# 2018
# Water Price Review

# Gippsland Water's Price Submission
## (28 September 2017)

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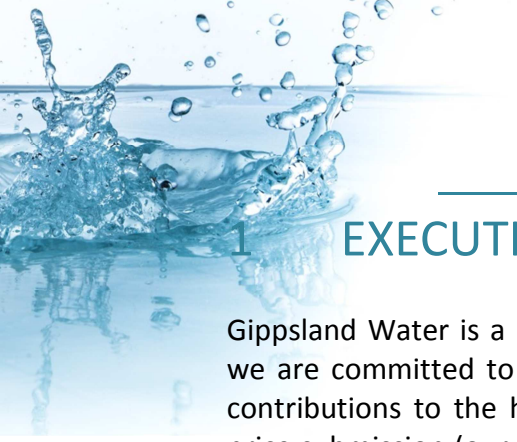


# 1 EXECUTIVE SUMMARY

Gippsland Water is a proud member of the Gippsland community. We are local, and we are committed to partnering with our communities in ways that deliver positive contributions to the health and economic growth of our region. At the core of our price submission (our Plan) is the delivery of high quality, sustainable services that are based on the priorities outlined by our customers.

The Gippsland region is going through significant and challenging change. From the withdrawal of major industries and key employers, to strong growth in towns such as Warragul and Drouin, the diversity and resilience of our region in itself presents a unique operating environment for an urban water corporation. Alongside this we continue to see an increase in unemployment and hardship in the region, particularly across the Latrobe Valley, and customer affordability is a growing concern for Gippsland Water.

Our Plan continues to build on the extensive customer and community engagement undertaken during 2016, with further engagement undertaken most recently with the release of our draft price submission to customers in June 2017.

During our engagement journey we asked our research partners to engage with our customers about the service experiences that they value, and to a lesser extent, the level of risk that they are willing to accept. Ultimately, this has resulted in our customers developing a set of five values on which this Plan is based. These five values are:

- do your job well;
- be easy to deal with;
- be affordable and fair;
- prepare and protect; and
- be involved.

Based on customer preference, we have adopted the term customer values, rather than customer outcomes, to better reflect the idea that these are tangible needs, expectations and priorities.

Each of these values is supported details of the customer experience sought, Gippsland Water's promise, outputs, key performance indicators (KPI's) and proposed guaranteed service levels (GSL's). Our approach seeks to forge stronger relationships with our customers, communities and stakeholders. Our engagement activities will be strengthened in all our planning processes to ensure customers and stakeholders are provided a voice in the investments we make.

In relation to levels of service, we have listened to our customers when developing our Plan:

- customer opinion was overwhelmingly in favour of spending to ensure the reliability of their service - customers did not want any reduction in service;

- on the other hand, customers did not say that they wanted improved services;
- it was also noteworthy that customers were adamant that they would not accept a cheaper bill if that meant a reduced level of service.

During October 2016, the Victorian Government released the 'Water for Victoria' Water Plan. The Water Plan seeks to ensure that water corporations' manage water to support a healthy environment, a prosperous economy and thriving communities for all Victorians. The Water Plan sets out actions to ensure our water system is modern and efficient, innovative, future focused, and our water services remain affordable, so that we can deal with new and emerging issues.

To achieve these outcomes, the Water Plan outlines a range of priority policy areas that water corporations are required to focus attention on, including climate change. In March 2017, all water corporations were required to pledge emissions reductions targets. Gippsland Water's pledge to the state government includes spending $4.18M during the fourth regulatory period on emissions reductions and energy saving projects. Significantly, our Plan also includes a pass-through of energy savings that are generated as these projects are delivered. At full production, these 'behind the meter' projects are expected to generate savings of almost 10% in energy consumption, or around 2,600 MWh per annum by June 2023.

We understand that delivering the same high quality services at the lowest possible cost is fundamental to the interests of customers. Disappointingly, given this significant reduction in energy consumption, costs for electricity purchases during the fourth regulatory period are forecast to rise sharply, and represent a substantial increase on costs currently being incurred. These forecast increases have not only negated the savings in energy consumption, but have also undermined savings made in operational expenditure across the business.

Over the next five years we plan to invest $392.1M (Jan 18 $) in operational expenditure, and a further $203.8M (Jan 18 $) in capital expenditure, on infrastructure and services that sustainably deliver outcomes that our customers told us they value the most. This capital expenditure includes two major projects - $31.4M for a new wastewater treatment plant (WWTP) to meet the population growth in Drouin, and $9.7M on a new sewer pump station to service growth and an environmental hazard within the township and surrounds of Sale.

We have spent considerable effort considering the allocation of risk between customers and the corporation, to determine how we can relieve customers of risk in this Plan, and reduce upward pressure on tariffs and customer bills. Our aspiration was to have zero or negative 'real' tariff movement for the fourth regulatory period. However, the accumulated effect of large revenue losses and significant operational cost increases require a small increase in tariffs despite the considerable risks the corporation has taken.

The closure of our third largest customer - Energy Brix occurred in late 2014. The closure of the Engie - Hazelwood Power Station (our second largest customer) was

announced at the end of March 2017. Most recently, Carter Holt Harvey's Morwell sawmill ceased operations during August 2017. The loss of these three major customers represents a combined water consumption of more than 16 gigalitres (GL) of water per annum (at full production). Despite this, our Plan absorbs increased risks which have sheltered tariffs from being fully exposed to these impacts.

In terms of the local economy, these latest closures represent the loss of up to 660 jobs in the Latrobe Valley, and have signalled a significant slowdown in developer activity. For the first time in many years, Gippsland Water failed to declare any new serviced properties in the Latrobe Valley for both the first and second quarters of the 2017 calendar year.

With uncertainty continuing to surround the longevity of the brown coal based local power industry, Gippsland Water also faces significant risks in relation to the revenues included in our Plan for our remaining power industry based major customers.

Against this backdrop, our Plan takes on significant risk by making a range of positive assumptions about the regions' future. We have assumed that Engie - Hazelwood will continue to be a reduced yet significant revenue stream for the duration of our Plan, well beyond the current contract expiry date of mid-2021. We have also chosen to take an optimistic view of underlying economic activity and connections growth. Rather than limit forecast growth for our four main Latrobe Valley towns (Churchill, Moe, Morwell and Newborough) we have continued to forecast growth at historical average rates.

In addition, we have elected to reduce forecast capital expenditure for the construction of Shared Asset infrastructure to 50% of the total value estimated by our planning team. This action recognises that this expenditure is volatile in nature and is very difficult to predict with any accuracy. Finally, we have elected not to seek any increase in New Customer Contributions in our Plan in an effort to support local developers.

The regulatory return reflected in prices has been established by Gippsland Water via the PREMO incentive mechanism. Gippsland Water has self-assessed the level of ambition in this price submission as 'standard'. Based on this assessment, Gippsland Water has included a real per annum return on equity rate of 4.5 percent, in accordance with the regulated return model. To set a level of ambition higher than 'standard' would only lead to further pressure on prices, and was not considered given the current environment and the range of risks outlined above.

Together, these actions present a significant risk to the forecast revenues in our Plan, but represent a risk that the Corporation is prepared to take. Our actions seek to minimise increases in customer tariffs at a time when customer affordability risks due to increased unemployment in the region are of heightened concern.

Despite these actions, a small, real annual increase of 0.57% per annum in tariffs is sought in our Plan, as outlined in the table below.

**Table E1: Key Customer Tariffs ($ Jan 18)**

| | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Availability Charge - 20mm Water Service | 175.90 | 176.90 | 177.91 | 178.92 | 179.94 | 180.97 |
| Treated Water per kL | 2.0340 | 2.0456 | 2.0573 | 2.0690 | 2.0808 | 2.0927 |
| Availability Charge - Wastewater Service | 808.07 | 812.68 | 817.31 | 821.97 | 826.66 | 831.37 |

As such, customer bills are expected to increase marginally each year. As outlined below, assuming average water consumption of 168.1 kL per annum (which represents the mid-point usage during the regulatory period), an average full service customer bill will increase by $7-8 per annum, while an average tenant bill is expected to rise by $2 per annum (Jan 18 $), excluding CPI.

**Figure E1: Average Household Bill – Full Service Customer ($ Jan 18) – Excludes CPI**

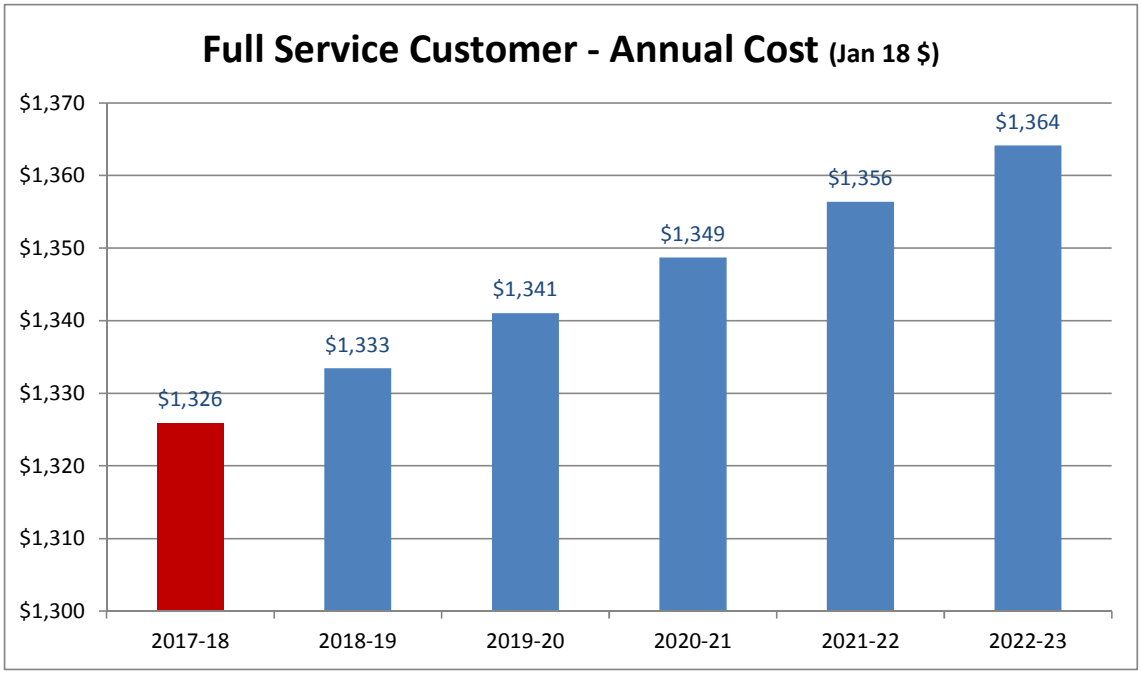
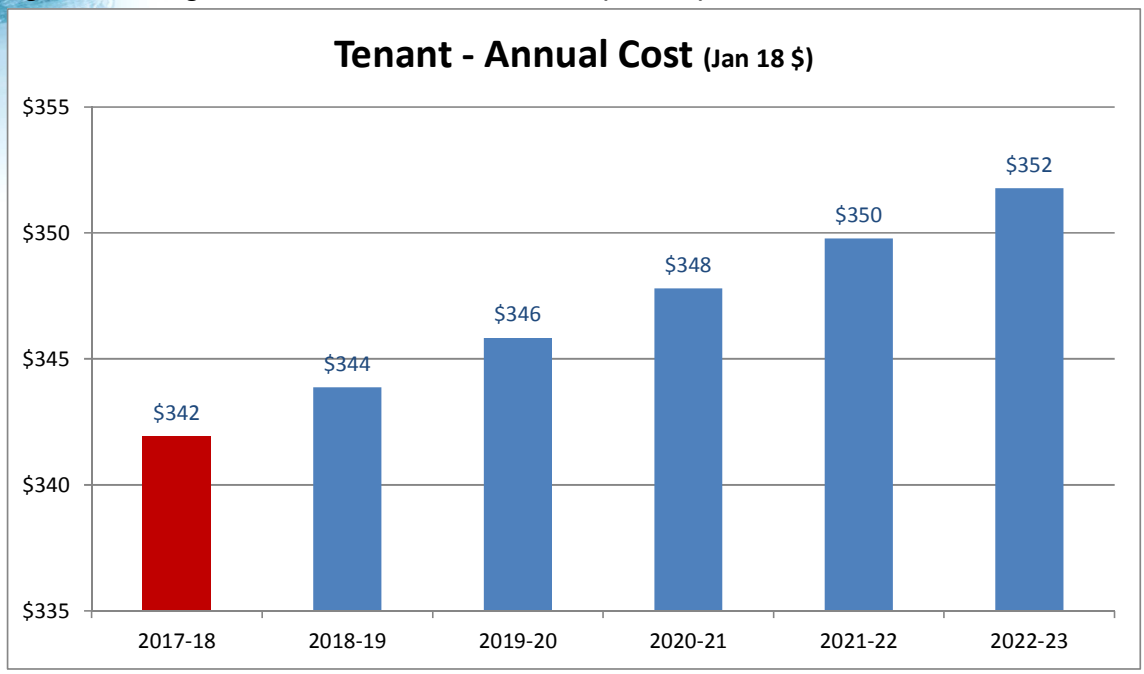


**Figure E2: Average Household Bill – Tenant Customer ($ Jan 18) – Excludes CPI**




Our Plan assumes that customers will receive the fourth and final annual Government Water Rebate during the 2017-18 financial year. From July 2018 onward, our Plan assumes that all enduring efficiency savings are incorporated into the cost base for the determination of ongoing customer tariffs.

Despite the modest annual tariff increase proposed above, our corporate plan forecasts reveal that cash flows from operating activities will not be sufficient to fund the predominantly renewals based capital expenditure required during the regulatory period. As such, the Corporation's total borrowings will increase from a base of $280M at June 2017 to $329M by June 2023 (nominal dollars).

The Gippsland Water Board has devoted significant time during the development of our Plan to gain an understanding of the issues and assumptions used in formulating Gippsland Water's price submission. The Board has provided an assurance (refer appendix one) that:

- information and documentation provided in the price submission and relied upon to support Gippsland Water's price submission is reasonably based, complete and accurate in all material aspects;
- financial and demand forecasts are the business's best estimates, and supporting information is available to justify the assumptions and methodologies used; and
- the price submission satisfies the requirements of the 2018 Water Price Review Guidance paper issued by the Essential Services Commission (ESC) in all material respects.

