3.00**	**20.00**

Project driver

This project is compliance driven and needs to be done to meet regulatory obligations, regardless of efficiencies that might be created through implementation.

Our current GIS platforms can't capture the required granular spatial data for our major facilities, which is in breach of requirement 12b (Monitoring asset performance) of AMAF. This project will enable the required data to be captured complying with requirement 12b.

The new GIS system will facilitate sharing of public maps with customers and the community, which we are currently unable to do. It will also allow us to share information with delivery partners and other government agencies including environmental impacts, heritage and cultural overlays. This supports better service delivery and meeting our obligations for cultural heritage and the Environment Protection Act.

Moving to only one GIS system will reduce duplicated effort of managing two separate systems. The expected financial benefit is a cost saving of $0.26 million per year, which has been included in our integration efficiencies, as part of our baseline efficiency target.

Timing and scope

Given the urgency of the challenges that managing two disparate systems creates, and the need to address non-compliance, expenditure on the GIS replacement started in 2022/23, with the project to be delivered by 2028/29. Works delivered to date include preparatory activities such as foundational data model and GDA20020, procurement strategy and platform assessment.

The GIS system is a cornerstone of asset ecosystems, which all other systems use in some shape or form. As such, it is prudent to invest in the GIS system before, or at the same time as, any other upgrades.

The project will take six years, due to it requiring both technology changes and changes to processes and employee capability. This program's complexity is

compounded by two legacy systems, each with very different supporting data models. The program will be implemented through the following stages:

- Consolidation:
  - Data migration into one new, unified data model (ESRI).
  - Remediation of legacy data quality issues.
  - Design and implementation of data governance processes.
  - Inclusion of full asset lifecycle data (previously uncaptured).
- Functional uplift:
  - Roll out of self-serve capability.
  - Implementation of new data management processes.
  - Employee and Partner training.

The GIS system will ensure that GWW can effectively track, assess, and measure performance of our networks. This means we will be able to readily communicate interruptions to customers, and plan better to reduce interruptions. It reflects feedback provided during customer engagement, where customers placed a high value on communication of service interruptions, informing the design of our customer outcome – 'When things go wrong, we fix them'.

Options analysis

The following four options were considered for implementation:

- **Option 1: Do Nothing** - This option will continue to use the existing spatial technology solution.
- **Option 2: Technology focus** - This option is an interim solution that will consolidate the existing GIS platforms onto one single GIS platform. Option 2 will remove all duplicated processes, however, will still rely heavily on manual data inputs as there will be no self-service functionality or automations. A security risk exists with this option as the current systems are unsupported.
- **Option 3: Whole of business focus** - Transform the way that spatial information is used at GWW by implementing a new GIS system with a consolidated and accurate underlying data model, consolidated business processes, capability (people) uplift and new (self-serve) functionality.
- **Option 4: Uplift in knowledge and capability** - This option was considered as a non-technology option, to understand if knowledge uplift would be sufficient to address key issues. The option would require planning and conducting spatial training to address knowledge and associated capability gaps.

A rigorous options assessment, considering compliance, feasibility, customer impact and strategic objectives, identified Option 3 as the preferred option. Option 3 delivers compliance with AMAF criteria 12B, 17, 35, 36, 37A, 37B, 38, 39 (required under Financial Management Act) and Victorian Digital Asset Strategy, meets all criteria outlined in GWW's GIS strategy roadmap.

Option 4 did not address AMAF compliance obligations, would only address minimal business requirements and would not align to the high-level needs of the organisation as per the strategic geospatial roadmap. Option 1 did not meet any requirements and Option 2 only partially met the criteria.

5.2.4.4.2 Program Concordia

Program Concordia combines two projects identified in the Asset Ecosystem program justification – Enterprise asset and works capability uplift, and Field services management consolidation. The total cost for the revised combined project is $16.05 million over the next five years (including 2023-24).

Costs differ from those included in the Asset Ecosystem program justification ($18.47 million for asset and works capability uplift and $4.02 million for field service management) as we now have a better understanding of the resources required to deliver this project.

Table 33 – Program Concordia revised project capex forecast ($m, 2023-24)

Program Concordia costs	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Labour	4.49	5.27	2.43	2.55	1.32	**16.05**
Total	**4.49**	**5.27**	**2.43**	**2.55**	**1.32**	**16.05**

Project driver

This project is compliance driven, and needs to be done to meet regulatory obligations, regardless of efficiencies that might be created through implementation.

The primary driver for Program Concordia is compliance with:

- the Asset Management Accountability Framework (AMAF), as required by the financial Management Act 1994.
- dam surveillance plan requirements for all dams and recycled water storages, pursuant to Section 4I (2) of the Water Industry Act 1994.
- General Environmental Duty (GED) as part of Environment Protection Act 1994.

GWW currently uses multiple outdated systems for Assets and Works Management Systems (AWMS) and Field Service Management Systems (FSMS). This program will consolidate existing data into systems that can provide better management and interpretation of asset data. Improved data capture, review and analysis will support quantification and implementation of lower cost, better value programs, based on data insights. GWW currently does not have this capability.

There are also significant customer benefits in terms of maintenance response times, and improved communication. In connection with our new billing system, this project will allow rapid direct communication with customers of outages and expected repair times.

These benefits were strongly supported through our customer engagement in the following ways:

- Our customers want timely communication.

- 44 per cent of customers surveyed in our exploration stage felt that for us to deliver value for customers, we must provide 'excellent customer service with fast response times'.
- Improved communication is a priority for our customers.
  - Our deliberative panel developed a fifth recommendation area: improved communication. This focused on 'notifying and communicating with customers in a more proactive and customized way to ensure greater accessibility for everyone' and noted a preference for spending on communication rather than reducing service interruptions.
  - 62 per cent of respondents to our confirmation survey agreed 'to a great extent' with the panel's recommendations.
  - 52 per cent of respondents for our confirmation survey agreed that our proposed plans to improve communication 'deliver what the panel asked for'.
- Improved data availability and quality by defined data custodianship and standards
  - Recommendation 5.1 from the deliberative panel focused on improved customer communication that is 'proactive and customized'. The panel recommended that customers be provided with information and communication that provides 'sufficient notice and clarification to plan around and mitigate impacts' of interruptions.

Timing and scope

Given the urgency of the challenges that managing two disparate systems creates, and the need to address non-compliance, expenditure on the AWMS and FSMS has started in the current financial year (2023-24). Consolidation of FSMS onto Clarity is now well underway. The project will be delivered over the next four years and be in use by 2028-29. This will ensure that we can meet our compliance obligations under AMAF, the *Water Industry Act 1994* and the General Environmental Duty.

This project will deliver:

- Configure Oracle eAM (existing asset management system) to support all GWW asset classes.
- Consolidate all asset data onto one existing asset management platform (eAM), facilitating activity-based costing.
- Configure the platform to allow for multiple service providers with efficient contractual mechanisms.
- Consolidate field services onto a single platform (Clarity), extending to use across dams, treatment plants and facilities.
- Provide a single inventory management capability.

Options analysis

Three options were considered through project development:

- **Option 1: Do Nothing -** This option continues to use the existing systems, processes, and data.
- **Option 2: New technology platforms -** This option moves directly to new technology systems, without first migrating data to a single system.

- **Option 3: Upgrade existing platforms and migrate data** - This option works with existing technology platforms, upgrades them to support broader asset classes and better data capture, and migrates duplicate systems into single systems.

Options 1-3 were assessed using a qualitative framework across timeframes, resource requirements, change management, training, operational and technical risks, and alignment with business outcomes.

Option 3 was preferred because it contributes to achieving compliance and business benefits more rapidly, meets all criteria outlined in the scope and business requirements documents and establishes a pathway for GWW's asset management maturity uplift journey.

Option 1 did not meet any requirements. While Option 2 would provide a more enduring solution, it took longer to deliver, would be more costly and had higher risks. This meant a longer time taken to achieve compliance and any realise any related business benefits.

5.2.4.4.3 Program and Project Management capability consolidation

The Program and Project Management capability consolidation (PPM) project is a key recommendation from the Asset Delivery Organisational Review (ADOR), which supports the Program and Project Management Framework (PPMF). The project will provide a single enterprise system for managing projects and programs, aligning with the PPMF. The system will support the data capture and workflow capability required to manage and deliver a capital portfolio the size of GWW's.

Table 34 – PPM revised capex forecasts ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Labour	0.41	0.58	0.40	0.00	0.00	**1.39**
Vendor cost	0.34	1.00	0.60	0.00	0.00	**1.94**
Total	**0.75**	**1.58**	**1.00**	**0.00**	**0.00**	**3.33**

Project driver

The primary driver for PPM project is compliance. The project will assist GWW to comply with the Asset Management Accountability Framework (AMAF) and meet ISO 55000 standards for effective asset management. The PPM project will contribute to addressing existing non-compliance as highlighted in the 2023 Asset Management Maturity Assessment in the following AMAF areas:

- leadership and accountability
- Asset Acquisition and disposal.

It will also increase our ability to prioritise projects over the asset lifecycle, standardise planning and project management across the business and provide improved monitoring of costs. The PPM project is required to realise the full benefits

of the ADOR program, which was supported by the draft decision for its ability to deliver an increased capital program.

Timing and scope

This project is split into phases. Phase 1 involves consolidating all major infrastructure projects into a single PPM tool (PMO365, the legacy central tool), aligned to the PPMF. The business case provided refers to Phase 1 only. Subsequent phases will expand the tool's functionality to suit business needs. Different project management tools will be considered for that purpose.

The project needs to be delivered to align with the implementation of the ADOR program. Any delay to the PPM project will impact ADOR benefits realisation.

The project commenced in 2023/24 due to the urgent need to ensure accurate collection and reporting of Major Capital Infrastructure Projects data. By 2026/27, the project will be finalised and used for all GWW capital projects.

Options analysis

Four options were considered for this project:

- **Option 1: Do nothing** - Maintain the current practices and approach.
- **Option 2: Align pmo365 -** Initially transition all project management data and activities into pmo365 (previously used by CWW). Once a single system is in use, further investigate system upgrades or changes.
- **Option 3: New PPM tool -** Procure and implement a new project management tool for the business.
- **Option 4: Align to WW PPM tool** - Transition all project management data and activities into the western water project management systems. Once a single system is in use, further investigate system upgrades or changes.