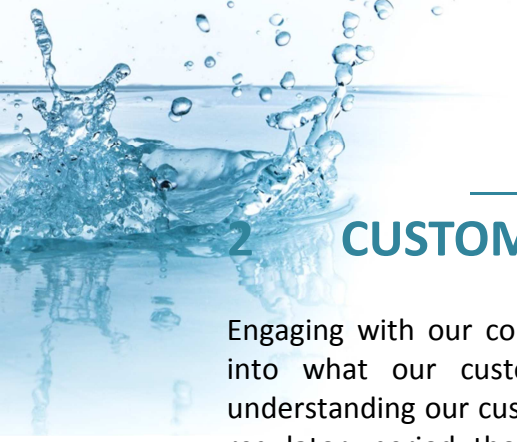
We believe our Plan is a strong and fair Plan that acknowledges the challenges in our region, while balancing the pressures of reduced revenue, increased costs, allocation

of risk and customer affordability. More importantly, our Plan has been guided by those priorities that our customers told us are most important to them.

The table below outlines a number of key questions identified by the ESC in July 2017, together with Gippsland Water's responses.

**Table E2: ESC Key Questions Checklist**

| ESC Question | Gippsland Water Response | Price Submission Reference |
|---|---|---|
| Are prices lower, the same, higher? | Marginally higher. 0.57% per annum real increase proposed | Chapter 7. Specifically sections 7.3 and 7.4 |
| Are controllable costs lower, the same, higher? | Higher – particularly in relation to energy price forecasts | Chapter 4. Specifically sections 4.2 and 4.4 |
| Are cost efficiency targets higher, the same, lower? | Higher than 1% proposed by ESC | Chapter 4. Specifically section 4.4 |
| Are you providing more, about the same, or less services? | Services expected to maintained at current levels during fourth regulatory period | Chapter 4 |
| How have engagement findings influenced outcomes? | Significant influence to develop customer-derived values | Chapter 2 and 3 |
| Has less, the same, more risk been allocated to customers? | Significantly less risk to customers given our approach to capex risk and revenue risk | Chapter 6 and 9. Specifically sections 6.1, 9.1 and 9.2 |
| Has management taken responsibility for submission? | Yes – management has attested to the Board. Board attestation also provided. | Appendix One |
| The 'golden threads' should also be clear about how findings from engagement have influenced the price submission (giving effect to voice of the customer) | Significant explanation of our engagement journey and our 'golden threads' provided | Chapter 2 and 3 |



# 2 CUSTOMER ENGAGEMENT

Engaging with our community has provided Gippsland Water with valuable insights into what our customers want from their water corporation. Not only has understanding our customers' values guided the development of our Plan for the next regulatory period, those values have also been embedded into our corporate strategy and are influencing our organisation at every level.

Customers were extremely positive about the engagement process Gippsland Water undertook, and gave particularly thoughtful feedback. It's based on their preference that we have adopted the term customer values, rather than customer outcomes, to better reflect the idea that these are tangible needs, expectations and priorities.

## 2.1 LISTENING TO CUSTOMER FEEDBACK

Gippsland Water has a good history of listening to customers. Customer satisfaction surveys conducted in 2014 and 2015 gave us a strong understanding of customer perceptions and expectations. But in order to improve our service to the community, we needed to develop a deeper understanding of our customer's values and priorities.

We elected to reach out to our customers in several rounds of engagement activities which stretched over a 17-month period. This process of ongoing engagement over time was designed to be agile and iterative in nature, connecting with the community on a regular basis, constantly evolving the materials used to engage the customer, and working to progressively develop a stronger set of customer-initiated values.

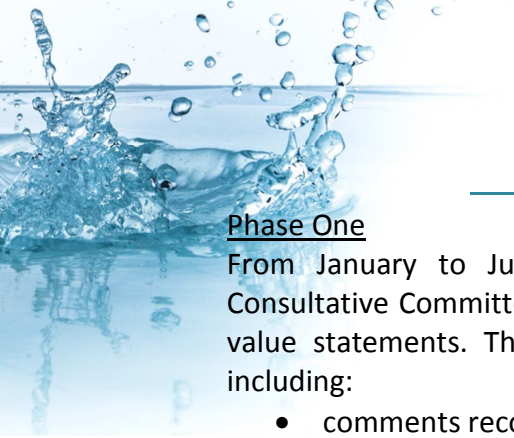
We started this process in early 2016 so that customer input could guide the price submission from the conceptual stage, rather than commencing after our Plan had been formulated. In addition, throughout our activities we have ensured that demographic representation is consistent with our customer base.

## 2.2 OUR ENGAGEMENT JOURNEY

From the outset, Gippsland Water's vision was to focus our engagement in areas that customers can most effectively influence. By overlaying the drivers of investment with the IAP2 Public Participation Spectrum, we identified that customers had the most influence in the areas of risk and service standards.

In particular, we asked our research partners to engage with our customers about the service experiences that they value, and to a lesser extent, the level of risk that they are willing to accept.

By engaging with our customers about what really matters to them, and refocusing our standards to be more closely linked to customer experiences, our intent is to align our programs and activities to our customers' values and experiences, and in doing so increase the level of customer influence.



Phase One

From January to June 2016, we worked in conjunction with our Community Consultative Committee and research partner, Insync, to develop 10 simple customer value statements. The work was based on information from a range of sources, including:

- comments recorded during surveys of Gippsland Water customers;
- discussions with our Community Consultative Committee; and
- customer research conducted by local and international water corporations.

The statements were written in simple language, free from jargon, and were the starting point for our customer engagement process. The initial statements covered areas such as service levels, communications, affordability, environmental interests and hardship provisions.

The 10 simple customer value statements identified were:

1. I expect my tap water to be perfectly safe to drink at all times;
2. I expect Gippsland Water to be a part of my community;
3. I can accept interruptions to my water supply, as long as they are kept to a minimum and I'm kept informed;
4. My experience when dealing with Gippsland Water should be low effort and convenient;
5. Information provided by Gippsland Water should be easy to access and easy to understand;
6. I expect Gippsland Water to be able to explain where my money is going in a way that I can understand;
7. Gippsland Water's pricing and payment approach should acknowledge that some people struggle to pay their water bills;
8. Gippsland Water should be preparing for future threats to our water supply, such as extreme heat and drought;
9. I want information about service disruptions to be delivered to me promptly and with notice where possible; and
10. I want my Gippsland Water bill to be easy to understand.

Phase Two

In November and December 2016 Gippsland Water set out to collaborate with our customers and community representatives to test and refine these customer value statements. Customers were also empowered to contribute their own ideas to the list.

The findings from the first phase of engagement suggested that there was a gap between experiences that customers' value and the standards we operate to. This theory was tested through a workshop with Gippsland Water's Executive team, which confirmed that our regulatory KPI's did not align with what our customers said they valued. The current regulatory KPI's are focused on technical aspects of water and wastewater service delivery, with little emphasis on other, non-technical aspects that customers told us were important to them.

In light of this, the second phase of our research explored areas of value which were linked to a draft set of service commitments. The original 10 customer value statements were adjusted and grouped by Gippsland Water into emerging outcomes which were tentatively titled:

- safe and secure drinking water;
- low effort and convenient services;
- affordable bills;
- dependable services; and
- information and advice.

We engaged with representatives from a range of relevant community groups, facilitated community conversations with residential and business customers, and set up an online forum. The inclusion of an online option removed the barrier of distance that prevented some customers from attending the customer conversations. The online forum generated significant positive customer reaction, engagement and enthusiasm, and provided robust data and detailed responses.

Based on customer feedback, the emerging outcomes were iteratively refined to arrive at a revised set that better aligned with customer needs and expectations, and most importantly were customer-derived:

- do your job well (provide safe water and remove wastewater dependably);
- be easy to deal with;
- be affordable and fair;
- be involved; and
- prepare for future growth and protect the environment

Proposed service commitments and a draft set of GSL's were tested, and customers were asked to rank them in order of importance.

Phase Three

In March 2017 Gippsland Water set out to pressure test and validate the refined set of customer outcomes, along with the associated commitments and revised GSL's. Each of the customer outcomes was set out in a format that demonstrated the correlating customer experience, promise, output, and GSL. Each element was discussed in detail, as were overall attitudes to the concept.

Following the success of the online community model, another online forum was set up for approximately three weeks in March 2017. During that period, over 250 pages of transcripts and 100,000 customer words were collected and analysed.

During this phase we also explored specific areas of interest to Gippsland Water including:

- giving customers greater control through exploring their appetite for adjusting the variable to fixed tariff mix:
    - customers were introduced to the idea of a possible change in the proportion of the fixed and variable components of their bills through a fact sheet;

  - an online calculator was also developed so customers could explore what impact a change may have on their own bills;
- environmental stewardship and emissions reductions:
  - participants were asked to comment on the importance of protecting the environment, possible activities, willingness to pay and overall concerns.

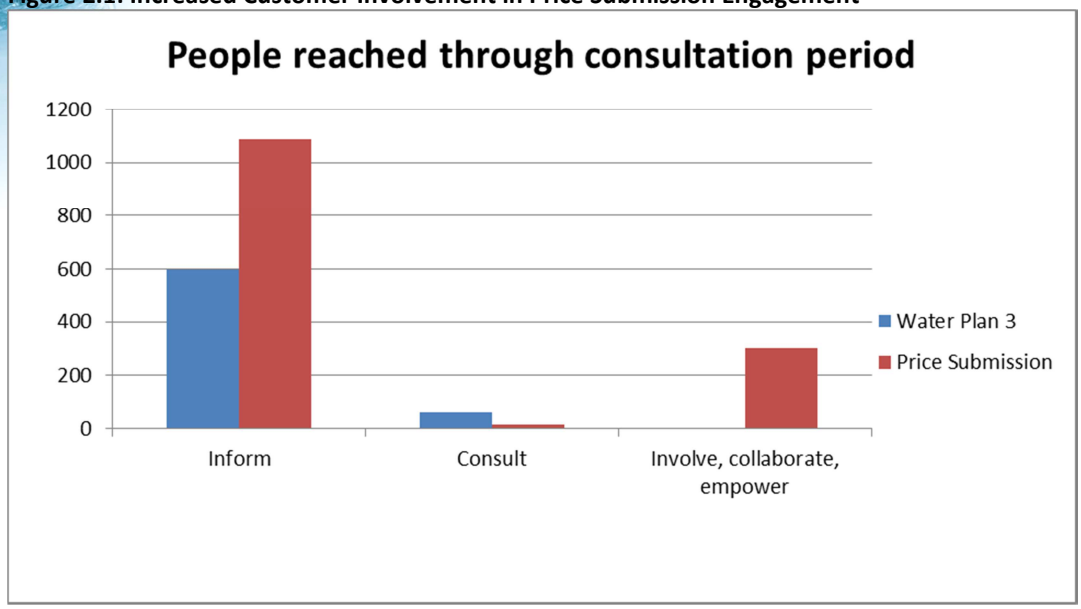
While the feedback from customers in Phase three was very positive, it was suggested that the order of presentation be changed to better reflect customer priorities. 'Prepare and Protect' was moved up to fourth position, and 'Be Involved' became the fifth on the list. Significantly, customers did not think that the phrase 'customer outcome' adequately described the five key themes. Instead, customer feedback indicated that customers preferred the phrase, 'customer value'._Appendix Two outlines the journey in terms of customer-derived language (from phase one to phase three) that has evolved during the engagement process.

Phase Four

By June 2017, Gippsland Water was ready to demonstrate to our customers how their feedback had informed our planning for the next regulatory period. We developed a booklet, a dedicated website and social media posts, all using simple language, to demonstrate how the planned projects, pricing and GSL's aligned to what we'd heard from our community. We set up 13 pop-up information stalls outside supermarkets and in town centres across Gippsland, and invited customers to give us feedback (captured on the campaign website).

Customers were extremely positive about the engagement process undertaken by Gippsland Water and the breadth and depth of the process. Compared to Water Plan 3, there has been a step change in the quality and quantity of customer feedback that we have collected, and the level of influence customers have been able to exert. This gives us confidence that the techniques employed and the results recorded reflect a much deeper level of community engagement than we were able to achieve five years ago, as shown in figure 2.1 below.

**Figure 2.1: Increased Customer Involvement in Price Submission Engagement**




## 2.3 WHAT WE LEARNED

Although our customer values evolved over time, the quality and continuity of water supply remained the top priority for our customers at every stage. Making water supply and quality a priority is reflected in the final order of our customer values:

- do your job well;
- be easy to deal with;
- be affordable and fair;
- prepare and protect; and
- be involved.

Initial conversations with customers in 2016 revealed that their attitude towards service is that continuity of service is paramount, 'cheapest is not always best', and that keeping jobs local is important. Yet the typical customer was somewhat concerned by the proportions in their bill between the fixed and variable charges. When asked, most were unwilling to pay extra to help support other customers in a difficult financial situation, but were very strong about Gippsland Water needing to support vulnerable customers.

Later in 2016, in both online and live forums, we again heard that providing 'perfectly safe tap water' was easily the most important outcome. Every customer ranked safe drinking water as the most important commitment Gippsland Water could make.

Gippsland Water's pricing was discussed, though did not receive significant comment, nor strong comment. If cost was a major concern we would have expected it to be raised and discussed more frequently by participants. Mostly, participants thought Gippsland Water bills were affordable and that there were provisions in place for those who struggled to pay their bills or were on a pension / low income. Very few people made any strong negative comments on water affordability.

Though overall cost was not a major issue, customers sought a greater ability to influence what they pay. Customers recognise that water is precious and want the ability to conserve and save money as a result.

Many customers liked the idea of a greater variable component to their bills. The main reason for the positive reaction was a belief in a user-pays approach and that this would encourage better water-saving behaviours. Despite this, customers expressed major concerns about any possibility of reduced revenue to Gippsland Water and the possibility of that impacting on service delivery. Customers do not want any degradation of service and were less supportive of variable tariffs if this was an outcome.

Intelligent water meters were well-received as a concept with some minor concerns. Positivity towards the idea was driven by a belief that intelligent water meters empowered customers, were a natural evolution and that they enabled customers to manage water better and detect leaks sooner. Minor concerns included the lack of any value in providing intelligent water meters if current fixed tariff structures could not be improved upon.

It was also noteworthy that customers were adamant that they would not accept a cheaper bill if that meant a reduced level of service.

Customer attitudes towards investment in ongoing maintenance and renewal were explored. Customer opinion was overwhelmingly in favour of ongoing operational and capital expenditure needed to ensure the reliability of their service - customers did not want any reduction in service. On the other hand, customers did not say that they wanted improved services. Customers did emphasise that they expect Gippsland Water not to waste money, and that spending should be transparent.

Climate change was quite a polarising topic, however, the sample was united in the belief that water is precious and that increased pressure is likely to be exerted upon it and therefore it needed to be protected.

Overall, there was widespread and strong support for the idea of Gippsland Water looking after the environment. Most of the sample was in favour of this, however, there was some disparity in comments about how to achieve this and willingness to pay. Mostly, the simple, local activities were strongly endorsed. The bigger issues, such as willingness to pay for greenhouse gas reductions were more contentious, as customers had mixed opinions on climate change.

By June 2017, we had composed a framework linking each customer outcome to related customer experiences, promises, outputs, and GSL's. Overall, the online community was very positive toward the structure and content of the framework shown to them. Many described it as being clear, simple, easy-to-understand and with a logical flow. The content was comprehensive without any gaps or areas of duplication.

Another important comment made by customers was that they believed these outcomes and promises were realistic, achievable and that Gippsland Water would honour these promises and guarantees.

Customers also responded favourably to the idea of guarantees. Guarantees were shaped based on customer feedback and demonstrated Gippsland Water was prepared to stand behind its promises and this was not typical behaviour from a monopoly provider.

Gippsland Water closed the loop with customers in June and July 2017. Gippsland Water was able to advise customers that, excluding consumer price index (CPI) increases, we anticipate a small real price rise annually, during the next regulatory period. We received one piece of feedback on this topic through our dedicated website, which expressed the view that a price rise higher than CPI is not acceptable. A headline in a local newspaper highlighting the price rise elicited a range of responses on social media, both negative and positive.

## 2.4 REASONABLE OPPORTUNITY AND REPRESENTATIVE VIEWS

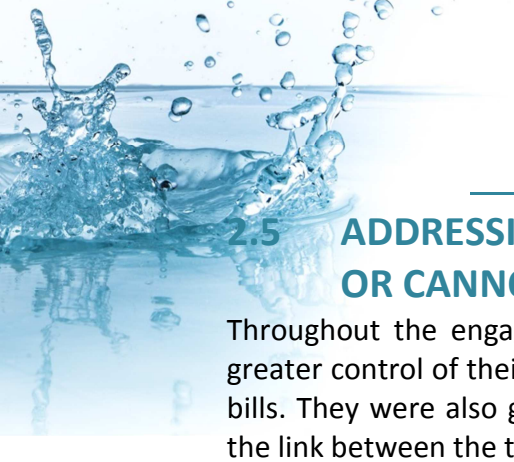
There was a strong focus on ensuring that participants in our online and live customer forums were representative of our customers. We spent time with community organisations and representatives across the region to ensure a broad and well-represented cross-section of the community was achieved.

To recruit customers for online forums, our research partner for phases two – four (Redhanded) used accredited market research recruiters. Based on our own internal data and data from the Australian Bureau of Statistics, customers who represented the diversity of our customer base were sought. A recruit brief was developed to ensure an appropriate cross-section of people were included across age, gender, region, socio-economic status, household status (i.e. single, couples, families, renters, owners, etc.) hardship provisions and so on.

Although the online community forum excluded residential customers without internet access, we observed no difference between online community responses and those collected by traditional methods.

Significant effort was put into social media campaigns and advertising in local media outlets to let our customers know about our engagement activities and encourage them to have their say.

Conducting public pop-up stalls at the start and end of the process allowed us to reach segments of Gippsland Water customers who may not typically choose to engage with us, or who may not see our social media posts or advertising.



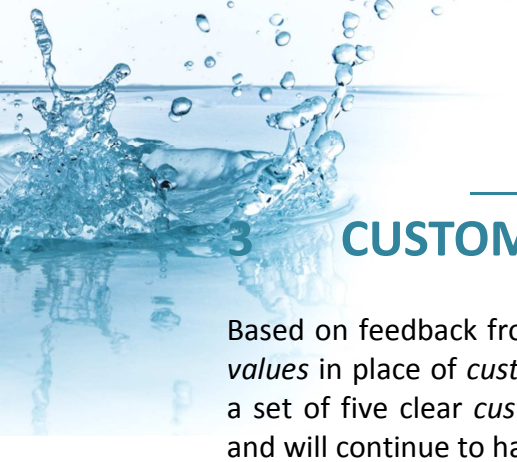
## 2.5 ADDRESSING CUSTOMER EXPECTATIONS THAT WILL NOT OR CANNOT BE MET

Throughout the engagement process, we heard that customers would like to have greater control of their bill, and liked the idea of a greater variable component to their bills. They were also generally supportive of intelligent water meters, and recognised the link between the two concepts.

While we are not in a position to adopt either change initially during the next regulatory period, we are committed to further investigation of both. During phase four of our engagement journey, we advised customers that we would:

- work with other water businesses that are trialling new water meters and learn from their insights; and
- conduct trials of flexible pricing options during the next regulatory period.

We have committed to continued engagement with our customers on these topics, and through that engagement we will continue to address customer expectations.



# 3 CUSTOMER VALUES AND GSL'S

Based on feedback from our customers, we have elected to use the phrase *customer values* in place of *customer outcomes* throughout all of our communications. Creating a set of five clear *customer values* has changed the way we think about our service, and will continue to have a significant influence on our organisation.

As outlined in chapter two (and appendix two), our customer values evolved iteratively, over a 17 month period, through several rounds of discussions with our customers. In the tables below, Gippsland Water's customer values are outlined, along with details of the customer experience, Gippsland Water's promise, outputs, KPI's and proposed GSL's.

## 3.1 OUR CUSTOMER VALUES

As noted in chapter two, our customer values are based on customer feedback, and most importantly are described in customer-derived language.

Each of the customer values is set out below, including details of the customer experience sought, Gippsland Water's promise, outputs, KPI's and GSL's.

This line of sight from customer values to KPI's and GSL's demonstrates how Gippsland Water's 'golden thread' is driving long term and sustainable customer centric outcomes.

## CUSTOMER VALUE - DO YOUR JOB WELL

**Table 3.1**

| Customer experience | Gippsland Water promise | Outputs | KPI | GSL |
|---|---|---|---|---|
| Provide safe, pure drinking water. Always. | We will reliably deliver safe drinking water that meets or exceeds regulatory standards. | Water quality meets the Safe Drinking Water Act. | Population receiving water meeting E.Coli standards Target – 100% (GW - KPI #22). | If we are required to issue a 'boil water' alert, we will contribute $5,000 to a fund administered by our Community Consultative Committee. |
| Remove and treat wastewater. | We will remove and treat wastewater and return it to the environment without harm. | Sewer spills contained within 5 hours. | Spills contained within 5 hours Target – 98% (GW - KPI #18). | |
| Invest wisely to maintain and improve the integrity of the system. | We will act and innovate to maintain and improve our customer's experience. | Unplanned water supply interruptions. | Unplanned water supply interruptions restored within 5 hours Target – 98% (GW - KPI #5). | |
| Respond to needs and deal with interruptions promptly. | We will do what we say, put our customers first and act in their best interests as quickly as possible. | Average time to rectify a sewer blockage. | Average time to rectify a sewer blockage Target – 95 minutes (GW - KPI #17). | |
| | | Sewer spills within a house caused by Gippsland Water will be contained within 1 hour. | Number of sewer spills not contained within 1 hour. | If a sewer spill within a house caused by Gippsland Water is not contained within 1 hour then affected customers will receive $500. |
| | | Planned interruptions will be carried out in a timely manner. | Number of planned interruptions going over advised times. | If a planned interruption goes longer than advised then each affected customer will be compensated by a $50 credit to their next water bill. |

## CUSTOMER VALUE – BE EASY TO DEAL WITH

**Table 3.2**

| Customer experience | Gippsland Water promise | Outputs | KPI | GSL |
|---|---|---|---|---|
| Keep me informed in ways that suit me. | We will be timely in communications and use ways of communicating that suit our customers. | Affected customers advised of planned interruptions. | 100% of affected customers will receive a minimum of 5 days notification prior to a planned interruption taking place. | If a customer is affected by a planned interruption and was not provided a minimum of five days notification, we will credit that customer $50 on their next water bill. |
| | | The time it takes to respond to customer correspondence where required. | Customers receive a response to correspondence within 5 days from receipt where necessary. | |
| | | Percentage of contacts that are resolved at first point of contact. | Contacts are resolved at the first point of contact Target – 88% (GW - KPI #21a). | |
| | | Complaints to Energy and Water Ombudsman Victoria (Level 1). | Water Level 1 Complaints Target – 0.03 per 1000 customers (GW - KPI #20). | |
| Be easy to understand. | We will communicate using everyday language. | | | |

## CUSTOMER VALUE - BE AFFORDABLE AND FAIR

**Table 3.3**

| Customer experience | Gippsland Water promise | Outputs | KPI | GSL |
|---|---|---|---|---|
| Give me water at a fair price. | We will charge customers the minimum required to maintain the level of service they need and expect from us. | Predictable prices. | Prices contained to CPI + 0.57% per annum for until 30 June 2023. | |
| Make allowances for those who struggle to pay their bills. | We will provide support and choice for customers and flexible payment arrangements. | Protect customers in hardship from having their services restricted for non-payment. | No customer in genuine hardship will have their services restricted for non-payment. | If a customer in genuine hardship is restricted for non-payment we will pay compensation of $300 per day to a maximum of $900 until service is restored. |
| | | Choice in flexible payment options. | The % of hardship customers paying through instalments. | |
| | | | The % of customers over 120 days paying through instalments. | |

## CUSTOMER VALUE - PREPARE AND PROTECT

**Table 3.4**

| Customer Experience | Gippsland Water Promise | Outputs | KPI | GSL |
|---|---|---|---|---|
| Be prepared for population growth. | We will be ready to meet the needs of a growing population. | Provide infrastructure and resources to support population growth. | Deliver all actions outlined in Gippsland Water's 2017 Urban Water Strategy. | |
| Secure our precious resource and be prepared for droughts, floods, fires and disasters. | We will be ready for, and secure our water services from natural and man-made disasters. | Business continuity and water restrictions. | Supply reliability of 95%. Water restrictions no more prevalent than 1 in 20 years. | |
| Conserve and preserve the natural environment from which we take and return water. | We will do no harm and act to improve the environment. | We will not take more water than we are allowed to. Water returned to the environment meets all standards. | No sanctions issued by a regulator. | If we receive a sanction from a regulator for harm to the environment we will contribute $5,000 to a fund administered by our Community Consultative Committee. |
| | | We will identify actions to improve the environment. | Total CO2 equivalent emissions - annual targets established (GW - KPI #25). | |
| | | | Biosolids Reuse Target – 100% (GW - KPI #27). | |

## CUSTOMER VALUE - BE INVOLVED

**Table 3.5**

| Customer Experience | Gippsland Water Promise | Outputs | KPI | GSL |
|---|---|---|---|---|
| Be local. | We will base our services in the region we serve. | Support the local economy. | % of operating and capital expenditure spent locally. | |
| Be engaged in our community. | We will be visible and support our community to advance the health and prosperity of the region we serve. | Investment in programs for the benefit of our communities. | Level of investments committed to each year for the benefit of the community. | We commit to investing a minimum of $30,000 per year in programs that support the wellbeing of our communities. |

### REPORTING ON OUR PERFORMANCE

We propose to report to our customers about our performance on an annual basis, in customer focussed language. We propose that reporting will initially cover several areas of interest to customers including:

- results against our customer-focussed service standards and targets;
- progress on our major capital projects;
- outcomes from our major capital programs;
- the amount we have invested in programs that support the wellbeing of our communities; and
- how we met our GSL's and details of any payments or rebates that occurred.

Reporting to customers is expected to occur via a new report, specifically tailored for customers, to demonstrate how we have performed against the targets and actions set. This new report will be complimented by fact sheets on the Gippsland Water website, media releases, social media posts and targeted campaigns.

### RESPONDING TO UNDERPERFORMANCE

While each of Gippsland Water's proposed GSL's include a financial aspect, it became clear through our engagement that customers expect GSL's to be an incentive to do better, rather than a budgeted penalty for failure. As such, there has been no budget allowance made for GSL payments. Any GSL payment made will be absorbed into operational budgets. This approach is consistent with customer feedback that GSL's should not be a financial penalty that is simply passed onto customers.

**ADAPTING OUR VALUES TO RESPOND TO CHANGING CUSTOMER PREFERENCES, INCLUDING AN ONGOING ENGAGEMENT PROGRAM**

The success of Gippsland Water's community engagement program in the lead-up to this price submission has fuelled a willingness within the organisation to continue to develop and deepen our culture of engagement:

- community engagement work is well underway on two of the most significant construction projects we have planned for the next regulatory period, and will continue to be a priority on all major projects in future;
- we are currently exploring a range of online engagement tools to make it easy for customers to engage with us;
- we will continue to conduct an annual customer satisfaction survey as a means to gauge community sentiment and measure whether customer preferences have changed; and
- we will continue to actively monitor traditional and social media for mentions of Gippsland Water, as another tool to gauge community sentiment.

We propose to review our customer values annually, based on the results of the annual customer satisfaction survey and other customer engagement techniques. This will allow Gippsland Water to respond to any changes in customer preferences during the regulatory period.

## 3.2 MANDATORY SERVICE STANDARDS

During the development of our Plan, our discussions with ESC staff have clearly identified a number of mandatory service standards that the business is required to set targets for, as set out in section 9.2 of the ESC's Customer Service Code.