Option 1 does not comply with AMAF, Option 4 was not considered as the existing tool is at end of life. Option 2 was recommended over Option 3, as it would deliver faster results, and provide a better basis for review of additional business needs, potentially reducing overall costs.

5.3 Stormwater harvesting program

5.3.1 Our proposal

GWW proposed a total of $12.8 million to be invested into stormwater harvesting projects. The program will provide for up to 10 projects using a co-investment model with our partners. We will be using a competitive merit-based funding model to ensure that funded stormwater harvesting projects can deliver the greatest liveability and environmental benefits at the lowest cost to our customers.

This program has history of successful delivery of collaborative projects, with a shared funding model that is consistent with the shared responsibilities and benefits

associated with integrated water management projects. Table 35 shows the annual capex proposal for stormwater harvesting.

Table 35 – Price submission 2024 stormwater harvesting ($m, 2023-24)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Stormwater harvesting capex	0.21	0.86	4.28	4.28	3.21	**12.84**

5.3.2 FTI Consulting's analysis

In its review of GWW's stormwater harvesting program, FTI Consulting (FTI) stated the following (summarised):[45]

- *While we understand that Greater Western Water has been able to garner support from its customers for this program, it has not been able to identify the individual projects or business cases for review.*
- *We have not been able to assess whether this expenditure is prudent and efficient*.

5.3.3 Draft decision

The draft decision proposes to remove the $12.8 million stormwater harvesting program. The ESC stated that the program is 'essentially a grant scheme',[46] and GWW was unable to provide or identify individual projects or stormwater harvesting business cases for review, meaning that underlying prudency and efficiency cannot be assessed.[47]

In its draft decision, the ESC note stated that in order to justify this expenditure GWW must:[48]

- Demonstrate how the delivery of these works is relevant to the provision of prescribed services in the *Water Industry Regulatory Order (WIRO) 2014*.
- Explain the proposed treatment of these costs as operating or capital expenditure.

5.3.4 Response

We maintain that the program is prudent and efficient and the full $12.8 million should be included in the capital forecast. Delivery of the works contributes to the provision of services prescribed under section 7(b) of the WIRO 2014. The assets provide long-term benefits to our customers and community, reflected by the capital cost recovered from customers via the RAB and through pricing over time as the benefits are received.

[45] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p. 72.
[46] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p 42.
[47] FTI Consulting, Greater Western Water: Review of expenditure forecasts, 2024, p. 41.
[48] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p 42.

5.3.4.1 Program structure

We confirm this is not a grants program. We implement a partnership approach that co-invests the delivery of stormwater harvesting systems. Assets associated with our prescribed services such as storage, treatment and distribution of water are integrated into our asset base. Stormwater managers (i.e., our Local Government and land managers partners) own and operate assets within their operational remits such as the stormwater related infrastructure, diversion systems and litter traps.

The stormwater harvesting program takes a competitive, merit-based approach to funding projects through partnerships with councils. This provides the greatest potable water reduction and substitution, liveability, and environmental benefits at the lowest cost to customers.

5.3.4.2 Individual projects

While individual projects for investment are not specifically confirmed, we have many projects already scoped and locations identified through previous schemes. Detailed concept designs exist for stormwater harvesting schemes developed by an external provider (confidential).

In 2023, we worked closely with eleven councils within our service region to develop a portfolio of 347 opportunities to irrigate open spaces with alternative water. These opportunities were identified through a combination of detailed technical analysis, as well as direct input from councils who contributed 60 of their feasible priority projects to the portfolio.

Each opportunity was assessed for a range of social and environmental benefits, cost factors, and then prioritised accordingly. Four of these opportunities have so far been further assessed for feasibility and developed to a stage of high-level concept design. Ongoing engagement with council partners is underway to progress further design of these opportunities to approach project readiness.

Similarly, the Metropolitan Integrated Water Management Forums have worked together over the last two years to identify priority actions within each catchment These actions include stormwater harvesting schemes prioritised by councils. The stormwater harvesting partnership fund will consider these actions and the opportunities identified through our investigations to date.

5.3.4.3 Efficiency

GWW's proposal will co-fund up to 50 per cent of investments capped at $1.5 million per project. We will invest in a total of 10 projects over the regulatory period.

The program will deliver efficient investment in stormwater projects across our region. We have a strong track record of delivery in co-investment programs and have taken on lessons from the past to guide future success.

The assessment process for the program ensures efficiency, and it is comparable to other similar co-investment programs in the Greater Melbourne Region. The previous

rounds assessment criteria were provided to FTI through the expenditure review. The future round assessment criteria will be co-designed with program partners to ensure maximum benefits.

This program also contributes to system-wide efficient water service provision. The Greater Melbourne Urban Water and System Strategy demonstrated that provision of up to 50GL of alternative water sources will deliver a lower cost sustainable water supply solution for our region.

History of successful delivery

City West Water previously delivered a stormwater harvesting partnership fund. The previous fund included the following elements to ensure prudency and efficiency of individual projects:

- working collaboratively with councils on project identification,
- a merit-based assessment process for final selection of projects,
- quality assurance during project delivery, and
- a robust governance structure.

This program will use the same elements to ensure prudency and efficiency. The last round of funding was oversubscribed with three projects awarded from nine submissions. This meant only the highest value projects received funding. The new fund is also forecast to be over oversubscribed, driving selection and completion of only the highest value projects.

Stormwater harvesting projects funded by City West Water in the past decade contribute approximately 0.5GL a year of supply to public open spaces. This is a meaningful contribution to water supply augmentation from alternative water sources.

Learning from the past to guide future assessment and success

An evaluation of the previous program has demonstrated success of the model. The review outlined the following four broad outcomes, which will be used to strengthen the next round:

- A broad range of legacy documents and processes will be updated to support successful delivery.
- Capital funding caps will ensure GWW is not exposed to cost overrun (cost escalation risk to be borne by partners).
- Updated design standards and specifications will be developed to support project quality.
- We have selected the timing of the expenditure that reflect experience in the previous fund, to deliver on our customer outcomes (as agreed to with customers) and support the delivery of the Greater Melbourne Urban Water and System Strategy and Sustainable Water Strategy.

Comparable programs in Greater Melbourne

Comparable programs are currently being delivered by other metropolitan water corporations.

South East Water is delivering its first "Drought Proofing Open Space Partnership Program" which consists of co-funded partnerships with councils and other partners to deliver alternative water infrastructure to passive and active open spaces. Funding for this program was approved for inclusion in South East Water's revenue requirement in the recent price review.

Similarly, for over 25 years, Melbourne Water has worked in partnership with customers and the community to undertake a range of activities that improve waterway health and enhance liveability via its flexible incentives program: Liveable Communities, Liveable Waterways Program.

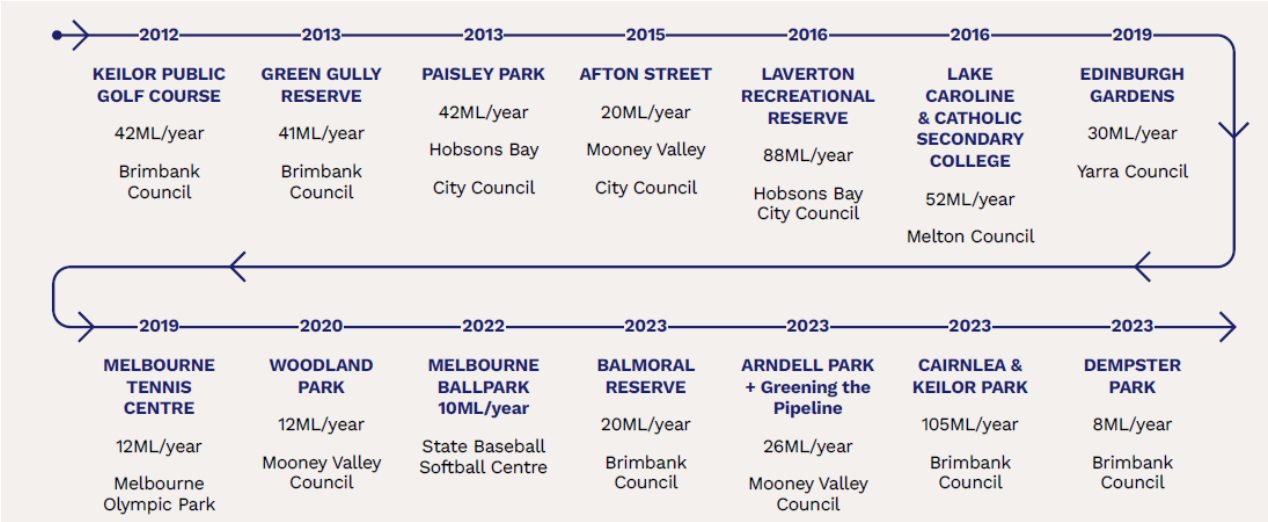
5.3.4.4 Prescribed service under WIRO 2014

Clause 7(b) of the WIRO outlines the prescribed services that the ESC can regulate prices for, including retail water, recycled and sewage services. Stormwater harvesting schemes which collect, treat and reuse stormwater to offset the use of potable water, contribute to the provision of retail water services by reducing demand on the centralised system, and delaying centralised system augmentations.

While there are many benefits associated with stormwater harvesting, the role it plays in potable substitution and therefore system resilience is an important component of the delivery of our prescribed services, in particular retail water services and drought resilience. Better use of stormwater can delay the need for major augmentations which significantly increase costs to customers.

Figure 10 shows that between 2012 and 2023, GWW co-invested in 14 projects that substituted 511ML of retail potable water. This is equivalent to the volume that would enable the deferral of one per cent of a typical 50GL desalinated water augmentation.

Figure 10 – Volumes of potable water savings through stormwater harvesting schemes



As a water retailer, GWW is best placed to co-invest and co-deliver local stormwater harvesting schemes to offset potable water use. Melbourne Water, as a bulk water provider, floodplain and waterway manager, can and does deliver stormwater harvesting schemes, as do councils. However, these schemes are typically driven by a need to slow runoff and reduce pollutants entering waterways or minimise flood risk.

In contrast, water retailers like GWW can harvest and use stormwater to offset uses that would otherwise depend on drinking water, like irrigation of open spaces. And unlike Melbourne Water, GWW – as the only entity responsible for retail water services in Melbourne's west – can work directly with customers to identify local opportunities for potable substitution and then deliver the stormwater harvesting capital assets, operation, maintenance, billing and associated services needed to create and maintain these benefits.