From a Gippsland Water perspective, while some of these standards are included in the customer value tables above, several mandatory standards will not be reported to customers. Our engagement feedback indicated that these standards do not resonate with customers and on that basis they have been excluded from the tables above. Gippsland Water will continue to be held accountable by regulators for the technically-based standards set out in the Customer Service Code.

A complete list of all service standards proposed by Gippsland Water for the fourth regulatory period is set out in appendix three.

## 3.3 GUARANTEED SERVICE LEVELS OVERVIEW

A key aspect of Gippsland Water's engagement has been the development of GSL's that clearly link what our customers told us they value to what we promise and guarantee. We set out to empower our customers to shape our customer values, and in turn, collaborate with us on formulating a model with a minimum of one corresponding GSL for each customer value.

Once the proposed GSL's had been refined, they received a very positive reaction. Customers believed that the promises were realistic and achievable, and that Gippsland Water would honour these promises and guarantees. They also believed

that the guarantees demonstrated that Gippsland Water was prepared to stand behind its value statements and this was not typical behaviour from a monopoly provider.

**HOW GSL's HAVE BEEN INFORMED BY CUSTOMER ENGAGEMENT**

GSL's were a key topic in our community engagement work, and were thoroughly tested and refined over time. For instance, guaranteeing that customers would receive two days' notice of a planned outage was seen as important, but most customers argued that two days was not enough. The GSL we are now proposing promises at least five days' notice.

Customers told us that protecting vulnerable customers is important, and while an existing GSL protects hardship customers from being restricted, it was clear that if a restriction in error did occur that the urgent restoration of services was just as critical. To strengthen our commitment to protecting vulnerable customers, we propose adding an additional penalty if a hardship service restricted in error is not restored on the day we are notified.

Many of the GSL's we are proposing are similar to those offered by other organisations that our customers deal with, such as electricity suppliers, banks and telecommunications companies. However, the two GSL's that stipulate providing funds to benefit the entire community are somewhat unique. This concept was suggested by our customers, who liked the idea of compensating the broader community rather than individuals, especially if the 'failing' affected everyone, such as environmental damage. In the event that one of these community compensation guarantees is triggered, we have committed to providing the funds to our Community Consultative Committee who will decide which water-related community project/s to contribute the funds to.

While most of our GSL's will be introduced during the 2018-19 year, system requirements will need to be determined and put in place to allow the 'planned interruption' GSL to proceed. An implementation timetable for all of our GSL's is set out below.

**Table 3.6: Proposed Guaranteed Service Levels**

| Customer Value | Description of Guarantee and proposed payment or rebate | Current or new | Implementation date |
|---|---|---|---|
| **1. Do your job well** | If we are required to issue a 'boil water' alert, we will contribute $5,000 to a fund administered by our Community Consultative Committee. | New | 2018-19 |
| | If a sewer spill within a house caused by Gippsland Water is not contained within 1 hour then affected customers will receive $500. | Current | 2018-19 |
| | If a planned interruption goes longer than advised then each affected customer will be compensated by a $50 credit to their next water bill. | New | 2019-20 |
| **2. Be easy to deal with** | If a customer is affected by a planned interruption and was not provided a minimum of five days notification, we will credit that customer $50 on their next water bill. | New | 2018-19 |
| **3. Be affordable and fair** | If a customer in genuine hardship is restricted for non-payment Gippsland Water will pay compensation of $300 per day to a maximum of $900 until service is restored. | Current, but Improved | 2018-19 |
| **4. Prepare and Protect** | If we receive a sanction from a regulator for harm to the environment we will contribute $5,000 to a fund administered by our Community Consultative Committee. | New | 2018-19 |
| **5. Be involved** | We commit to investing a minimum of $30,000 per year in programs that support the wellbeing of our communities. | New | 2018-19 |

## CHANGES TO THE GSL SCHEME COMPARED WITH THOSE APPROVED FOR THE CURRENT REGULATORY PERIOD

During the Water Plan 3 period, Gippsland Water committed to three GSL's, two of which remain as noted in the table above. The third GSL, a $50 rebate for customers who experience more than five (5) unplanned water supply interruptions in a financial year has been removed, given the new GSL's proposed above which more closely align with the customer values identified.

## BENEFITS TO CUSTOMERS - PAYMENTS OR REBATES

Gippsland Water's proposed GSL regime contains both rebates and payments. For those GSL's that affect individual customers - e.g. not being notified of a planned interruption – we propose that a credit be raised on an affected customers' account, which would be issued through the next bill.

For GSL's that are communal in nature, and not able to be attributed to a single customer (such as receiving a sanction from a regulator), we propose that an amount will be paid through a community fund for the purposes of delivering a water-related investment for that community – e.g. installation of a water fountain at a sporting venue.

**REASONS FOR THE PROPOSED SIZE OF THE CUSTOMER PAYMENT OR REBATE THAT APPLIES TO EACH GSL**

The sizes of customer payments are largely consistent with payments for similar GSL's across the industries we researched – with the exception of the community fund GSL's. These have been tested with customers and have been refined based on feedback.

With the benefit of our consultation we are proposing a model that, while focused on customer values, is centred on a set of promises that connect the expectations of customers to the delivery of services.

# 4 FORECAST OPERATING EXPENDITURE

Gippsland Water's forecasts for operating expenditure for each year of the fourth regulatory period are detailed below. Key drivers of expenditure are outlined, and detailed information is provided to show that the expected levels of expenditure are prudent and efficient.

Gippsland Water's operating expenditure is heavily influenced by the need to meet a range of obligations set out by stakeholders and regulators. As the key stakeholder, the Victorian Government outlines the obligations that it requires the corporation to meet in a Statement of Obligations issued by the Minister for Water.

In addition, a range of regulators have powers under legislation to impose obligations on the corporation. These regulators include the ESC, the Department of Health and the Environment Protection Authority (EPA). The range of obligations imposed by these regulators is far-reaching. As such, these regulators provide guidance to all water corporations on issues of concern to the regulator, in the lead up to the finalisation of plans for the next regulatory period. This advice on obligations for the period to June 2018 has been considered in the development of Gippsland Water's operating forecasts. After reviewing the requirements outlined, Gippsland Water has not determined the need for any significant increases in operating expenditure during the fourth regulatory period.

As noted in chapter nine, the water industry has sought guidance from the EPA in relation to the requirement to conduct environmental risk assessments at WWTP's during the fourth regulatory period. A review of the matter continues with the EPA. Depending on the final requirements, Gippsland Water may be required to fund significant costs which have not been allowed for in our Plan.

Gippsland Water continues to look for ways to minimise increases in operating expenditure. A range of reductions in budgets for operating expenditure have been made across a number of operational areas during the development of our Plan. Risk-assessed reductions have included revisions to forecast maintenance expenditure, as well as forecast reductions in transport costs and chemical costs due to process improvements at the Gippsland Water Factory (GWF).

Operational costs have however increased as a result of a significant increase in the environmental contribution, from 2018/19 onward, has also been factored into our Plan, together with energy costs which are forecast to rise sharply.

Since the release of the draft price submission proposal to customers, Gippsland Water has identified a number of minor changes to operating expenditure. This has occurred due to improvements in cost estimates for some activities becoming available since the draft was released. These changes have included:

- reducing energy budget estimates given better knowledge of 'behind the meter' capital projects planned for the regulatory period, and the impact these projects have in reducing energy consumption forecasts;
- revising payroll tax costs in line with the State Government's changes to payroll tax in regional areas of Victoria.

## 4.1 OVERVIEW OF OPERATING EXPENDITURE

Detailed in Table 4.1 is an overview of operating expenditure required to allow Gippsland Water to meet its obligations and deliver services during the regulatory period. Gippsland Water's operating expenditure forecast for the five year regulatory period totals $392.08M.

**Table 4.1: Overview of Operating Expenditure ($ Jan 18 – millions)**

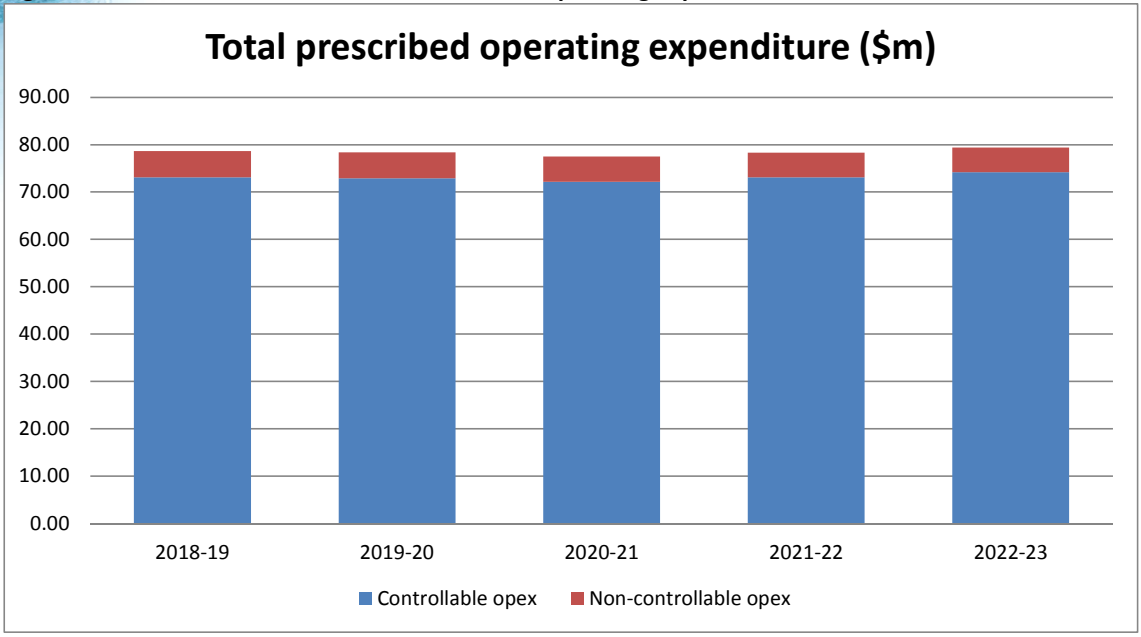
| Function | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Water | 29.93 | 30.68 | 29.91 | 30.09 | 30.29 | 150.91 |
| Wastewater | 43.12 | 42.23 | 42.24 | 42.96 | 43.93 | 214.48 |
| Total Controllable (and Opex Hurdle) | 73.05 | 72.91 | 72.15 | 73.05 | 74.22 | 365.39 |
| Licence Fees | 0.50 | 0.46 | 0.46 | 0.46 | 0.49 | 2.36 |
| Environmental Contribution | 5.07 | 4.97 | 4.86 | 4.76 | 4.66 | 24.33 |
| Total Cost | 78.62 | 78.33 | 77.48 | 78.28 | 79.37 | 392.08 |

In developing our Plan, we have listened to the feedback from our customers during our engagement journey. In terms of levels of service, we have listened to our customers when developing our Plan:

- customer opinion was overwhelmingly in favour of spending to ensure the reliability of their service - customers did not want any reduction in service;
- on the other hand, customers did not say that they wanted improved services;
- it was also noteworthy that customers were adamant that they would not accept a cheaper bill if that meant a reduced level of service; and
- customers did emphasise that they expect Gippsland Water not to waste money, and that spending should be transparent.

As such, the level of operational expenditure proposed in our Plan does not seek to improve on the level of services currently provided to Gippsland Water's customers.

**Figure 4.1: Controllable versus Non-controllable Operating Expenditure**




Further detail in relation to this operating expenditure is provided in Table 4.2 and Table 4.3, where the allocation between water and wastewater services is detailed, by category of spend within each area.

**Table 4.2: Total Operating Expenditure - Water ($ Jan 18 – millions)**

| Category | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Operations Maintenance | 15.13 | 15.58 | 15.02 | 15.16 | 15.34 | 76.23 |
| Treatment | 4.66 | 4.60 | 4.37 | 4.38 | 4.39 | 22.39 |
| Customer Service and Billing | 1.28 | 1.32 | 1.32 | 1.33 | 1.33 | 6.59 |
| Corporate | 8.86 | 9.18 | 9.21 | 9.23 | 9.23 | 45.71 |
| Total | 29.93 | 30.68 | 29.91 | 30.09 | 30.29 | 150.91 |

**Table 4.3: Total Operating Expenditure - Wastewater ($ Jan 18 – millions)**

| Category | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Operations Maintenance | 10.35 | 10.35 | 10.46 | 10.61 | 10.73 | 52.50 |
| Treatment | 17.08 | 16.39 | 15.95 | 16.35 | 17.06 | 82.83 |
| Customer Service and Billing | 1.99 | 1.95 | 1.98 | 2.01 | 2.04 | 9.97 |
| Corporate | 13.70 | 13.54 | 13.85 | 14.00 | 14.10 | 69.18 |
| Total | 43.12 | 42.23 | 42.24 | 42.96 | 43.93 | 214.48 |

## 4.2 SIGNIFICANT ITEMS OF OPERATING EXPENDITURE

Gippsland Water's operating expenditure covers a wide range of expenditure categories. Details in relation to the top ten items of operating expenditure by category, excluding labour, are outlined below.

**Table 4.4: Top Ten Categories of Operating Expenditure ($ Jan 18 – millions)**

| Category | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Energy | 5.34 | 5.04 | 4.45 | 4.46 | 4.51 | 23.80 |
| Treatment Chemicals and Supplies | 3.50 | 3.46 | 3.48 | 3.54 | 3.54 | 17.52 |
| Major Maintenance | 3.17 | 3.37 | 3.21 | 3.47 | 3.63 | 16.85 |
| Sludge and Biosolids Treatment | 2.76 | 2.03 | 2.08 | 2.13 | 2.32 | 11.32 |
| Mech. and Elec. Planned Corrective Maintenance | 2.36 | 2.32 | 2.32 | 2.32 | 2.32 | 11.64 |
| General Maint. Agree. and Contractor Pay. | 2.26 | 2.26 | 2.05 | 1.97 | 1.95 | 10.49 |
| Licence Fees | 1.38 | 1.36 | 1.36 | 1.36 | 1.39 | 6.85 |
| Mech. and Elec. Planned Preventative Maintenance | 1.26 | 1.29 | 1.30 | 1.31 | 1.31 | 6.47 |
| Contracted Routine Sampling | 1.23 | 1.22 | 1.22 | 1.22 | 1.22 | 6.11 |
| Fleet Costs | 1.22 | 1.21 | 1.15 | 1.15 | 1.19 | 5.92 |
| Total | 24.48 | 23.56 | 22.62 | 22.93 | 23.38 | 116.97 |

It should be noted that significant 'behind the meter' energy savings have been included in the energy budget outlined above during the fourth regulatory period given capital expenditure of $4.18M that has been included in our Plan. These capital projects (see table 5.25) are expected to deliver 2,600 MWh of renewable energy generation, at full production.

## 4.3 SPECIAL INTEREST OPERATING EXPENDITURE

Gippsland Water's customers are often interested to learn about the expenditures that the corporation is required to make in relation to issues that, at first, appear not to have a strong link to the provision of water and wastewater services.

Environmental Contribution

All water corporations in Victoria are required to pay environmental contributions to the Victorian Government, as set-out in the *Water Industry Act 1994*. The purpose of collecting environmental contributions from water corporations is to fund initiatives that promote the sustainable management of water or address adverse water-related environmental impacts.

The contributions are used to fund a range of environmental initiatives such as improving river health, better groundwater management, more efficient use of water, and reliable and secure water supplies.

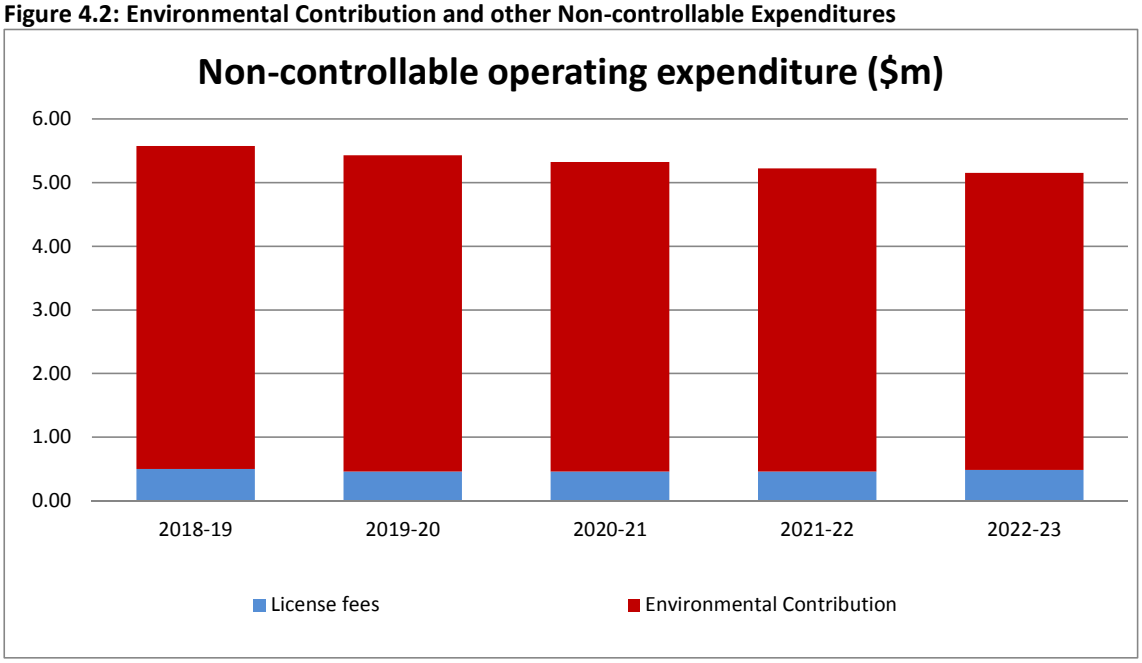
During the fourth regulatory period $5.18M per annum (Jan 19 $) has been provided by Gippsland Water for environmental contribution payments. This is a significant increase on the current $4.66M per annum paid by the corporation during the third regulatory period.

**Table 4.5: Environmental Contribution ($ Jan 18 – millions)**

| Activity | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Annual Contribution | 4.66 | 5.07 | 4.97 | 4.86 | 4.76 | 4.66 |

Figure 4.2 below demonstrates the size of the environmental contribution in relation to total non-controllable costs.

**Figure 4.2: Environmental Contribution and other Non-controllable Expenditures**



Direct Environmental Expenditure

Direct expenditure on environmental activities will continue to be significant during the fourth regulatory period. Our Plan provides for a range of activities to be undertaken, including monitoring native flora and fauna, as well as maintaining fencing to protect wildlife corridors. Gippsland Water must also conduct ecological surveys and risk assessments. These activities are consistent with our customers telling us we need to 'prepare and protect'. Among many comments from customers, perhaps the following is most informative – *"it is vital that Gippsland Water acts in the best interests of the environment, without each of us taking care, the future generations will suffer".*

In addition, Victoria's Native Vegetation Management Framework establishes the strategic direction for the protection, enhancement and revegetation of native vegetation across Victoria. Its main goal is to achieve a reversal, across the entire landscape, of the long term decline in the extent and quality of native vegetation, leading to a net gain. A number of Gippsland Water's works programs have not been able to avoid the removal of native vegetation resulting in the establishment of a series of environmental offset sites as planning permit conditions. These sites have ten year approved management regimes which include the removal of noxious and invasive weeds, fire management plans, feral animal control, revegetation of native species and the securing of the site. Forecasts for both environmental activities and environmental offsets are outlined in table 4.6 below.

**Table 4.6 – Environmental Expenditure ($ Jan 18 – millions)**

| Activity | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Environmental activities | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Environmental offsets | 0.16 | 0.15 | 0.14 | 0.14 | 0.13 | 0.13 |

Contributions to Southern Rural Water

Gippsland Water has a bulk entitlement in place to extract water from Blue Rock Reservoir. Gippsland Water pays a contribution to Southern Rural Water, along with other entitlement holders, for the management of storage facilities at the reservoir. Gippsland Water is also charged, by Southern Rural Water, for the provision of recreational facilities at its Blue Rock Reservoir, Lake Glenmaggie and Cowwarr Weir sites, as these sites are located within our region, with the charge applying regardless of whether we gain any direct benefit from the storage facility. Table 4.7 below outlines the contributions to Southern Rural Water included in our Plan.

**Table 4.7 – Contributions to Southern Rural Water ($ Jan 18 – millions)**

| Activity | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Bulk Entitlement Infrastructure Charge | 0.20 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| Recreational Facilities Charge | 0.36 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 |
| Total | 0.56 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 |

**OVERVIEW OF LABOUR EXPENDITURE**

Expenditure on labour for the fourth regulatory period is based on Gippsland Water's full-time equivalent workforce. Gippsland Water personnel are employed in both the prescribed and non-prescribed sections of Gippsland Water's activities. Non-prescribed activities include Gippsland Water's (SORF), as well as Gippsland Water's farming activities at Dutson Downs, Maffra, Drouin and a number of smaller sites across the region. The details outlined below exclude all personnel employed in these non-prescribed activities.

**Table 4.8: Full Time Equivalent Personnel (Excluding Non-prescribed Activities)**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Total | 244.98 | 246.98 | 246.98 | 246.98 | 246.98 | 245.98 |
| Movement – year on year | | +2 | nil | nil | nil | -1 |

Total labour costs for the fourth regulatory period are outlined below. Total labour costs include direct salaries paid to personnel, superannuation costs and workcover costs and payroll tax costs.

**Table 4.9: Total Labour Costs (Excluding Non-prescribed Activities) ($ Jan 18 – millions)**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Total | 27.3 | 27.7 | 28.1 | 28.5 | 29.1 | 29.6 |

## 4.4 THE OPEX PRODUCTIVITY HURDLE

Operating expenditure proposed for the fourth regulatory period will be assessed by the ESC, by establishing a baseline 'business as usual' level of operating costs. This baseline will reference 2016-17 actual operating costs data, the last year of actual expenditure available before the ESC's final decision on prices for the fourth regulatory period. The calculation of Gippsland Water's baseline is detailed in table 4.10 below.

**Table 4.10: Baseline Year - Total Prescribed Operating Expenditure in 2016-17 ($ Jan 18 – millions)**

| Description | Amount |
|---|---|
| Total operating expenditure (2016-17) | 75.30 |
| Less non-controllable expenditure items | |
| Licence fees | (0.45) |
| Environment Contribution | (4.66) |
| Total controllable operating expenditure | 70.19 |
| Adjustments for non-recurring expenditure items incurred | |
| Nil | 0.0 |
| **Baseline controllable operating expenditure (2016-17)** | **70.19** |

Gippsland Water's forecast customer growth rate assumptions and its annual cost efficiency improvement rate are both required to determine an adjusted controllable operating expenditure. Growth rates and efficiency improvement rates are outlined below.

**Table 4.11: Forecast Customer Growth Rate Assumptions**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Connections Growth – res and non-res | 878 | 878 | 878 | 878 | 878 | 878 |
| Total connections – res and non-res | 68,772 | 69,650 | 70,528 | 71,406 | 72,284 | 73,162 |
| Growth rate (%) | 1.27% | 1.25% | 1.24% | 1.22% | 1.21% | 1.19% |

**Table 4.12: Annual Cost Efficiency Rate**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Efficiency Saving | 1.00% | 1.32% | 1.24% | 1.22% | 1.21% | 1.19% |

The baseline controllable operating value for 2016-17 is then escalated by the annual growth in total connections, net of the efficiency saving, to derive an adjusted controllable operating value for each year of the fourth regulatory period, as outlined below.

**Table 4.12: Adjusted Baseline Controllable Operating Expenditure given Growth and Efficiency**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Baseline controllable operating expenditure (2016-17) from table 4.10 above | 70.19 | 70.19 | 70.19 | 70.19 | 70.19 | 70.19 |
| Net growth / efficiency rate | 0.27% | (0.07%) | (0.00%) | (0.00%) | (0.00%) | (0.00%) |
| Adjusted baseline controllable operating expenditure | 70.38 | 70.33 | 70.33 | 70.33 | 70.33 | 70.33 |

Finally, Gippsland Water may make amendments to the adjusted controllable operating value, where it has evidence to justify an increase or decrease in relation to forecasts for future periods. In this case, Gippsland Water has made three adjustments below to account for:

- labour costs in excess of those costs included in the 16-17 baseline. These additional costs relate to the costs of posts that were vacant during the 2016-17 year that will be filled during the fourth regulatory period, costs associated with new posts to be added during the period, and enterprise agreement increases (above CPI), that have been included in future forecasts;
- energy costs in excess of costs incurred during the 2016-17 year as a result of forecast increases in electricity prices in future periods, as discussed in section 4.2 above; and
- a range of savings identified by Gippsland Water in future forecasts, when compared to the 2016-17 baseline.

**Table 4.13: Gippsland Water Amended Baseline**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Adjusted baseline controllable operating expenditure | 70.38 | 70.33 | 70.33 | 70.33 | 70.33 | 70.33 |
| Add GW amendments | | | | | | |
| Labour Costs | | 1.24 | 1.64 | 2.04 | 2.58 | 3.09 |
| Energy Costs | | 1.81 | 1.51 | 0.94 | 0.94 | 0.99 |
| Other Costs | | (0.33) | (0.57) | (1.15) | (0.79) | (0.20) |
| **GW amended baseline controllable operating expenditure** | | **73.05** | **72.91** | **72.15** | **73.05** | **74.22** |
| | | | | | | |
| Proposed GW operating expenditure (see table 4.1 Total Controllable) | | 73.05 | 72.91 | 72.15 | 73.05 | 74.22 |
| Variation | | Nil | Nil | Nil | Nil | Nil |

In summary, the profile of Gippsland Water's proposed operational expenditure for the fourth regulatory period is very flat. In other words, there is no distinct increase in expenditure in the later years of the period. This profile, together with the amendments proposed to the 2016-17 baseline, allow for a significant efficiency rate within the productivity hurdle model, as noted in table 4.12 above.

## 4.5 APPROACH TO ALLOCATING SHARED OPERATING COSTS

Gippsland Water allocates corporate costs across the corporation's two non-prescribed businesses, the SORF and the Agribusiness. Allocations are made on the basis that each of the non-prescribed activities is an independent stand-alone business.

At present, the SORF attracts an allocation of $170,000 per annum, while Agribusiness attracts an allocation of $130,000 per annum. The impact of these allocations to the prescribed business is to reduce the total value of corporate costs included as operating expenditure in the revenue requirement. In other words, customers of the prescribed business are not subsidising corporate costs of the non-prescribed businesses.

# 5 FORECAST CAPITAL EXPENDITURE

Gippsland Water continues to operate in a regulatory environment where debt is carefully monitored and constrained. Gippsland Water is required to plan for future capital expenditure within these financial constraints. Gippsland Water undertakes capital works at a time when they are assessed to be required to maximise the effectiveness of the investment. To be successful, Gippsland Water maintains a strong risk management discipline to ensure that capital works undertaken are both prudent and efficient, and are based on well structured, risk-based prioritisation criteria.

Gippsland Water's forecasts for capital expenditure for each year of the regulatory period are detailed below along with the key drivers of expenditure, and information to show that the expected levels of expenditure are prudent and efficient.

## 5.1 OVERVIEW OF CAPITAL EXPENDITURE

Detailed in Table 5.1 is an overview of capital expenditure required to allow Gippsland Water to meet its obligations and deliver services during the regulatory period. Gippsland Water's net capital expenditure forecast for the fourth regulatory period totals $203.78M. Annual expenditure varies from year to year depending on the timing of major projects.