The service is a non-potable retail water service and that as such is captured by WIRO 2014 section7 (a)(i) as a prescribed service.

5.3.4.5 Treatment of expenditure

All funding in the program is capital expenditure. The investment funds the delivery of GWW assets that enable an alternative water service to be provided. Water Transfer Agreements govern GWW's supply to the customer, clearly identifying asset ownership and the service and supply expectations. They can also establish fees associated with operation and maintenance of the asset.

Our treatment of the expenditure as capital expenditure is consistent with the PREMO regulatory accounting framework and our annual regulatory accounts.

5.3.4.6 Customer support

The program directly supports the delivery of our third customer outcome 'We support our diverse communities and customers'. Removing the proposed expenditure significantly constrains our ability to deliver customer outcome three. No other program within the GWW price submission will advance this outcome and appropriate alternatives cannot be mobilised during the regulatory period.

The Deliberative community panel suggested a revenue requirement increase between $10-$14 million for stormwater harvesting schemes. The panel's reasoning for this was the 'changes in climate, population growth and decreased rainfall to help meet the ever-growing demand'.

GWW has committed to ongoing accountability to our customers through the Customer Forum who will meet annually to track our progress towards our commitments and sense check their ongoing relevance to customers' expectations and report our progress annually.

Table 36 summarises customer engagement feedback for alternative water and stormwater harvesting schemes.

Table 36 – Price submission 2024 customer feedback on stormwater harvesting and alternative water

Engagement stage	Feedback
Exploration	When asked what "supporting communities to thrive" meant to them, 74 per cent of the 3,097 survey respondents and all eight focus groups said it was "Looking into alternative water sources like recycled water to improve our public spaces". When asked "Affordability is important. Other than price, which of the following are most important for you?", 26 per cent of the 3,097 survey respondents said, "Local councils having access to cheap or free water to maintain public spaces".
Valuation	When asked "How much would you like GWW to spend on partnering with local councils and agencies to provide alternative water for public green spaces?", 21 per cent of the 2,177 survey respondents wanted us to spend less, 27 per cent wanted us to keep spending at current levels, and 52 per cent wanted us to increase our spending. In the focus groups, most participants (six out of eight groups) thought GWW should do more to provide alternative water for public green spaces (invest in 10-15 new schemes).
Deliberation	The deliberative community panel wanted GWW to increase funding for up to 15 new stormwater harvesting schemes and increase our advocacy role in alternative water to support waterway health and green open spaces to save drinking water. The panel's reasoning for this was the 'changes in climate, population growth and decreased rainfall to help meet the ever-growing demand'. The panel also stressed that engaging with local councils, businesses and other water corporations is critical. A revenue requirement of $10-$14 million was recommended.
Confirmation	90 per cent of the 1,046 survey respondents expressed some level of agreement that GWW's proposed plans to get water from other sources would deliver on the panel's recommendation. We also heard from eight local councils. They strongly aligned with our third customer outcome 'we support our diverse communities and customers' and supported our response to the panel's recommendations to deliver 10 additional stormwater harvesting schemes to improve the liveability of our service region.

6 Demand

Draft decision

The ESC accepted GWW's demand forecast for the purpose of approving maximum prices.[49] Demand forecasts have been developed consistently with the latest Victoria in Future (ViF) estimates. Updated ViF forecasts have been released that provide for new population and dwelling growth estimates, and the ESC require GWW to consider the updated estimates and if necessary, identify and justify any changes to its demand forecast. [50]

Response

In response to the draft decision, we have updated our connections forecasts to reflect the most recently available data from ViF2023 aligning with the ESC consideration. Correspondingly we have updated the volumetric consumption forecast to reflect the change in connections from ViF2023.

GWW's developed its population, connection and demand forecasts using ViF estimates issued by the Victorian Government in 2022 (ViF 2022). The Government released an update to ViF shortly after we lodged our price submission with the ESC (ViF2023), and we have undertaken analysis on the projections.

Our analysis on ViF2023 shows a short-term reduction (up to 2025-26) connections over the next four years for residential customers. In the long-term there is an increase (from 2026-27 onwards) in population and dwelling forecasts. This has resulted in a long-term increase in water demand and sewage disposal. This is shown in Table 37.

Table 37 – Comparison of ViF connections (BED 1 – residential and non-residential water connections)

	2023-24	2024-25	2025-26	2026-27	2027-28
ViF2022 connections	635,884	655,125	675,483	692,885	710,465
ViF2023 connections	635,514	653,697	673,022	691,295	709,616
Change in connections (ViF2023 - ViF2022)	**-1,370**	**-1,428**	**-2,461**	**-1,590**	**-849**
Change in new connections		**-58**	**-1,033**	**+871**	**+741**
ViF2022 Growth rate	3.29%	3.03%	3.11%	2.58%	2.54%
ViF2023 Growth rate	3.07%	3.02%	2.96%	2.72%	2.65%
Change in growth rate (ViF2023 - ViF2022)	**-0.22%**	**-0.00%**	**-0.15%**	**+0.14%**	**+0.11%**

[49] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p 51.
[50] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p 51.

We have updated customer and demand projections and resubmit a revised financial template that reforecasts from 2023-24. This takes into consideration:

- Lower customer numbers and associated forecast trendline for opex.
- The corresponding change in customer demand in our pricing worksheet and associated bulk charge volumes from Melbourne Water.

We are also not proposing to update new customer contributions modelling or NCC revenue forecast based on the lower customer connections. GWW is prepared to wear the risk on this small volume change of NCCs. Assuming a weighted average NCC price per connection, the change in NCC revenue over the regulatory period less than one per cent.[51] This has an immaterial impact on prices in this regulatory period as the revenue requirement moves by +$0.2 million in NPV terms over the four years, which is within the margin of error for the price control.

[51] Based on 61 per cent of new connections in Central, four per cent in Western Infill, 21 per cent Western Greenfield, and 14 per cent with recycled water in Central.

7 New customer contributions

7.1.1 Our proposal

We proposed in our 2024 Price Submission to have three New Customer Contribution (NCC) charges:

- Central and Western Infill - $1,830 in year 1 and CPI+5 per cent years (2-4)
- Western Greenfield - $7,616 in year 1 and CPI+5 per cent years (2-4)
- Central Recycled Water - $3,149 in year 1 and CPI+5 per cent years (2-4)

These three charges were modelled using the ESC's Net Cash Flow model provided on its website.[52]

Our proposal was informed by the ESC's NCC pricing principles and guidance paper, our existing tariff structures and the outcomes of engagement with developers for a more simple, consistent tariff structure across the GWW region.[53]

7.1.2 Draft decision

The draft decision does not approve our proposed NCC's on the basis that the proposal did not meet the guidance.

The draft decision stated:[54]

- *Greater Western Water has not provided us with adequate information or justification for us to be satisfied that its proposal regarding uniform standard new customer contributions for both infill and greenfield is compliant with the assessment criteria in our guidance.*
- *We have not yet seen quantitative evidence from Greater Western Water to demonstrate that the costs of providing services to new connections in its western greenfield areas are sufficiently consistent such that a common charge is justifiable.*
- *Proposed greenfield new customer contribution has not met our guidance requirements, because it has not demonstrated that it meets the pricing principle to have regard to the incremental infrastructure and associated costs attributable to a given connection.*
- *Greater Western Water estimates, based on its current assumptions on expenditure and demand, that its new customer contributions will be cost reflective by 2040, and potentially longer for recycled water.*

[52] Capital Contribution Model.xlsx from https://www.esc.vic.gov.au/water/industry-standards-codes-and-guidelines/new-customer-contributions-guiding-resources
[53] See developer forum engagement material provided to the ESC in response to RFI.
[54] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, pp58-62.

Specifically, the ESC asked GWW in response to the draft decision to: [55]

- *explain how its proposed uniform standard new customer contributions consider the guidance principles*
- *provide its justification, including the cost analysis it is based on, to support a uniform greenfield new customer contribution in the western greenfield areas.*

The ESC's draft decision did accept our negotiated customer contribution framework.

7.1.3 Our response

Based on consideration of the ESC's draft decision, further discussions with the ESC following the draft decision, and the ESC's concerns regarding cost reflectivity, we are withdrawing our proposed changes to the western infill tariff of our NCC. We are seeking a continuation of the current NCC tariff structures as approved by the ESC in previous reviews.[56]

The proposed tariffs use the existing tariff structure brought over from the two previous organisations. This tariff structure was assessed by the ESC as meeting the principles of its NCC framework, and the principles and requirements of the WIRO through the previous price submissions. The existing tariff structure is:

- Central – water – single charge across the region previously serviced by City West Water for water services.
- Central – sewer – single charge across the region previously serviced by City West Water for sewer services.
- Central – recycled water – single charge across the region previously serviced by City West Water in the areas where recycled water is available.
- Western Infill – water and sewer – single charge across the region previously serviced by Western Water for development that is infill for water and sewer services.
- Western Greenfield – water and sewer – single charge across the region previously serviced by Western Water for development that is greenfield for water and sewer services.

We have updated these tariffs to reflect our forecast growth and cost through the ESC's NCC estimator model. As with our current NCCs, for all other situations where the costs to serve are significantly different, or the circumstances of the development are not considered typical the negotiation framework applies. We have reaffirmed this position in our conversations with the ESC following the draft decision.

We are proposing to retain our proposed price submission transition path of CPI + 5 per cent for all NCCs apart from the western infill NCC (being re-introduced through this response) which will increase in line with CPI. Table 38 sets out our proposed response NCCs.

[55] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p 63.
[56] 2013 and 2018 for City West Water (now referred to as Central) and 2013, 2018 and 2020 for Western Water (now referred to as Western).

Table 38 – NCC proposal in response to the draft decision ($, 2023-24)

	Modelled outcome[57]	Price year 1	Price increase (years 2-4)
Central region (previously CWW service area) – water	$518	$915	CPI+5%
Central region (previously CWW service area) – sewer	$2,826	$915	CPI+5%
Western region – infill (previously WW service area) – water and sewer	$4,337	$3,133	CPI
Western region – greenfield (previously WW service area) – water and sewer	$15,511	$7,618	CPI+5%
Central region (previously CWW service area) – recycled Water	$11,990	$3,149	CPI+5%

While we do not expect any customers to require water or sewer only connections, we propose that if a customer in the western region only connects to one service, then a 50 per cent discount will apply if the customer does not wish to use the negotiation framework. This is consistent with the Central region pricing structure.