**Table 5.1: Overview of Capital Expenditure ($ Jan 18 – millions)**

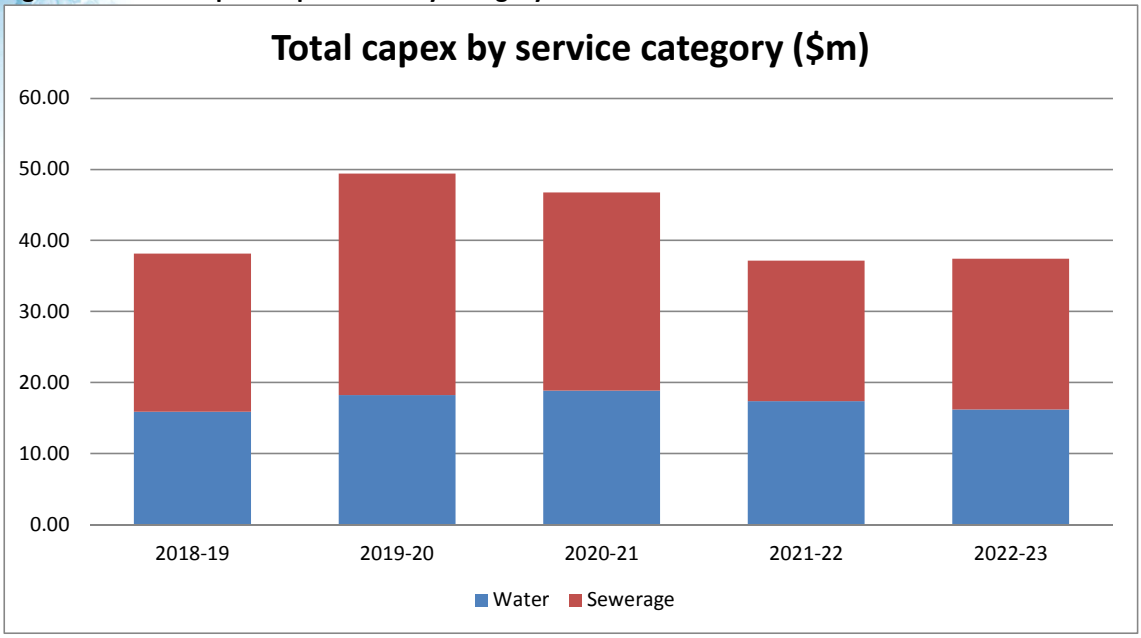
| Function | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Water | 15.86 | 18.23 | 18.85 | 17.37 | 16.17 | 86.46 |
| Wastewater | 22.24 | 31.20 | 27.93 | 19.76 | 21.23 | 122.36 |
| Sub-total | 38.10 | 49.43 | 46.78 | 37.13 | 37.39 | 208.82 |
| Less | | | | | | |
| Government Contributions | - | - | - | - | - | - |
| Customer Contributions | (0.05) | - | - | (0.10) | (4.89) | (5.04) |
| Total | 38.05 | 49.43 | 46.78 | 37.03 | 32.50 | 203.78 |

As noted in chapter four, we have listened to the feedback from our customers during our engagement journey. Our proposed capital expenditure has been developed with this feedback in mind. In particular, customers told us that they:

- did not want any reduction in service;
- did not say that they wanted improved services;
- were adamant that they would not accept a cheaper bill if that meant a reduced level of service; and
- expect Gippsland Water not to waste money, and that spending should be transparent.

As such, the level of capital expenditure proposed in our Plan does not seek to improve on the level of services currently provided to Gippsland Water's customers.

**Figure 5.1: Total Capital Expenditure by Category**




In developing the capital plan for the fourth regulatory period, Gippsland Water has recognised the outputs of an externally lead review of capital expenditure requirements that focussed on the longer term capital investment required across the region, as well as the State Government's Water for Victoria Plan.

Gippsland Water has ongoing programs for the addition and renewal of water reticulation and wastewater reticulation systems. Asset renewal includes replacing or rehabilitating deteriorated assets to return them to a condition whereby they can deliver the required level of service. This expenditure is significant, and is supported by detailed reviews of asset condition and robust forward planning. Planning takes into consideration both proposals for regional development that demand additional works, and risk analysis related to condition and failure predictions for existing infrastructure renewals.

Examples of different types of asset renewals include replacing mechanical or electrical equipment, excavating and replacing existing water and wastewater pipes, rehabilitating pipes by internal re-lining (without having to excavate and replace pipe sections) and overhauling and rebuilding major mechanical plant.

These examples illustrate that once an asset reaches the end of its life it may not simply be replaced with a similar asset. Although this is the case for some assets (eg, motor vehicles, switchboards, office computers etc.) it is not always applicable for 'civil' infrastructure assets that are an integral part of the system. The renewal strategy for many civil assets, such as buried pipelines or concrete structures such as pump station wet wells, involves substantial in-service rehabilitation to 'renew' the service potential of the asset until such time as total replacement is unavoidable. The same approach is also used with major items of mechanical plant that can be 'renewed' by overhauling and rebuilding at a lower cost than outright replacement. Often,

mechanical and electrical equipment can be replaced with new technology such as variable speed drive or larger sized pumps, for example.

Further detail in relation to this capital expenditure is provided in Table 5.2 and Table 5.3 below, where the allocation between water and wastewater services is detailed, along with asset type within each area.

Capital expenditure associated with the collection and storage of water, including that relating to dams, reservoirs, bores, river intakes and associated storages and the water transfer mains between storages are included in the headworks category. Capital expenditure associated with all pipe networks utilised for water or wastewater services are included in pipelines/networks category.

Capital expenditure associated with treatment, including the treatment of water before it enters the distribution network and the treatment and disposal of wastewater and trade waste are included in the treatment category. General corporate expenditure that cannot be reasonably allocated to other activity areas has been included in the corporate category.

**Table 5.2: Total Capital Expenditure by Asset Type - Water ($ Jan 18 – millions)**

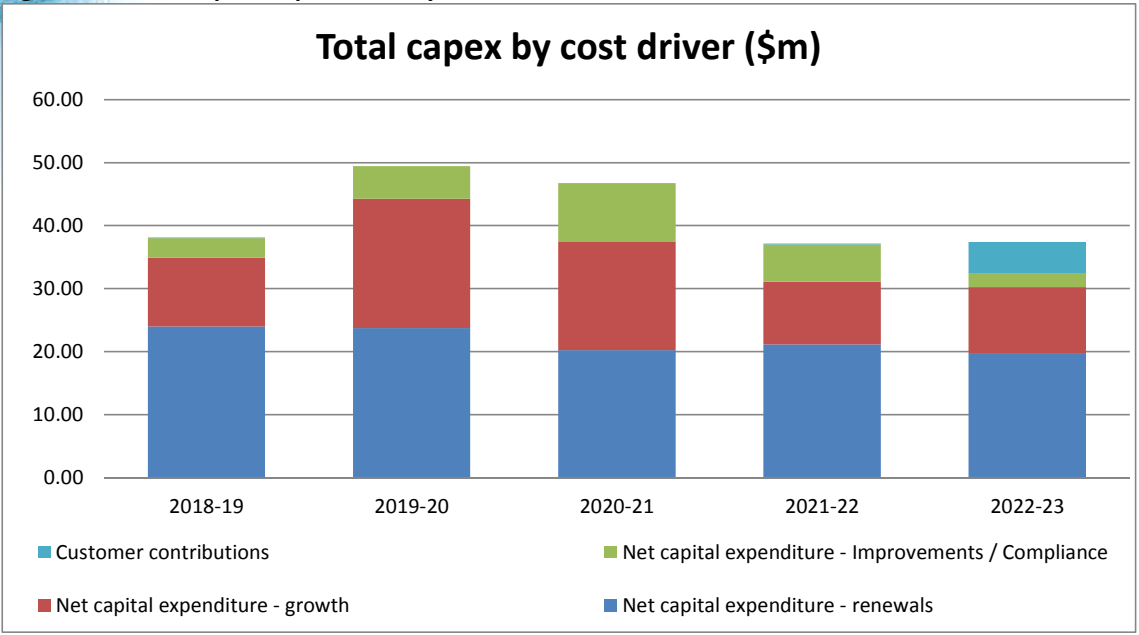
| Category | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Headworks | 0.58 | 0.92 | 5.31 | 0.10 | 0.61 | 7.52 |
| Pipelines / Networks | 6.25 | 9.37 | 4.99 | 11.43 | 9.38 | 41.43 |
| Treatment | 6.93 | 6.08 | 6.74 | 4.15 | 4.53 | 28.44 |
| Corporate | 2.09 | 1.85 | 1.81 | 1.69 | 1.64 | 9.08 |
| Total | 15.86 | 18.23 | 18.85 | 17.37 | 16.17 | 86.46 |

**Table 5.3: Total Capital Expenditure by Asset Type - Wastewater ($ Jan 18 – millions)**

| Category | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Headworks | Nil | Nil | Nil | Nil | Nil | Nil |
| Pipelines / Networks | 12.48 | 13.05 | 6.33 | 10.61 | 15.76 | 58.23 |
| Treatment | 7.81 | 16.68 | 20.40 | 8.11 | 4.37 | 57.37 |
| Corporate | 1.95 | 1.47 | 1.19 | 1.04 | 1.10 | 6.76 |
| Total | 22.24 | 31.20 | 27.93 | 19.76 | 21.23 | 122.36 |

Further detail in relation to the cost drivers for the capital expenditure proposed is outlined in Figure 5.2 below. Total capital expenditure in this chart is allocated between four cost drivers - growth, renewals, improvements / compliance and major customer specific works.

**Figure 5.2: Total Capital Expenditure by Cost Driver**




## 5.2 SIGNIFICANT CAPITAL PROJECTS

Gippsland Water has outlined below information in relation to 10 of the corporation's most significant capital projects to be undertaken in the fourth regulatory period. The descriptions below include details such as the drivers of each project and the customer value that each project supports. A table for each project details the expected delivery date and completion date for the project, and the cost of the project for each year of the regulatory period.

Gippsland Water prepares Business Cases in accordance with requirements outlined by the Department of Treasury and Finance. From a Gippsland Water perspective, a Business Case will typically be required for a large capital project which is expected to exceed a total forecast cost of $20M. For projects that fall below this threshold, Gippsland Water prepares an internal Strategic Assessment which forms part of the justification for the project to proceed.

<u>Drouin Sewer – New Wastewater Treatment Plant</u>

To meet the needs of Drouin's population now and into the future, Gippsland Water plans to invest in a new WWTP.

The new treatment plant, to be built by 2022, will have more capacity than the existing treatment plant at Drouin. It will cater for the rapid growth of the town and provide a more reliable service. Improving the reliability of the plant has several benefits.

- for the community:
  - cleaner wastewater means less odour for nearby residents and better protection of public health ;
- for the environment:
  - the treated water released from the new treatment plant will be more compliant with the standards set by the Environmental Protection

Authority, protecting the ecology of local waterways and Westernport Bay; and

- producing high quality treated wastewater could allow Gippsland Water to recycle more wastewater for beneficial reuse (such as irrigation), saving precious drinking water.

Expenditure of this magnitude requires Gippsland Water to develop a business case, which is presented to the Minister for Water for endorsement, and the Treasurer for approval. Gippsland Water has submitted a formal business case for the new Drouin WWTP, and was notified by the Department of Treasury and Finance in late August 2017 that the business case had been approved by the Treasurer, after endorsement by the Minister for Water.

**Table 5.4: Drouin Sewer – New Wastewater Treatment Plant ($ Jan 18 – millions)**

Start date: 2016-17
Completion date: 2021-22
Cost Driver: Growth
Customer Value: Prepare and Protect (refer table 3.4)
GW Promise: Be ready to meet the needs of a growing population
Planned Expenditure Details: $31.45M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 1.93 | 12.20 | 15.41 | 1.93 | 0.00 | Nil |

Sale Sewer – Outfall Sewer Pump Station

The current sewer pump station near the Port of Sale is too small to cater for the growth of the town, has had ongoing odour issues and spills to the environment. By 2020, Gippsland Water plans to build a new, much larger pump station nearby with better emergency storage and odour control systems. Once the new pump station is operational the old pump station will be demolished.

**Table 5.5: Sale Sewer – Outfall Sewer Pump Station ($ Jan 18 – millions)**

Start date: 2016-17
Completion date: 2019-20
Cost Driver: Growth
Customer Value: Prepare and Protect (refer table 3.4)
GW Promise: Be ready to meet the needs of a growing population
Planned Expenditure Details: $9.69M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 5.00 | 4.69 | 0.00 | 0.00 | 0.00 | Nil |

Warragul Water – Western Ring Main to South Basin

The Warragul township is growing rapidly. Water is supplied from the Water Treatment Plant (WTP) on the northern side of the town via a main pipeline that connects the WTP and northern storage basin to the southern storage basin. The pipeline is a 450mm diameter main that runs through the central business area. Failures on the main in the past have caused significant disruption to water supplies. Due to growth of the town on the western side (between Warragul and Drouin) and

also high growth in Drouin, it is proposed to construct a new western ring main around Warragul, and provide an alternative supply to service Warragul and allow for a future upgrade to service Drouin. The project will be completed in 2023.

**Table 5.6: Warragul Water – Western Ring Main to South Basin ($ Jan 18 – millions)**

| | | | | | | |
|---|---|---|---|---|---|---|
| Start date: 2019-20<br>Completion date: 2022-23<br>Cost Driver: Growth<br>Customer Value: Prepare and Protect (refer table 3.4)<br>GW Promise: Be ready to meet the needs of a growing population<br>Planned Expenditure Details: $8.88M during period | | | | | | |
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.00 | 0.36 | 0.36 | 4.09 | 4.09 | Nil |

Coongulla Water – Interconnect to Heyfield

To supply Coongulla with clean drinking water, water is currently taken from Lake Glenmaggie and then treated at the Coongulla WTP. Treating water from Lake Glenmaggie has a number of challenges - the water in the lake can be affected by run-off after bushfires upstream and by recreational activities such as boating and water-skiing on the lake.

To better manage the ongoing costs and challenges associated with Coongulla's water supply, Gippsland Water will build a new pipeline from the Heyfield water treatment plant to Coongulla by 2021. The water treatment plant at Coongulla will then be decommissioned.