The following section steps through how our response is consistent with the WIRO pricing principles, the NCC pricing principles and the ESC's 2024 guidance for:

1. Drivers of growth for the new entity
2. Existing tariff structure
3. Proposed price transition
4. Use of the ESC's NCC modelling
5. Consideration of costs to serve at different locations including the role of the negotiation framework.

The ESC, through direct engagement post the draft decision, has indicated that our response should include a rationale for continuation of current tariff structures. Historically the ESC's decisions have focused on proposed changes and have, as a rule, accepted regulatory precedent set by the ESC's previous determinations.

The servicing solution for new growth in the western region has not changed since integration. In accordance with the ESC's post-draft decision advice, we have included in this response the supporting rationale for continuing with our existing NCCs.

7.1.4 Ongoing drivers of growth

The integration of City West Water and Western Water has not impacted on the nature of the growth that we service. Growth is expected to remain relatively high in the western region and is forecast to average 5.4 per cent per annum over 2024-28. The central region continues to be forecasted to grow, on average, at a slower rate of 2.4 per cent per annum, with the volume of connections still 2.4 times as many as the western region with 53 thousand new connections expected over the next four

[57] Note the modelled outcomes for Western region greenfield and Central Region Recycled Water will differ from the modelled outcomes in the price submission due to changes in customer growth and updates to the regulatory rate of return, tariffs and bulk water costs.

years in the central region compared to 22 thousand new connections in the western region. The rate and profile of development is driven by factors that are external to GWW and our integration.

The recently released Victorian Housing Statement identifies several priority precincts and regions within GWW's service region. The statement talks to the need to quickly and efficiently provide water connections to new properties, in both greenfields and infill areas.

GWW continues to navigate integration and the assets required to serve our diverse area. We have not experienced any significant technological change in the assets required to service growth and our capital solutions are structurally unchanged. We are still predominantly providing for water treatment and transfer, and sewage treatment and disposal in the catchment through a series of interconnection systems.[58]

Currently, the main impact of integration on our growth capex program relates to realising economies of scale and potential efficiencies in capital planning. These efficiencies will improve our ability to deliver capital planning quicker and at a lower cost.

We have been able to pass on efficiencies in incremental operating cost per connection as a result of integration. This has been incorporated into our modelling.

Until there is a decision made to serve the regions differently, we are not proposing to change the existing new customer contribution charging structure of the two legacy businesses. As such, our proposal continues to reflect the cost to serve in each of the existing charging regions for the two legacy businesses and the newly formed GWW. This is discussed further below.

7.1.5 Existing tariff structure

Our response proposes to continue to apply our existing NCC tariff structure and amend the small change originally proposed for infill connections in the western area. These tariffs are:

- Central – Water and Sewer NCC mirroring the City West Water approved NCCs.
- Western – Infill and Greenfield NCC mirroring the Western Water approved NCCs.

Given that the ESC in both the draft decision and subsequent engagements has made observations about the cost to serve in different locations, the response sets out how these relate to current tariffs below.

[58] Prior to integration, Western Water and City West Water entered into a sewage transfer agreement that would allow sewage to flow along the natural topography of the land for final treatment at Western Treatment Plant.

7.1.6 WIRO 2014 pricing principles

The overarching pricing principles guiding the draft decision and the ESC's New Customer Contribution framework are contained in the WIRO 2014. These principles form the basis against which the ESC makes all its regulatory decisions regarding price. Including those that relate to NCCs. The WIRO 2014 consists of three pricing principles in Clause 11:

> *(d) the following pricing principles, namely that the prices that a regulated entity may charge for prescribed services, or the manner in which the regulated entity's prices are to be calculated, determined or otherwise regulated, should:*
>
> > *(i) enable customers or potential customers of the regulated entity to easily understand the prices charged by the regulated entity for prescribed services or the manner in which such prices are calculated, determined or otherwise regulated;*
> > *(ii) provide signals about the efficient costs of providing prescribed services to customers (either collectively or to an individual customer or class of customers) while avoiding price shocks where possible; and*
> > *(iii) take into account the interests of customers of the regulated entity, including low income and vulnerable customers.*

Our current tariffs were found by the ESC to be consistent with the WIRO principles across multiple reviews. Given there has been no change in either the nature of the growth that we service or the underlying supply solutions we believe this remains as true for the 2024 regulatory period as it did for the ESC's previous pricing decision. The NCC tariff structure is simple and easy to understand and has been designed to meet the outcomes of engagement with developers.[59] We note that we have not received negative feedback from developers on our current tariff structures. We have calculated the prices by populating the ESC's model and this is publicly available on the ESC's website as part of our price submission. The proposed tariff structure is unchanged from the current determinations.

The ESC notes in its draft decision, that the second pricing principle 'in essence, requires new customer contributions to be cost reflective'.[60] GWW asserts that its NCC charges have been modelled to reflect costs such that they include the appropriate costs associated with the development. Our approach to cost reflectivity aligns with the regulatory precedent set by the ESC its previous determinations.

Our customers include developers and new customers, as well as end-use customers. WIRO Clause 11(d)(iii) requires ESC to have regard to whether prices 'take into account the interests of customers of the regulated entity, including low income and vulnerable customers'. It also addresses Clause 11(d) (ii) in avoiding

[59] Summary outcomes from our engagement with developers is found in our 2024 Price Submission and additional material provided to the ESC following our submission. We engaged with developers on the tariff structure as required in the 2024 Guidance Paper: 'Provide evidence of consultation with developers and how their views have informed the proposed changes, particularly if proposed Standard NCCs are significantly higher than the existing NCCs.' p63.
[60] Essential Services Commission 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p62.

price shocks. GWW is of the opinion that our current tariffs and proposed prices meet these two clauses of the WIRO as:

- Existing customers: We have had consideration of the impact of the cap on our existing customer base. Over the next regulatory period, typical owner-occupier customers on average pay $40 less per annum when we use a transition path for NCCs, compared to moving directly to the full modelled price. If there was no transition and NCC prices increased to the modelled price in 2024-25, customers would be paying more over the next regulatory period. This is a result of the higher tax paying position over the next regulatory period due to higher revenue from NCCs.

- New customers: We had consideration of the impact of a cap and transition price path on developers and new customers. We are aware of our impact on the development costs and our ability to provide timely processing of development applications. Through engagement with the developers, annual price increases were discussed, with the proposed annual price increase supported with consideration for annual increases approved for our neighbouring retail water utilities.

7.1.7 Regulatory guidance

The guidance paper states:[61]

> *The WIRO does not specify whether a business should use locational or postage stamp pricing. It is up to Greater Western Water to make the case for which is most appropriate.*

This guidance indicates that locational based pricing is not a requirement of the guidance paper (and is not a requirement in the current WIRO). GWW has the discretion to not propose locational based pricing where it is appropriate not to. We believe that our current NCCs are appropriate and fully align with the WIRO pricing principles, the ESC's NCC principles, the Water Act and the ESC's regulatory guidance.

7.1.8 NCC pricing principles

The ESC's pricing principles are that NCC should:[62, 63,64]

- Have regard to the incremental infrastructure and associated costs in one or more of the statutory cost categories attributable to a given connection.
- Have regard to the incremental future revenues that will be earned from customers at that connection.

[61] Essential Services Commission, 2022. 2024 Greater Western Water price review: Guidance paper, 20 September, p57.
[62] Essential Services Commission, 2013, New Customer Contributions: Explanatory Note, December, p2 and Essential Services Commission 2012.
[63] Essential Services Commission, 2013, Guidance paper – new customer contributions, August, p13 (referred to as minimum pricing principles).
[64] Essential Services Commission, 2022. 2024 Greater Western Water price review: Guidance paper, 20 September, p63.

- Be greater than the avoidable cost of that connection and less than the standalone cost of that connection.

Our current NCCs tariff structures updated as per the ESC's NCC estimator model are consistent with the NCC pricing principles as approved by the ESC in the 2013, 2018 and 2020 WW and 2013 and 2018 CWW price reviews.

Consistent with the ESC's broader application of pricing principles we have interpreted the principle of having regard to mean we must consider the incremental and associated costs, however it does not preclude either a water business or the ESC considering other matters such as capacity sharing and benefits customer receive from connection. The regard our current tariffs and proposed prices show for incremental and associated costs is evidenced by:

- Including only relevant incremental capital and operating costs of the new connections in the designated area.
- Including an allocation of shared costs based on the split of connections between existing and new customers.
- Considering the benefits received by all customers when they connect to our system, not dissimilar from our water and sewerage tariff proposal of similar price for similar service.

Through post draft decision engagement with the ESC, the commission officers have indicated that it would appreciate further consideration by GWW of location-based pricing for NCCs. The ESC's guidance clearly refers to consideration of the appropriateness of location-based costs and should not be interpreted as a requirement by the ESC for location-based pricing. We believe this guidance is appropriate and aligns with the pricing principles of the WIRO 2014.

The resources supporting the NCC pricing principles that are currently available on the ESC's website refer to the framework aiming to send signals about the cost of developing in different locations.[65] However, this is in reference to specific clauses of the WIRO 2012 that were removed in WIRO 2014, and there is no requirement in the WIRO 2014 pricing principles to have pricing differential by location. The redundant Clause 14 (1) of WIRO 2012 that states prices should:[66]

> *(v) provide appropriate incentives and signals to customers or potential customers about:*
>
> *(A) the sustainable use of Victoria's water resources by reference to the costs of providing prescribed services to customers (either collectively or to an individual customer or class of customers), including costs associated with balancing supply and demand; and*
>
> *(B) the costs associated with servicing a new development in a particular location.*

[65] Essential Services Commission, 2013, New Customer Contributions: Explanatory Note, December, p2.
[66] Water Industry Regulatory Order 2012.

Since this clause has been removed, there is no direct requirement in the WIRO 2014 to provide incentives based locational costs of development.

The ESC's current NCC principles were established in 2013 and predate the WIRO 2014. These principles have not been adjusted to reflect the gazetting of WIRO 2014. Principles that pre-date the current WIRO, and no longer align with the WIRO do not provide a solid basis for rejecting a proposed charge.