**Table 5.7: Coongulla Water – Interconnect to Heyfield ($ Jan 18 – millions)**

| | | | | | | |
|---|---|---|---|---|---|---|
| Start date: 2018-19<br>Completion date: 2020-21<br>Cost Driver: Improvement / Compliance<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards<br>Planned Expenditure Details: $5.72M during period | | | | | | |
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.10 | 0.36 | 5.21 | 0.05 | 0.00 | Nil |

Saline Waste Outfall Pipeline – Stages 4 and 5 Upgrade

The Saline Waste Outfall Pipeline conveys saline wastewater produced by coal-fired power stations at Yallourn and Loy Yang in the Latrobe Valley, to the ocean outfall at McGauran's Beach. The pipeline is now 33 years old and its condition is starting to deteriorate. Stages 1 and 2 have already been replaced, with stage 3 set for completion during 2017-18. Contractual arrangements include the requirement for the reimbursement of this project by the power station operators. This funding is included as a customer contribution in our Plan and offsets the capital cost of the project. As such, these works will be performed at no cost to other customers.

**Table 5.8: Saline Waste Outfall Pipeline – Stages 4 and 5 Upgrade ($ Jan 18 – millions)**

Start date: 2021-22
Completion date: 2022-23
Cost Driver: Improvement / Compliance
Customer Value: Do your job well (refer table 3.1)
GW Promise: We will remove and treat wastewater and return it to the environment without harm
Planned Expenditure Details: $4.70M during period (offset by major customer contribution)

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 0.00 | 0.00 | 0.00 | 0.10 | 4.60 | Nil |

Warragul Sewer – North East Branch Augmentation (to Sutton Street)

Gippsland Water plans to upgrade the existing sewer on the north east side of Warragul by 2023. Investment in this project is required as the existing pipe is too small to cope with expected growth. In addition, sections of the existing pipe are around 45 years old, therefore upgrading the sewer now will reduce the likelihood that the old pipe will fail and cause a spill.

**Table 5.9: Warragul Sewer – North East Branch Augmentation (to Sutton Street) ($ Jan 18 – millions)**

Start date: 2019-20
Completion date: 2022-23
Cost Driver: Growth
Customer Value: Prepare and Protect (refer table 3.4)
GW Promise: Be ready to meet the needs of a growing population
Planned Expenditure Details: $4.45M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 0.00 | 0.31 | 0.33 | 0.24 | 3.57 | Nil |

Mirboo North Water – Rising Main Replacement

Mirboo North's water is delivered through a pipeline that was built around 70 years ago. Long sections of the current pipeline run under the Strzelecki Highway. Gippsland Water plans to replace it by 2021. The majority of the new pipeline will be laid away from the highway, allowing for faster responses to any breakages in future, with fewer interruptions for customers expected, and decreased safety risks for motorists.

**Table 5.10: Mirboo North Water – Rising Main Replacement ($ Jan 18 – millions)**

Start date: 2018-19
Completion date: 2019-20
Cost Driver: Renewal
Customer Value: Do your job well (refer table 3.1)
GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards
Planned Expenditure Details: $2.96M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 0.15 | 2.76 | 0.05 | 0.00 | 0.00 | Nil |

Moe Water – Treatment Plant Basin Liner and Cover Replacement

Once water is treated to a standard that is suitable for drinking, it is stored in large, covered storage basins. Heavy duty material is used to cover and line the basins to protect water quality and stop it from evaporating. Many of our covered liners have reached the end of their useful life and will need replacing over the next five years. The Moe Water Treatment Plant basin cover will be replaced with a fixed roof which will also allow for installation of solar power at this site.

**Table 5.11: Moe Water – Treatment Plant Basin Liner and Cover Replacement ($ Jan 18 – millions)**

Start date: 2018-19
Completion date: 2018-19
Cost Driver: Renewal
Customer Value: Do your job well (refer table 3.1)
GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards
Planned Expenditure Details: $2.81M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 2.71 | 0.10 | 0.00 | 0.00 | 0.00 | Nil |

Churchill Water – Sanders Treated Water Basin Liner and Cover Replacement

Similar to the Moe Water Treatment Plant project, the basin liner and floating cover at the Sanders Treated Water basin in Churchill have reached the end of their useful life and will be replaced with a new floating cover and liner by 2023.

**Table 5.12: Churchill Water – Sanders Treated Water Basin Liner and Cover Replacement ($ Jan 18 – millions)**

Start date: 2021-22
Completion date: 2022-23
Cost Driver: Renewal
Customer Value: Do your job well (refer table 3.1)
GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards
Planned Expenditure Details: $2.12M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 0.00 | 0.00 | 0.00 | 0.10 | 2.02 | Nil |

Sale Sewer – Convert Sewer Pump Station No. 2 to Underground Facility

The Sale Sewer Pump Station No. 2 faces a range of issues, including the standard of electrical controls, confined space concerns, and limited storage under emergency conditions (such as rising main failure). The scope of this project is to construct a new wet well, convert the existing wet well into a detention storage and upgrade electrical controls at the pump station.

**Table 5.13: Sale Sewer – Convert Sewer Pump Station No. 2 to Underground Facility ($ Jan 18 – millions)**

Start date: 2019-20
Completion date: 2021-22
Cost Driver: Improvement / Compliance
Customer Value: Do your job well (refer table 3.1)
GW Promise: We will remove and treat wastewater and return it to the environment without harm
Planned Expenditure Details: $1.94M during period

| Year | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Out years |
|---|---|---|---|---|---|---|
| Spend | 0.00 | 0.05 | 0.20 | 1.69 | 0.00 | Nil |

## 5.3 SIGNIFICANT CAPITAL PROGRAMS

Gippsland Water has a range of significant capital programs in place to ensure the long-term integrity of the water and wastewater infrastructure servicing central Gippsland. These programs remain a cornerstone of Gippsland Water's capital plan for the fourth regulatory period. The descriptions below include details such as the drivers of each program and the customer value that each project supports. A table for each program details the cost of the program for each year of the period.

Gippsland Water prepares an internal Strategic Assessment for each significant capital program, which forms part of the justification for the program to proceed.

Sewer Reticulation Renewals Program

Gippsland Water has more than 1,100 kilometres of reticulation gravity sewer pipes. The sewer pipe network is of variable age and condition and there is a constant challenge to keep pace with increases in the volume of waste streams being collected and treated. For the last 3 years on average Gippsland Water has relined 5 km of sewers each year.

Gippsland Water has a well-established program that is undertaken on an annual basis in order to:

- address risks that are associated with ageing and failing infrastructure;
- identify and rehabilitate sewer mains that are likely to fail to meet Gippsland Water's responsibility to our customers;
- reduce the likelihood of breaching ESC defined KPI's; and
- review capacity and flow rates to identify potential system improvements.

A comprehensive monitoring program of the installed sewer reticulation system is in place at Gippsland Water as part of the asset management system. This program determines the condition and remaining service life of the installed pipework and a long term rolling program of replacement of poor condition pipework ensures that levels of service can be maintained.

**Table 5.14: Sewer Reticulation Renewals Program ($ Jan 18 – millions)**

| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $6.43M during period | | | | | | |
|---|---|---|---|---|---|---|
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 1.23 | 1.23 | 1.33 | 1.33 | 1.33 | Ongoing |

Water Reticulation Renewals Program

Gippsland Water has more than 1,500 kilometres of water reticulation pipes. The age and condition of this pipe network varies considerably, with more than 50% of pipes over 70 years old already replaced. For the last 3 years on average Gippsland Water has renewed 6 km of water reticulation pipe each year.

Gippsland Water has a well-established program that is undertaken on an annual basis in order to:

- address risks that are associated with ageing and failing infrastructure;
- identify and replace water mains that are likely to fail to meet Gippsland Water's responsibility to our customers;
- reduce the likelihood of breaching the maximum number of unplanned water supply disruptions to customers and indicators specified by ESC defined KPI's; and
- improve water quality and supply flow rates for potential system improvements.

**Table 5.15: Water Reticulation Renewals Program ($ Jan 18 – millions)**

| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards<br>Planned Expenditure Details: $6.13M during period | | | | | | |
|---|---|---|---|---|---|---|
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | Ongoing |

GWF – Membrane Replacement and Major Works Program

The GWF treatment process uses a range of technologies, including world first technology for the treatment of pulp and paper industrial waste. The range of technologies includes anaerobic reactors, ultrafiltration, reverse osmosis and membrane bioreactor treatment.

In order to ensure the continued treatment of the waste streams to an acceptable standard, it is essential that membranes with an acceptable integrity are in service. The design life of the membranes is in the order of an average of five years. The original membranes were installed in 2009, and have been progressively changed over the past five years, as a consequence of a major warranty repair. The replacement membranes are now approaching the end of their design life. In order to progressively manage the

replacement of the membrane fleet, membranes will be replaced on an annual basis throughout the Plan period.

In addition, as part of the cost-optimisation and efficiency improvement approach, significant works are targeted to reduce the impact of corrosion and biogas management. This will address design and operational risk related to the treatment of industrial effluent high in hydrogen sulphide and methane.

**Table 5.16: GWF Membrane Replacement and Major Works Program ($ Jan 18 - millions)**

| | | | | | | |
|---|---|---|---|---|---|---|
| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $5.62M during period | | | | | | |
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.85 | 0.85 | 1.36 | 1.28 | 1.28 | Ongoing |

Water Treatment Plant Enhancement Program

Gippsland Water has 16 water treatment plants and 30 remote disinfection sites across the region. The age and condition of these assets vary considerably, with most requiring minor capital works to the various process steps (control points) to ensure they remain operational for the ongoing delivery of safe drinking water.

Drivers of the Water Treatment Enhancement Program include:

- provision of safe drinking water at all times to ensure the protection of public health;
- compliance with the Victorian *Safe Drinking Water Act (2003), Victorian Safe Drinking Water Regulation (2015), Australian Drinking Water Guidelines (2011), Code of Practice for Fluoridation of Drinking Water Supplies (March 2009)* and *Victorian framework for water treatment operator competencies (Best practice guidelines) (2012);*
- improved consumer confidence in water quality and trust of the water service provider;
- compliance with safety and environmental regulations/legislation; and
- provision of a level of service as defined by the Gippsland Water Customer Charter.

Gippsland Water's site improvement plan process is designed to identify and prioritise minor improvement works (generally < $100,000) and the driver for those works, which are required for each individual site within the next five year period to maintain compliant operation (performance, reliability, safety and environmental).

Utilising the Gippsland Water risk policy, all enhancement projects are assessed and ranked in order of risk and organisational priority.

**Table 5.17: Water Treatment Plant Enhancement Program ($ Jan 18 – millions)**

| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards<br>Planned Expenditure Details: $5.60M during period | | | | | | |
|---|---|---|---|---|---|---|
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | Ongoing |

Sewer Distribution and Trunk Main Renewals Program

Gippsland Water's Gravity Sewer Asset Class Plan provides cost-effective management strategies for installing, operating, maintaining and renewing gravity sewer trunk, branch and reticulation assets in compliance with specified levels of service.

A CCTV inspection program has been developed to provide a structural and service condition assessment for all branch and trunk sewers by 2030/31.

The expenditures outlined below are required to remain compliant with customer service KPI's and to ensure that future operational expenditure on sewer maintenance remains controlled.

**Table 5.18: Sewer Distribution and Trunk Main Renewals Program ($ Jan 18 – millions)**

| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $3.78M during period | | | | | | |
|---|---|---|---|---|---|---|
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.02 | 0.10 | 1.22 | 1.22 | 1.22 | Ongoing |

Wastewater Treatment Plant and Disposal Improvement Works Program

The ultimate aim of these programs is to ensure that minor capital works upgrades meet increasing operational, legislative and regulatory requirements to ensure the provision of public and environmental health compliant discharges to receiving environments. To facilitate this, an annual program of works is developed, based on a prioritisation criterion that considers the urgency of the solution in terms of timing, and the type of response the problem is suited to.

**Table 5.19: WWTP and Disposal Improvement Works Program ($ Jan 18 – millions)**

| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $3.70M during period | | | | | | |
|---|---|---|---|---|---|---|
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.71 | 0.68 | 0.77 | 0.77 | 0.77 | Ongoing |

Sewer Pump Station – Mechanical and Electrical Upgrade Program

Gippsland Water currently has 189 sewage pump stations (excluding 2,200 low-pressure systems) within its sewerage systems including outfalls. Pump stations have a range of components for civil, mechanical, electrical, instrumentation and control functions, with typical component lives varying from as little as ten years (pumps) through to more than 100 years (wet wells, valve chambers).

Through the application of the risk based decision processes, which includes accounting for growth in connections demand to individual pump stations, various improvements to existing pump stations have been identified to satisfy levels of service in the long term.

This program is broken into minor upgrades and major upgrades. Minor upgrades involve no or minor capacity upsizing, with improvements comprising replacement of components due to their condition, inadequate function or non-compliance with current specifications. Major upgrades result from deficient hydraulic capacity, with a number of improvement options generally requiring consideration utilising system hydraulic analysis to derive the preferred option. Major upgrades can also require replacement of various components, additional to any component hydraulic upsizing need.

**Table 5.20: Sewer Pump Station – Mechanical and Electrical Upgrade Program ($ Jan 18 – millions)**

| | | | | | | |
|---|---|---|---|---|---|---|
| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $3.30M during period | | | | | | |
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | Ongoing |

Regional Outfall System (ROS) – Renewal Program through Traralgon

The ROS is one of Gippsland Water's most critical assets, conveying on average, approximately 35 megalitres of effluent daily from the GWF to Dutson Downs and an ocean outfall.

Pipe breaks along the ROS are the result of internal corrosion of the concrete and in the pipe crown. The criticality of the ROS was made very clear given the consequences of a March 2016 break at Rosedale. This break occurred at a low point along the pipeline and caused a large loss of effluent (10 megalitres).

During this regulatory period, Gippsland Water proposes to replace a section of the ROS pipeline through Traralgon (Tyers Road to Cross's Road) due to:

- known pipeline corrosion (from pipe condition assessments);
- the route of the pipeline which passes directly through the front yards and backyards of several residential properties; and
- the difficulty of repair and inconvenience to residents of any failure of the ROS due to joint failure.