Notwithstanding this, both City West Water and Western Water had their NCC's approved (first time in this tariff structure) in 2013 by the ESC as being calculated in accordance with the core NCC pricing principles and appropriately cost reflective.[67]

Noting the discrepancy between the application of NCC principles and sending locational cost signals, we have adopted the ESC's 2024 guidance as our interpretation of the requirement to consider location based NCCs. We consider that our current NCC charges remain compliant with the WIRO 2014 and the ESC NCC framework.

Feedback from developer customers was clear that the current charging structure, or a more simplified version was the preferred structure. This is further discussed in Section 7.1.13.

7.1.9 Water Act

Section 268 (1) of the Water Act states that:[68]

> *An Authority that intends to provide services which will benefit a property may, by notice in writing, require the owner of the property to meet or contribute to the present day cost of any works that are used or will be able to be used directly or indirectly for the provision of those services, and any fireplugs attached to those works.*

Our response considers the benefit to apply to customers. All of our customers have the same benefit – timely connection to safe, secure reliable drinking water, and transport, treatment and disposal of sewage. The security of our drinking water is enhanced and treatment costs are reduced by the localised use of recycled water, as such the benefit of recycled water is shared amongst all users.

Our current tariffs reflect the four distinct cost drivers and benefits a property will have from being connected. We have considered the costs, both direct and indirect, for the provision of service as:

- Central – water and sewer: the continuation of our metropolitan network served wholly by Melbourne Water for water and predominately for sewerage.
- Central – recycled water: the continuation of our metropolitan network served by both our own infrastructure and through bulk recycled water from Melbourne Water.

[67] Essential Services Commission 2013. Greater Metropolitan Melbourne Water Price Review 2013 – Final Decision, June.
[68] Section 268 (1) of Water Act 1989 (Victoria).

- Western infill – water and sewer: the continuation of our urban network in regional towns and cities served by our own infrastructure and supplemented by bulk water from Melbourne Water.
- Western greenfield – water and sewer: the expansion of our urban network for the growing regional towns and cities served by our own infrastructure, supplemented by bulk water from Melbourne Water, and a small catchment supplemented sewage treatment by Melbourne Water.

7.1.10 Proposed price transition and price caps

The draft decision states that the ESC is unable to make a decision on NCCs tariffs as there is insufficient evidence to justify a tariff and the proposed charges are lower than what is calculated in the model. The decision states: [69]

> *We have reviewed Greater Western Water's proposed standard new customer contributions and we observe that most are lower than the charges calculated in its new customer contributions pricing model (see Table 5.1 above). Greater Western Water estimates, based on its current assumptions on expenditure and demand, that its new customer contributions will be cost reflective by 2040, and potentially longer for recycled water.*

In response to the draft decision, we are maintaining our proposed transition price paths. The proposal reflects the materially different modelled price outcomes for NCCs in the 2024 review compared to the NCC price outcomes in 2018 and 2020. Consistent with WIRO principles of 11 (d) (ii), to avoid adverse impacts on new customers, we are proposing a transition path to reach a full cost reflectivity price. In our consultation, we tested the proposed transition with developers. The transition approach adopting a five per cent per annum increase was supported by most developers at our forums.

Our response to the draft decision is based on a transition to full cost reflective NCC that will occur over the following periods (based on five per cent per annum real increase)[70]:

- Central: ~14 years to full cost reflectivity (2037-38)
- Western Greenfield: ~16 years to full cost reflectivity (2039-40)
- Recycled water: ~29 years to full cost reflectivity (2052-53).

We acknowledge that this will take multiple regulatory periods to reach the modelled price. However, as discussed with the ESC, the transition and capped pricing proposed reflect the inherent uncertainty in forecasting NCCs. The outcomes from the pricing model (using the same NCC model) are significantly different compared to what was proposed and approved in the 2013, 2018 and 2020 prices reviews. As such, we consider the proposed approach provides the appropriate balance between cost recovery and minimising the impact of future modelling outcomes.

[69] Essential Services Commission, 2024. Greater Western Water draft decision: 2024 Water Price Review, 26 March, p 62.

[70] The western infill NCC (proposed to continue via this response to the draft decision) will increase in line with CPI for the 2024 regulatory period under a temporary price cap. GWW will revisit this arrangement when we will re-calculate the NCC prices at the next price submission.

We will re-calculate the NCC prices at the next price submission to assess whether the price path proposed is consistent. Our proposed approach also does not preclude any tariff reform in NCCs we may wish to undertake in consultation with developers, new customers, and current end-use customers.

7.1.10.1 Regulatory precedent

Our transition path cap is consistent with regulatory precedent set in 2023 Water Price Review. The final decision approved both transition paths for NCCs (temporary price caps) and ongoing price caps of NCCs (see Table 39). These caps applied when the modelled price was both higher and lower (in the case of South East Water) than the price approved by the ESC.

Table 39 – Transition and capped pricing in 2023 water price review ($, 2023-24 – rounded to nearest whole dollar)

Business	Tariff	Modelled Price[71, 72]	Year 1 Price[73]	Price Path CPI +			
				Year 2	Year 3	Year 4	Year 5
Central Highlands (temporary price cap)	Water – New growth zone	$5,459	$3,211	17.8%	14.3%	1.0%	1.0%
	Wastewater – New growth zone	$7,376	$3,211	17.8%	14.3%	1.0%	1.0%
	Water – Existing growth zone and infill	$4,876	$1,391	26.3%	20.0%	16.7%	14.3%
	Wastewater – Existing and existing growth zone	$4,435	$1,391	26.3%	20.0%	16.7%	14.3%
Coliban (temporary price cap)	Water	$4,259	$2,299	20%	20%	16.3%	0.0%
	Sewer	$5,471	$2,299	20%	20%	20%	20%
Gippsland (ongoing price cap)	Moe Newborough – Sewer	$4,988	$2,744	0.0%	0.0%	0.0%	0.0%
South East (temporary price caps)	Other areas – Water	-$3,763	$870	5.0%	5.0%	5.0%	5.0%
	Other areas - Sewerage	$10,741	$870	5.0%	5.0%	5.0%	5.0%
Yarra Valley (temporary price cap)	Standard – Water	$2,107	$871	5.0%	5.0%	5.0%	5.0%
	Standard - Sewer	$3,861	$871	5.0%	5.0%	5.0%	5.0%

[71] Updated to $, 2023-24 by inflating by March 2023 CPI (132.6) divided by March 2022 CPI (123.9).
[72] Retrieved from either price submission or responses to the ESC draft decision: Central Highlands, p 23, Coliban NCC Submission Model 2022-09-30, Gippsland Wastewater NCC Model, South East NCC Model, and Yarra Valley NCC Model.
[73] Both year 1 price and price path have been retrieved from Schedule 2 of the Final Determinations 2023-28 for each business.

7.1.11 Modelling approach

GWW has used the ESC's Net Cash Flow methodology that considers incremental costs and benefits of new connections to our network. The model has been downloaded from the ESC's website and cleared of example data, and the 20-year model was used. The choice of a 20-year model was based on the reliability of data.

Our modelling assumptions were:

- Forecast connections: We used the latest Victorian Government data to forecast connections in each of our four tariff structures – Central (water and sewer), Central (recycled water), Western (Greenfield) and Western (infill).
- Forecast capex: We used our capex forecast consistent with our price submission and internal growth plans. Assets that were considered to be incremental for this purpose were:
    - All growth-related capex for pipes and pumps/valves.
    - A proportion of growth-related treatment costs based on the proportion of new customers connected relative to existing to reflect the secondary driver of compliance.
    - A proportion of some renewals expenditure that is being upgraded from growth. This was done on a case-by-case basis and only considered assets where the secondary driver was growth. The allocation was 20 per cent to growth with the exception of some large renewal programs where the driver was considered to be 50 per cent growth and 50 per cent renewal in the inner urban areas of Melbourne.
- Incremental bulk charges: We used current Melbourne Water bulk prices and percentage of new customers who will be served by potable water and sewage treated from Melbourne Water.
- Incremental O&M: We used the forecast price submission opex to calculate the incremental O&M by customers.
- Gifted assets: We used historical gifted asset values to develop a unit rate to be applied to forecast connections.
- Forecast consumption and prices: Forecast water consumptions and prices were drawn from our price submission and internal tariff modelling.

7.1.12 Consistency with NCC pricing principles

Consistent with the ESC's broader application of pricing principles we have interpreted the principle of having regard to mean we must consider the incremental and associated costs, however it does not preclude either a water business or the ESC considering other matters such as capacity sharing and benefits customer receive from connection. In particular it does not preclude consideration of the impacts of NCCs on new customers, as evidenced by the NCC price caps approved by the ESC for five water businesses.

The regard our response has for incremental and associated costs is evidenced by:

- Including only relevant incremental capital and operating costs of the new connections in the designated area.
- Including an allocation of shared costs based on the split of connections between existing and new customers.

- Considering the benefits received by all customers when they connect to our system, not dissimilar from our water and sewerage tariff proposal of similar price for similar service.

7.1.13 Further consideration of location-based pricing

During the development of our price submission, we investigated different charging options. We developed a series of options as part of our long list of considerations:

a) Development type (Infill and greenfield)
b) Previous boundary-based charging (Central and Western)
c) Location based charging and aligning to particular growth areas (for example, Melton, Hume, Wyndham)

These options were modelled at a high level, included a number of simplifying assumptions and early capital forecasts. This modelling was not considered as part of our submission because it did not accurately reflect the customers who would benefit from the investments (as required under the Water Act). The early modelling was used to inform options analysis and what options were realistic to pursue further from a technical and practical perspective.

During discussions with the ESC post draft decision, the commission staff expressed a preference for location-based pricing. We shared our process with them and initial modelling outcomes to show how we had considered and had regard to the costs to serve at each location. We note that by maintaining our current tariff structure we have a broad location-based approach that differentiates between our central area, western infill and western greenfield service areas.

We have not proposed to change our NCC to reflect a more granular level of location-based pricing on the basis that we believe it would currently be unreasonable to do so, as explained in the following sections.

7.1.13.1 Uncertainty in specifics of growth

Several greenfield locations whose forecast growth is subject to high levels of uncertainty. The average cost associated with servicing lots in these developments is extremely sensitive to changes in growth forecasts. Locational based NCCs have the potential to materially distort the future development profile of these locations. For example, there is relatively low growth in the Hume growth corridor. This area is less than five per cent of our growth and requires significant investment if growth connections are as expected. However, we have experienced much higher growth than anticipated in this region over the last several years.

7.1.13.2 Growth areas that are part of a contiguous systems

Whilst we have several key greenfield growth corridors in our western region (namely, Wyndham, Melton, Hume and Regional), we have three water systems (a northern, central and southern system). All systems are internally integrated. For example, in the western area (including the northern and southern systems) is inherently more complex due to many interconnected, small scale and distributed

storages. Investment made in the geographically bottom of the water network benefits all customers downstream.

Currently water enters our region through two interfaces with Melbourne Water – near Melton (transferred to Merrimu) and near Sunbury (transfer to Rosslynne). The system has been expanded to connect almost every town to the Melbourne supply system over the years to provide resilience for water supply. As such, water is currently transferred into the network at two single points to allow for all customers, regardless of location to receive water from the Melbourne network.

For example, the trunk mains near Sunbury and upgrades at Rosslynne water filtration plant are built not just for that growth corridor but provide benefit to all regional customers. The primary reason why we have chosen not to adopt more granular locational-based tariffs is that to do so ignores the integrated nature of the system costs and will distort any efficiency signal provided by the tariff. This supports the continuation of a greenfield charging approach.

7.1.13.3 Detailed investment allocation

During the development of the price submission, we tested a number of scenarios. Based on uncertainty and contiguous systems, it was not feasible at the time to provide detailed cost allocation to each individual catchment. This would have included examining all assets and estimating the cost which is attributable to the customers the asset serves that may be across different growth areas.

Systems are designed to provide the capacity required to service new customers and cater for the resilience to service all customers when outages occur.

The next section further discusses issues with using the locations aligned to growth areas (defined by council boundaries) as it does not reflect the distinct water and sewer systems.

7.1.14 Appropriateness of different locations

More granular location-based charging was discussed with our Land Development team and our developer customers. This was to investigate if the council boundary growth areas have significantly more or less cost than other areas, and whether it was material enough to separate out the existing greenfield charge in the western region.

As this was completed in our early options investigation modelling, our planning team provided capex allocations to different potential growth zones that were based on simplifying assumptions of where the asset is located. However, in practice this approach is not reasonable due to the integrated nature of our water system in the western catchment, as the location of an asset in a particular growth zone may benefit customers outside that zone. As such, it was determined that using council boundaries to establish growth zones for differential NCCs would not be reflective of system-based costs and would not meet the WIRO principles around efficiency, the Water Act or the ESC's NCC Pricing Principles.

To further explain this, we have prepared two maps that show the limitations of Local Government Area based cost allocation.

Figure 11 – map of water supply zones with council overlays

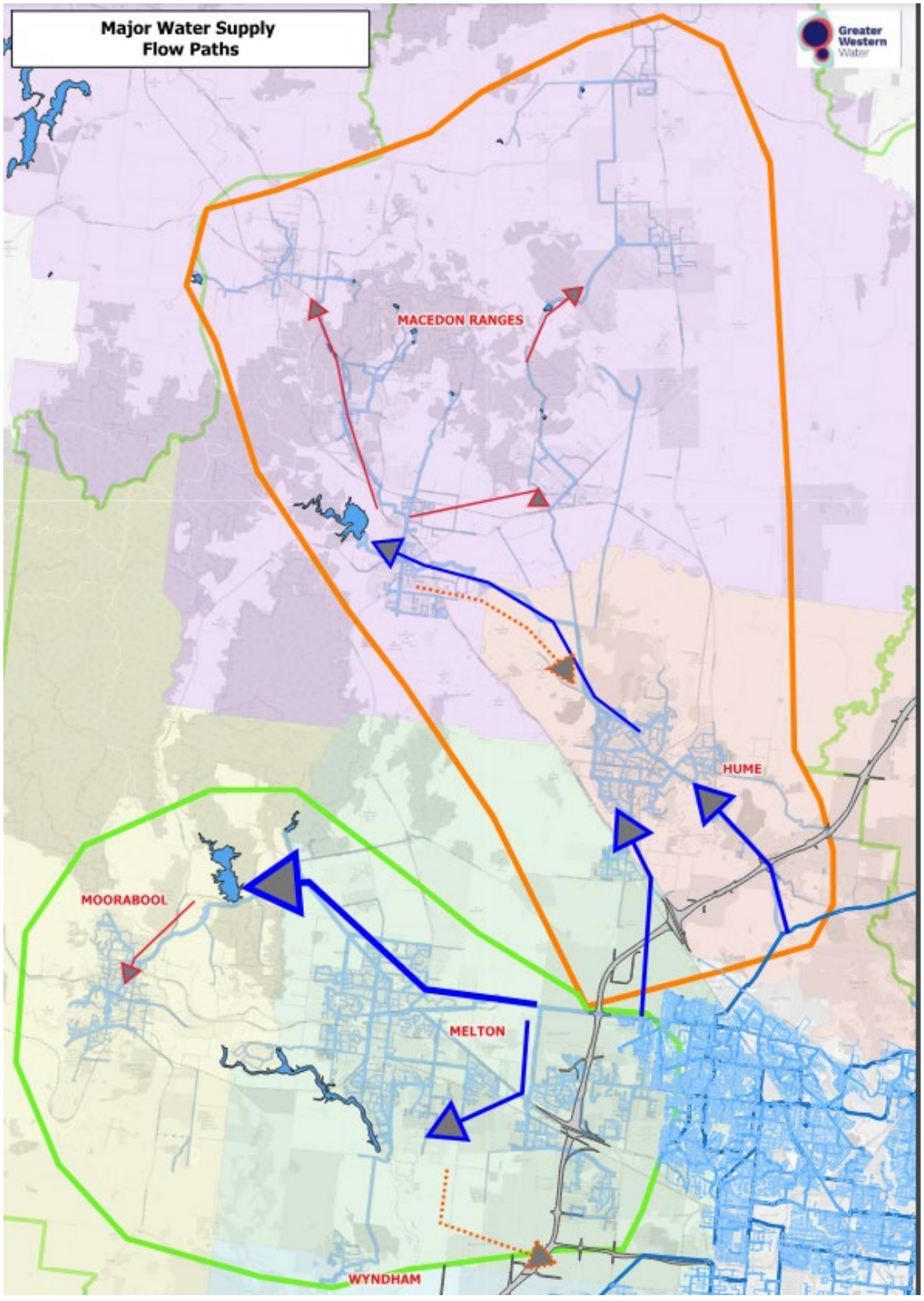


Figure 11 shows the two contiguous water supply zones in the western region with Rosslynne serving Hume and Macedon Ranges, and Merrimu serving Moorabool, plus providing resilience to Melton. Towns in these regions are served by a mix of local and bulk supplies from Melbourne Water.

For example, if we consider water entering the Hume area from Melbourne Water:

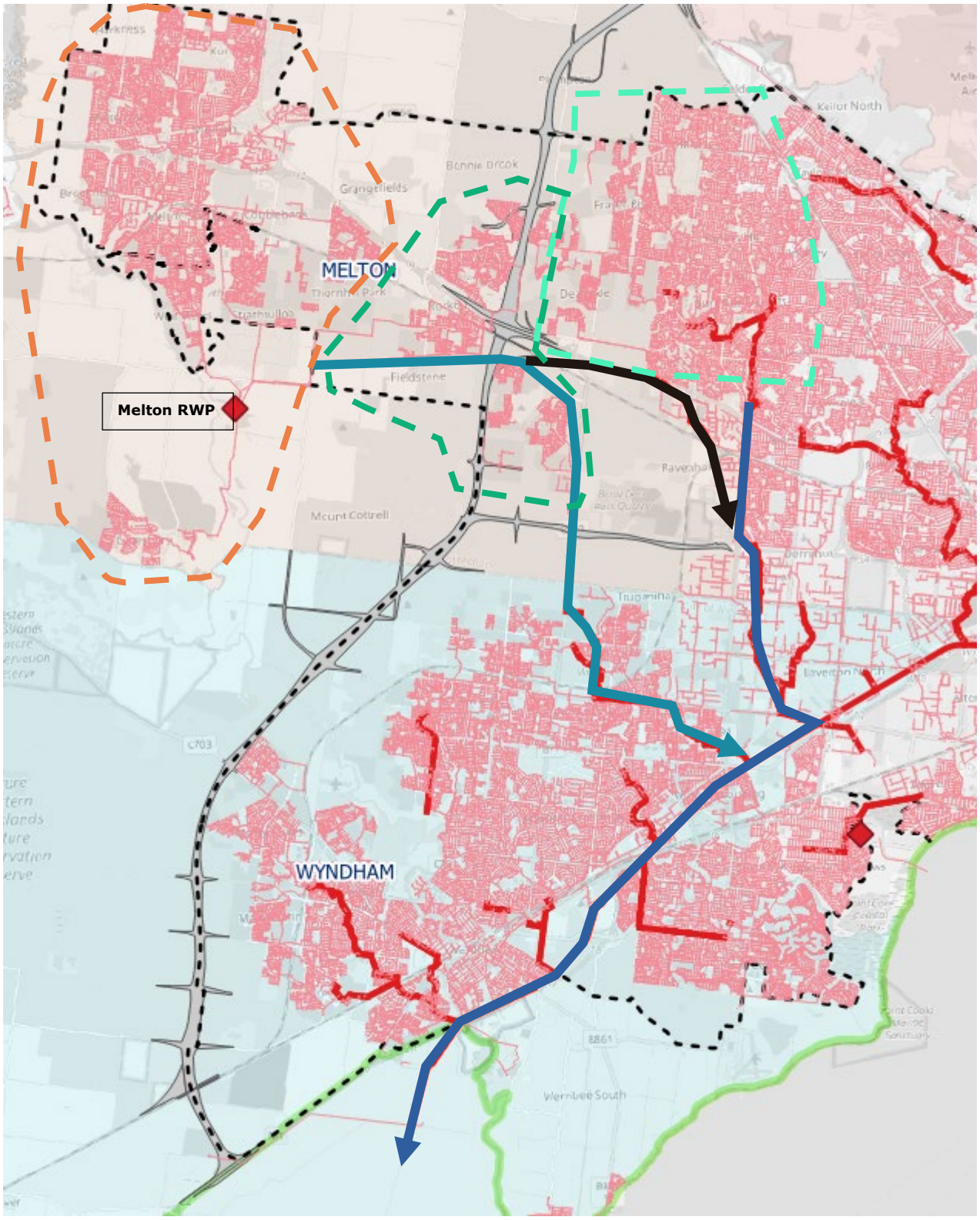
- This water is transferred through large networks to Rosslynne Reservoir where it is mixed with local supplies.
- It is then treated at Rosslynne Water Filtration Plant (WFP).
- Depending on the time of year, Gisborne, Riddells Creek, Macedon and Mount Macedon may be supplied directly by the Melbourne system or via the Rosslynne WFP.
- From Rosslynne, the raw water is available to be used by towns in the Macedon Ranges, including Romsey, Lancefield and Woodend.
- Rosslynne reservoir also provides for the resilience in Sunbury, as flows can be diverted there if there is an outage in the network.

This integrated system shows all water enters in Hume, but much of the water is transferred to Macedon Ranges Shire for storage and treatment in Rosslynne. From Rosslynne, water can be transferred north or south depending on the supply scenario which results in supplies to either the Macedon Ranges Shire, or Hume Council regions.

This arrangement shows that it is inappropriate to have a Hume LGA growth charge, as assets in Hume and at Rosslynne need to be sized for customers in the entire northern catchment of the region. Whilst the growth area is predominately in the Hume area, inclusion of these assets without considering the benefits to customers outside the Hume area would send inappropriate price signals.

A similar circumstance exists for customers across Melton, Wyndham and regional areas from Merrimu WFP. Note that Myrniong is the only township not connected to the Melbourne network.

Figure 12 – map of sewer supply zones with council overlays



The sewer servicing shown in Figure 12 provides an oversight to how the sewerage system operates in Melton. It shows that some customers in Melton have sewage

transferred to Western Treatment Plant (operated by Melbourne Water) while other customers have sewage treated locally at Melton RWP.

Furthermore, by breaking down the sewage systems into each regional area, there are five recycled water plants each with its own cost drivers and each with only a small volume of growth. Depending on the assumptions used around historical investment, a granular location-based charge in the western greenfield area would result in material price fluctuations between regulatory periods.

7.1.15 Role of the negotiation framework

We acknowledge that each growth region and/or location may have instances where specific connection costs differ from the average cost per connection.

Consistent with our current framework, GWW will continue to use the negotiating framework for areas where the servicing solution is different from expected and/or typical. This includes areas where only one service would be provided or particularly high-cost or low-cost areas. GWW or a developer can request the use of negotiating framework to apply for a development.

In our conversations with commission staff following release of the draft decision, there has been interest in the default application of the negotiation framework across all development in the western greenfield area. GWW is concerned the application of such an approach would be detrimental for both the business and our developer customers.

There would be a significant additional administrative burden of applying a negotiation framework for all greenfield development. Our operating model does not currently have the resourcing for that approach, and would require an increase in operational expenditure. Our price submission has not included the significant uplift in operating expenditure that would be required to deliver a negotiated charge for all developments in the western greenfield region. Developers would also be confronted with increased administrative burden and potential delays to development.

The scale of negotiating on all greenfield development in the Western region makes it impractical with over 5,000 new lots per year.

A large-scale negotiation framework approach impacts the transparency and perceived fairness between developers, and does not provide consistency between customers. This would be a move towards a non-transparent pricing structure that is implicit under a negotiation framework and may lead to uncertainty and VCAT challenges that could have been avoided.

A move to a full negotiation framework for western greenfield development would greatly increase administrative burden and therefore increasing regulatory burden to both existing and new customers. This is inconsistent with Part 2 8A of the ESC Act.

All of the above impact would work in opposition to the Victorian Housing Statement, and the Minister's Letter of Expectations to water corporations, in particular impeding the quick and efficient connection of new homes to water supply.

8 Financial position

The outcomes for the four key financial indicators have been updated to reflect our response proposals to the draft decision, and these are summarised in Table 40.

Except for the interest cover ratio, the remaining three financial indicators breach the ESC's benchmark requirements for all years of the regulatory period 2024-25 to 2027-28. As highlighted in our price submission, the primary catalyst impacting GWW's financial position is the necessary augmentation in capital expenditure to accommodate the accelerated population growth in our service region.

We believe our gearing ratio remains serviceable based on the strong forecast growth in our service region and the revised stable real bill path.

Table 40 – GWW's update financial indicators

	Benchmark	2024-25	2025-26	2026-27	2027-28
Interest cover (times)	>1.5 times	1.94x	1.88x	1.81x	1.76x
Net debt / RAV (gearing) %	<70%	75.78%	78.76%	80.94%	83.72%
Funds from operation / net debt (%)	>10%	4.44%	4.27%	4.05%	3.91%
Internal financing ratio (%)	>35%	14.02%	15.13%	13.66%	15.39%

9 PREMO rating

Draft decision

The draft decision rated our 2024 Price Submission as 'Standard' under the PREMO framework aligning with our self-rating.

The ESC draft decision agreed with our self-ratings for Performance, Risk, Engagement and Outcomes.

The ESC did not agree with our self-rating for Management and instead adopted a rating of 'Basic' for the Management element of PREMO. The rationale given for this included:

- Insufficient evidence to justify the baseline operating expenditure above benchmark.
- Not all capital expenditure was able to be verified by the expenditure consultant.
- Did not have sufficient information to justify that New Customer Contribution charges are cost reflective.

The draft decision also noted several elements that support a standard rating for management:

- The submission was generally well presented.
- It clearly linked outcomes of its engagement with planned outcomes and expenditure.
- The financial model contained no substantive errors and was consistent with the submission.
- The underlying base efficiency of 1.4 per cent proposed by GWW was aligned to a standard rating.

Response

GWW considers that we have met the PREMO requirements for a 'Standard' Management rating and request the ESC reconsiders supported by the evidence in this response.

GWW acknowledges the challenges faced by both FTI Consulting and GWW throughout the expenditure review. FTI Consulting's requests for information often required significant time and effort by GWW to interpret what quantitative and qualitative data was being requested, which we worked hard to resolve with FTI. The FTI expenditure report revealed that there was still a level of misinterpretation, leading to some of the expenditure adjustments. Our response focuses on addressing this misunderstanding.

GWW has addressed the ESC's 'Management' concerns through the information provided in this response for expenditure, pricing, NCCs and demand, as outlined in the preceding sections:

- **Opex**: GWW has provided further evidence and rationale that supports our proposed opex forecast. We have detailed the expenditure adjustments in the

base year as prudent and efficient, and that these costs are recurrent. We have provided additional evidence of the step change in billing and collections as it is maintenance of the system.

- **Capex**: We have provided additional evidence and business cases to justify our capex proposal. Where appropriate we have removed capex due to increased uncertainty on the cost identified between submission and the draft decision.
- **NCCs**: We have proposed to continue the existing NCC tariff structure, which was approved by the ESC in the 2018 and 2020 price reviews and we have provided additional justification on why the structure and transition path is consistent with the ESC's pricing principles and guidance.

In addition to this, GWW has updated its connection and demand forecast to reflect new information from ViF2023 and full year of consumption data from 2022-23 onwards. This has resulted in a slight decrease in our controllable opex growth rate relative to our submission.

Table 41 summarises the evidence provided to support a 'Standard' Management rating.

Table 41 – Evidence supporting a 'Standard' Management rating

Draft decision	Evidence in support of a 'Standard' rating
New Customer Contributions	• We note that in the recent 2023 price review, the ESC's draft decisions did not approve the proposed NCC charges for a significant number of businesses being reviewed. However, none of those business received a Management element downgrade on the basis their of NCC proposals. • We have held an open dialog with commission staff on our proposed charges following release of the draft decision. • We have provided further information on why our proposed continuation of the western greenfield charge and proposed transition paths is appropriate, reflects engagement outcomes and meets the ESC's principles and guidance. • Our response has also proposed to retain the central standard charge and western infill charge, reflecting the existing structures previously approved by the ESC.
OPEX The ESC noted that each of the adjustments are large compared with other water businesses through the 2023 price reviews. The 8.1 per cent reduction to controllable operating expenditure is higher than the largest adjustment from the 2023 price review, of 5.4 per cent, partly leading to the downgrade.	
Other baseline costs	• Provided a detailed rationale explaining that these costs are prudent, efficient, and recurring; therefore, should be included in our proposed base year. • Previous determinations relied on outdated data and forecasts from 2016-17 and 2018-19 for controllable opex of anteceded businesses. Therefore, the historical cost forecasts approved by the ESC are now deemed materially outdated and insufficient for accurately assessing base year costs. • Re-forecasting using actual growth figures shows underestimation of opex, impacting various assessments including labour, maintenance, compliance, and community costs. • Further, the analysis doesn't consider external factors such as integration, COVID-19 impacts, and supply chain interruptions, which could further inflate costs beyond the initial underestimation.

Integration costs	• Provided a detailed rationale explaining that these costs are both prudent and efficient and should be included in our proposed base year. • We have identified and justified integration expenditure consistent with ESC guidance. ESC's guidance doesn't require the total removal of ongoing integration expenditure from the proposed base year. • The identified integration costs are recurrent throughout the upcoming regulatory period and contribute to ongoing efficiencies.
Labour costs	• We had proposed to not include an opex step change for payroll tax and superannuation guarantee changes. • We are proposing to fund these costs through savings from our workforce optimisation plan, which will offset the increased payroll and superannuation costs over the next regulatory period. • Details on the breakdown of superannuation and payroll tax costs, along with the explanation of the workforce optimization plan, are provided in the GWW 2024 Price Submission (Appendix H.2.4).

Field maintenance costs	• Provided additional quantitative data to justify that these field maintenance costs are both prudent and efficient and will be recurring over the next regulatory period.
	• We have provided:
	  ○ a breakdown of the field maintenance costs uplift.
	  ○ data to show a sustained increase in our unit rates for repair activities over the last five years.
	  ○ data to show an increase in high cost / complex repair activities and correlation with large variation with weather.
	  ○ more detailed information on our external contractor costs, procurement process, and governance structure and controls.

Compliance obligation costs	• Provided additional quantitative data to justify that these compliance obligation costs are both prudent and efficient and will be recurring over the next regulatory period.
	• We have provided:
	  ○ a breakdown of the compliance obligation costs uplift by treatment plants.
	  ○ more detailed information on the cost drivers by treatment plants.

Corporate and customer costs	• Provided new information for each additional role's activities, benefits to customers, and articulation of the previous deficit in the function. • Provided evidence linking the roles to the additional costs.
Billings and Collections update costs	• Provided additional quantitative data to justify that these Billings and Collections update costs are both prudent and efficient and will be recurring over the next regulatory period. • Provided a breakdown of B&C update costs and detailed information on the requirement for this uplift.
CAPEX The ESC noted the proposed $160 million adjustment to capital expenditure was high compared to similar businesses in the 2023 price review, partly leading to the Management downgrade.	
Water Main Performance Renewal Program	• Modelled evidence demonstrating that FTI's proposed reduced expenditure for the program would not deliver the program objectives which it states it can with the reduce expenditure. • Evidence that FTI's proposed option would lead to declining service levels and unfunded increased opex costs for reactive maintenance which is not prudent or efficient. • Analysis demonstrating that GWW's proposed option is the most prudent and efficient to meet the program objectives. • Further context and new information provided on the risk of reactive maintenance costs and resources from any expenditure reduction.
Asset Ecosystem Program	The FTI report states that GWW should have provided individual business cases for the Asset Ecosystem program. GWW was never asked to provide individual business cases for this program. GWW was asked for information to summarise the program, which was provided. In addition, our response contains:

	• Three individual business cases for the asset ecosystem program. These business cases specifically address FTI's concerns. • Our response proposes to hold the financial risk as uncertain expenditure for three components for the program where individual business cases are not as developed.
Stormwater Harvesting Program	• Sufficient explanation for the treatment of costs as CAPEX through delivery of assets and agreements and processes in place for ongoing opex expenditure. • Further information on the identified projects, project assessment and scopes connecting to Government commitments, demonstrating prudency and efficiency and benefits to customers. • Detailed evidence for the program's alignment with our prescribed services under the WIRO and ability to offset potable retail water and delay costly augmentation. • Clarified the roles and responsibilities for GWW, Melbourne Water (Waterway and drainage authority) and Southern Rural Water (Rural Water Corporation) in stormwater harvesting programs.

Our response provides sufficient evidence relating to each of the ESC's concerns to allow the ESC to reassess its PREMO rating of GWW's Management from 'Basic' to 'Standard'.

Table 42 provides a summary of our response to the ESC's PREMO draft decision.

Table 42 – PREMO rating

	Overall PREMO rating	Performance	Risk	Engagement	Management	Outcomes
GWW self-rating	Standard	Standard	Standard	Advanced	Standard	Standard
ESC draft decision rating	Standard	Standard	Standard	Advanced	**Basic**	Standard
GWW revised self-rating	Standard	Standard	Standard	Advanced	**Standard**	Standard

10 Appendices

10.1 Appendix A - Unplanned water renewal activity ratio summary

The summary below shows why the ratio of three to four and four to five unplanned outages changes when the amount of renewal activity shifts significantly.

<table>
<tr><th colspan="5">GWW Current Regulatory Water Main Renewal Program (performance over past 3 years)</th></tr>
<tr><th colspan="2">Renewal Demand to meet Service Standard</th><th colspan="2">What has been delivered</th><th>Outcome</th></tr>
<tr><td colspan="2">• KPI renewal need: 22 km/year</td><td colspan="2">• KPI renewal need: 22 km/year
• Cohort renewal activity: 11 km/year (to avoid high risk failures and reduce burst rates in problematic assets)</td><td>• No accumulation of KPI renewal
• Cohort renewals assisting to keep failure rates consistent in problematic assets as shown by the number of customers on three unplanned outages being steady
• Temporary supply not being exhausted but has been maxed out on occasion</td></tr>
<tr><th colspan="3">GWW 2024 Price Submission Proposal
(Central 33km of renewal)</th><th colspan="2">FTI Proposal
(Central 20km of renewal)</th></tr>
<tr><td rowspan="3">Year 1 Renewal need:
22km of KPI renewals</td><td>Proposed program</td><td>• KPI renewal need met: 22 km/year
• Cohort renewal activity: 11 km/year</td><td rowspan="3">Year 1 Renewal need:
22km of KPI renewals</td><td>Proposed program</td><td>• KPI renewal need not met: 20 km/year
• Cohort renewal activity: 0 km/year</td></tr>
<tr><td>Delivery Partner expenditure</td><td>• Crews enabled: 10
• Temp supply capacity: 15km across network at any one time</td><td>Delivery Partner expenditure</td><td>• Crews enabled: 6
• Temp supply capacity: 10km across network at any one time</td></tr>
<tr><td>Outcome</td><td>• No accumulation of KPI renewals.
• Cohort renewals assisting to keep failure rates steady in problematic assets.
• Customers on 3 unplanned outages remains steady.</td><td>Outcome</td><td>• Minor accumulation of KPI renewal (+2km not delivered).
• Uptick in customers on three unplanned outages as modelled.
• No cohort activity leading to increased KPI renewal numbers in future years</td></tr>
</table>

		• Temporary supply being maxed out on occasion. • No increased opex for reactive maintenance costs			• Temporary supply being maxed out on occasion. • Likely increase in opex for reactive maintenance costs
Year 2 Renewal need: 22km of KPI renewals	**Proposed program**	As per year 1 – steady state achieved	**Year 2 Renewal need:** 23km + 2km of carry-over from last year = **25km** of KPI renewals	**Proposed program**	• KPI renewal need **not** met: 22 km/year • Cohort renewal activity: 0 km/year
	Delivery Partner expenditure	As per year 1 – steady state achieved		**Delivery Partner expenditure**	• Crews enabled: 6 • Temp supply capacity: 10km across network at any one time
	Outcome	As per year 1 – steady state achieved		**Outcome**	• Accumulation of KPI renewals has now set in (+5km not delivered). • Uptick in customers on three unplanned outages. • Temporary supply being maxed out more often, likely to lead to more customers on four, five and possibly more unplanned outages. • Likely increase in opex for reactive maintenance costs
Year 3 Renewal need: 22km of KPI renewals	**Proposed program**	As per year 1 – steady state achieved	**Year 3 Renewal need:** 24.3km + 5km of carry-over from last year = **29.3km** of KPI renewals	**Proposed program**	**Proposed program** • KPI renewal need not met: 22 km/year • Cohort renewal activity: 0 km/year
	Delivery Partner expenditure	As per year 1 – steady state achieved		**Delivery Partner expenditure**	• Crews enabled: 6 • Temp supply capacity: 10km across network at any one time
	Outcome	As per year 1 – steady state achieved		**Outcome**	• Significant accumulation of KPI renewal (+9.3km). • Ongoing increase in customers on three unplanned outages. • Temporary supply insufficient, more customers being subject to four and five and potentially more unplanned outages. • **Previous unplanned outage customer ratios no longer current.** • Increased opex from reactive maintenance
	Proposed program	As per year 1 – steady state achieved		**Proposed program**	• KPI renewal need met: 22 km/year • Cohort renewal activity: 0 km/year

Year 4 Renewal need: 22km of KPI renewals			**Year 4 Renewal need:** 24.5km + 9.3km of carry-over from last year = **33.8km** of KPI renewals		
	Delivery Partner expenditure	As per year 1 – steady state achieved		**Delivery Partner expenditure**	• Crews enabled: 6 • Temp supply capacity: 10km across network at any one time
	Outcome	As per year 1 – steady state achieved		**Outcome**	• Significant accumulation of KPI renewal (+13.8km). • Large increase in customers on three unplanned outages. • Temporary supply insufficient, more customers being subject to four, five and potentially many more unplanned outages. • **Previous unplanned outage customer ratios no longer current.** • Increased opex from reactive maintenance
Year 5 Renewal need: 22km of KPI renewals	**Proposed program**	As per year 1 – steady state achieved	**Year 5 Renewal need:** 25.5km + 13.8km of carry-over from last year = **39.3km** of KPI renewals	**Proposed program**	KPI renewal need met: 22 km/year • Cohort renewal activity: 0 km/year
	Delivery Partner expenditure	As per year 1 – steady state achieved		**Delivery Partner expenditure**	• Crews enabled: 6 • Temp supply capacity: 10km across network at any one time
	Outcome	As per year 1 – steady state achieved		**Outcome**	• Significant accumulation of KPI renewal (+19.3km). • Large increase in customers on three unplanned outages. • Temporary supply insufficient, more customers being subject to four, five and potentially many more unplanned outages. • **Previous unplanned outage customer ratios no longer current.** • Increased opex from reactive maintenance

10.2 Appendix B – Life Expectancy of Problematic Assets

Weighted Average Life (by length) of problematic assets at the time of their removal.

Pipe Material	Diameter	Life Expectancy (years)
AC	100	55.96411
	150	50.55656
	225	71.6329
	80	62.3175
AC average		55.2394
CI	100	102.7555
	125	123.6913
	150	113.4581
	175	129.7358
	225	112.1064
	80	119.3879
CI average		110.4495
CICL	100	64.20668
	125	137.0313
	150	56.03546
	175	143.286
	225	70.85723
	80	112.0197
CICL average		67.56965
AVERAGE		**72**

10.3 Appendix C – Date of installation for problematic assets still within the GWW network

Install decade	Lenth still active	How many years long has it been in for?	Comment
1861 - 1870	5,435	155	Approximately 320km of problematic asset still within the network are now operating beyond typical life expectancy of around 72 years.
1871 - 1880	2,866	145	
1881 - 1890	17,554	135	
1891 - 1900	18,957	125	
1901 - 1910	8,608	115	
1911 - 1920	17,346	105	
1921 - 1930	114,688	95	
1931 - 1940	93,594	85	
1941 - 1950	41,799	75	
1951 - 1960	!! **48,625**	65	Very large emerging renewal need in future years as CICL installed post WW2 reaches end-of-life
1961 - 1970	!! **37,059**	55	
1971 - 1980	!! **37,995**	45	
1981 - 1990	8,161	35	
1991 - 2000	753	25	
2001 - 2010	3,809	15	
2011 - 2020	72	5	
	1157 km		

10.4 Appendix D Problematic Asset Locations

The map shows problematic asset locations in red. We have a high density in Melbourne's inner CBD, and in older and more established and populated built up suburbs.