**Table 5.21: ROS Renewal Program through Traralgon ($ Jan 18 – millions)**

| Cost Driver: Renewal<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $3.15M during period | | | | | | |
|---|---|---|---|---|---|---|
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.04 | 0.92 | 0.10 | 2.04 | 0.05 | Ongoing |

Shared Assets – Water and Wastewater

When a developer requests connection to Gippsland Water's water and sewerage network, we work together with the developer in providing the required works to service both the development and the catchment.

Gippsland Water provides:

- major treatment plants, headworks and outfall; and
- shared assets that have sufficient capacity to meet future demand taking into account a long term planning horizon.

Developers provide:

- the assets to a determined size threshold that are required to service their development and connect to Gippsland Water's network; and
- any temporary works required to connect their development to our network on a temporary basis whilst the long term works are being completed.

Shared Assets are infrastructure assets that are generally provided in relation to prescribed services (based on the size of the asset). They do not include reticulation assets, headworks or treatment plants. They are provided to service the whole catchment and can service more than just the particular development. The framework also recognises that the developer should contribute to the shared asset, if the development is out of sequence, based on infrastructure sequence plans prepared and published by Gippsland Water.

Forecasting the timing of expenditure in relation to shared assets can be very difficult (and outside of the corporation's control). As such, Gippsland Water has decided to limit the capital cost of shared assets in our Plan to 50% of the total value currently identified in forecasts. This approach reduces the total capital requirement sought in the fourth regulatory period, lessons the impact on prices for customers, and sees Gippsland Water take on more risk. Actual expenditure will be included as part of the regulatory asset base during the next Water Price Review process.

**Table 5.22: Shared Assets – Wastewater ($ Jan 18 – millions)**

| | | | | | | |
|---|---|---|---|---|---|---|
| Cost Driver: Growth<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: We will remove and treat wastewater and return it to the environment without harm<br>Planned Expenditure Details: $2.84M during period (50% of forecast) | | | | | | |
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 1.35 | 0.44 | 0.09 | 0.53 | 0.42 | Ongoing |

**Table 5.23: Shared Assets – Water ($ Jan 18 – millions)**

| | | | | | | |
|---|---|---|---|---|---|---|
| Cost Driver: Growth<br>Customer Value: Do your job well (refer table 3.1)<br>GW Promise: Reliably deliver safe drinking water that meets or exceeds regulatory standards<br>Planned Expenditure Details: $1.50M during period (50% of forecast) | | | | | | |
| Year | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** | **Out years** |
| Spend | 0.34 | 0.31 | 0.31 | 0.16 | 0.38 | Ongoing |

## 5.4 OTHER CAPITAL EXPENDITURE

All other capital expenditure not associated with a defined major project or major program above has been grouped into the categories outlined below.

**Table 5.24: Other Capital Expenditure ($ Jan 18 – millions)**

| Type of Spend | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Water Renewals | 7.79 | 8.74 | 8.43 | 6.77 | 5.85 | 37.57 |
| Wastewater Renewals | 7.48 | 5.35 | 3.96 | 4.63 | 4.56 | 25.98 |
| Water Improvements | 0.85 | 2.46 | 1.95 | 2.70 | 0.82 | 8.78 |
| Wastewater Improvements | 2.22 | 2.26 | 2.00 | 1.48 | 1.43 | 9.40 |
| Water Growth | 1.57 | 0.80 | 0.19 | 1.16 | 0.66 | 4.39 |
| Wastewater Growth | 0.75 | 1.46 | 0.51 | 1.87 | 1.34 | 5.92 |
| Total | 20.66 | 21.07 | 17.04 | 18.61 | 14.66 | 92.04 |

## 5.5 SPECIAL INTEREST CAPITAL EXPENDITURE

The other capital expenditure outlined above contains one new program in relation to the delivery of the Corporation's pledge to the state government for a target for emissions reduction over the period from 2018 to 2025. By working with the broader water industry and delivering on the state government's Take 2 pledge program, Gippsland Water will ensure it is acting collectively, proportionately and strategically to mitigate the effects of climate change.

Based on a range of considerations, greenhouse gas emissions reduction milestones between now and 2050 have been set and agreed upon by the organisation. Gippsland Water's emissions reduction pledge provides a solid basis for our long-term strategy to reach net zero emissions by 2050.

Capital expenditure over the fourth regulatory period that has been included in our Plan totals $4.18M and is expected to deliver 2,600 MWh of renewable energy generation annually, at full production. These 'behind the meter' energy savings have been factored into Gippsland Water's energy budget for the fourth regulatory period (refer table 4.4).

**Table 5.25: Proposed Emissions Reduction Expenditure ($ Jan 18 – millions)**

Cost Driver: Growth
Customer Value: Prepare and Protect (refer table 3.1)
GW Promise: We will do no harm and act to improve the environment
Planned Expenditure Details: $4.18M during period

| Type of Spend | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Renewable Energy - Solar Panels on Moe WTP, Maffra WTP | 0.14 | 0.63 | - | - | - | 0.77 |
| Renewable Energy - Solar Panels on Moe WWTP, Warragul WWTP, Warragul WTP | 0.63 | 0.63 | 0.39 | - | - | 1.65 |
| Solar Panels on Traralgon Head Office | 0.01 | 0.14 | - | - | - | 0.15 |
| Traralgon Water - hydro turbine on inlet valve | 0.03 | 1.53 | 0.05 | - | - | 1.61 |
| **Total** | 0.81 | 2.93 | 0.44 | - | - | 4.18 |

As noted in chapter two, intelligent water meters were well-received as a concept by customers during our engagement activities. Despite this, Gippsland Water has not set aside any funds within the capital expenditure outlined above to provide intelligent water meters during the fourth regulatory period. We are however committed to further investigation of intelligent water meters moving forward, with a view to learning from the broader industry experience during the regulatory period.

## 5.6 PRUDENT AND EFFICIENT LEVELS OF CAPITAL EXPENDITURE

The difficulties in developing a capital expenditure program for a five year period, with an end date some six years distant are significant. Gippsland Water identified several key issues that required resolution during the development of the capital expenditure plan to ensure that proposals put forward for this regulatory period were both prudent and efficient. The key issues identified were:

- understanding the cost drivers that require capital expenditure to be undertaken;

- the need for risk assessment and prioritisation of projects to develop a priority listing of projects; and
- estimate accuracy for significant projects included in our Plan for the regulatory period.

Gippsland Water's approach to risk assessment and prioritisation is well documented and can be provided on request.

At any point in time, Gippsland Water has a range of capital projects and programs at various stages between concept and completion. Cost estimates in the early stages such as functional design can vary significantly with proposed final costs after a detailed design has been completed. In this Plan, Gippsland Water has elected to present capital project costs on the following basis:

- all major projects that have passed the tender stage are recorded at current estimated cost (assumed P95 level of confidence);
- all major projects that have not reached the tender stage have been reviewed by external consultants and have been recorded at the estimated cost derived from this work (assumed P50 level of confidence);
- all minor projects that have not reached the tender stage are recorded at current estimated cost (assumed P50 level of confidence); and
- all capital programs are recorded at current estimated cost (assumed P95 level of confidence).

# 6 DEMAND

Demand forecasts underpin the calculation of future revenues, and thus directly impact on any proposed tariff movements during the fourth regulatory period. In our Plan, Gippsland Water sets out forecasts for the range of services that it provides. Forecasts are prudent and reasonable, and take into account relevant sources of reference.

Demand forecasts are based on permanent water saving rules being in place for the duration of the fourth regulatory period. Gippsland Water does not expect any significant water restrictions to be required during this regulatory period.

This task involves forecasting the levels of growth and consumption that will occur across Gippsland Water's customer base over the next six years (including 2017-18) in relation to water supply services, including:

- residential water connections;
- non-residential water connections;
- fire service connections;
- residential water consumption;
- non-residential water consumption; and
- major customer water consumption.

This task also involves forecasting the levels of growth and outflows that will occur across Gippsland Water's customer base over the next six years (including 2017-18) in relation to wastewater and trade waste services, including:

- residential wastewater connections;
- non-residential wastewater connections;
- non-residential wastewater volumes;
- major customer wastewater volumes; and
- trade waste connections.

Sources of reference for this forecasting task include:

- previous growth history captured by Gippsland Water;
- trend analysis conducted by Gippsland Water; and
- Victoria in Future (VIF) 2016 statistical analysis released by the Department of Environment, Water, Land and Planning.

## 6.1 THE RISKS OF MAJOR CUSTOMER CLOSURES AND A LOCAL ECONOMIC DOWNTURN

Our Plan takes on risk by continuing to absorb the financial impact of the closure of our third largest customer - Energy Brix. Production at the Energy Brix complex ceased during 2014 with the closure of Briquette Factory 'A' in August 2014 and the Power Station in September 2014. Energy Brix consumed 5-7GL of water per annum and was a significant source of revenue for Gippsland Water.

The closure of the Hazelwood Power Station (our second largest customer) took effect at the end of March 2017. The Power Station / mine complex consumed more than 11GL of water per annum and was a significant source of revenue for Gippsland Water. In addition, the Power Station / mine complex employed about 450 staff and another 300 contractors. Engie–Hazelwood indicated that about 135 staff and 100 contractors would stay on at the site to manage the demolition and rehabilitation of the complex. As such, the closure has initially seen the loss of more than 500 jobs. Despite this, our Plan assumes that Engie-Hazelwood will continue to be a reduced yet significant revenue stream for the duration of this Plan, well beyond the current contract expiry date of mid-2021. While this is a bold inclusion, it presents a significant risk to our forecast revenues over the regulatory period.

In addition, another major customer, Carter Holt Harvey announced the closure of its softwood sawmill located in Morwell in June 2017. Whilst not as significant in terms of revenue as the two power station customers, this closure represents an additional revenue loss for Gippsland Water, and the loss of an additional 160 local jobs.

Perhaps not surprisingly, Gippsland Water has evidenced a significant slowdown in recent developer activity within the Latrobe Valley region coinciding with the announcement of these closures. For the first time in many years, Gippsland Water failed to declare any new serviced properties in the Latrobe Valley region for both the first and second quarters of the 2017 calendar year.

Despite this evidence and the current spate of major customer closures (and related job losses), Gippsland Water has chosen to take an optimistic view of future major customer viability, underlying economic activity and connections growth. Rather than limit forecast growth for our four main Latrobe Valley towns (Churchill, Moe, Morwell and Newborough) our Plan assumes total growth of more than 80 connections per annum for these towns, for the duration of the regulatory period. Given the economic uncertainty in the region at present, this presents another significant risk to our forecast revenues over the regulatory period.

## 6.2 PROPERTY CONNECTIONS FORECASTS

Water Connections - Residential

Gippsland Water has reviewed the VIF 2016 dataset and compiled a range of internal growth datasets for use in developing this price submission. Internal statistical analysis includes several variations on average growth based on historical records as well as a median growth scenario for all towns. Historical growth rates have been compared with VIF forecasts to test the validity of the data. As a result of this analysis, Gippsland Water has adopted four-year average growth rates as the basis of connections growth in our Plan.

Annual growth rates are outlined below for all of Gippsland Water's major towns.

**Table 6.1: Total Residential Water Connections – Major Towns**

| Town | Total Connections – June 2017 | Annual Connections Growth | % annual growth |
|---|---|---|---|
| Drouin | 5,420 | 202 | 3.7% |
| Moe | 4,868 | 28 | 0.5% |
| Morwell | 7,053 | 36 | 0.5% |
| Sale | 7,048 | 78 | 1.1% |
| Traralgon | 12,145 | 156 | 1.3% |
| Warragul | 6,942 | 191 | 2.7% |

Warragul and Drouin in the west of our region, and closest to metropolitan Melbourne, are forecast to experience the highest number of new connections in residential water properties, with forecasts for average growth of 2.7% and 3.7% per annum respectively. Growth in both towns has been strong, and connections are expected to continue to grow at similar rates during the forecast period. Growth in Traralgon is forecast at an average of 1.3% per annum in our Plan, while growth in Sale is forecast at an average of 1.1% per annum. This growth compares favourably to VIF 2016 data in relation to household growth as outlined below.

**Table 6.2: Major Town Connections Growth compared with VIF 2016**

| Town | % annual growth | VIF 2016 Region | VIF 2016 Household Growth[1] | VIF 2016 Dwellings Growth[2] |
|---|---|---|---|---|
| Drouin | 3.7% | Baw Baw (S) | 2.7 - 3.1% | 1.5 – 1.7% |
| Moe | 0.5% | Latrobe (C) | 0.6 - 0.8% | 1.5 – 1.7% |
| Morwell | 0.5% | Latrobe (C) | 0.6 - 0.8% | 1.5 – 1.7% |
| Sale | 1.1% | Wellington (S) | 0.6 - 0.8% | 1.5 – 1.7% |
| Traralgon | 1.3% | Latrobe (C) | 0.6 - 0.8% | 1.5 – 1.7% |
| Warragul | 2.7% | Baw Baw (S) | 2.7 - 3.1% | 1.5 – 1.7% |

Note 1: By region as noted, from 2016 to 2026
Note 2: Latrobe - Gippsland SA4 – from 2016 to 2026

Forecast average annual growth in residential water connections across the region ranges from 1.37% to 1.28% per annum in our Plan. This equates to 864 new residential connections per annum, and compares favourably with connections growth of 811 recorded in the 2016-17 year. The Table below discloses total connections on a year by year basis.

**Table 6.3: Total Residential Water Connections (end of year basis)**

| Period | Total Connections |
|---|---|
| Actual at June 2017 | 62,756 |
| Forecast to June 2018 | 63,620 |
| Forecast to June 2019 | 64,484 |
| Forecast to June 2020 | 65,348 |
| Forecast to June 2021 | 66,212 |
| Forecast to June 2022 | 67,076 |
| Forecast to June 2023 | 67,940 |

Water Connections – Non-residential

New connections for non-residential water properties are forecast to grow marginally during the period. Most notably, non-residential connections continue to grow at rates that are significantly below observed residential growth rates. Gippsland Water has estimated average annual growth in non-residential water property connections of 0.2% per annum.

Non-residential property growth has been forecast only for the major towns of Traralgon, Warragul, Sale and Drouin. Drouin's growth is forecast at 1.6% per annum, while growth in the other towns has been set at less than 0.5% per annum. In total, 14 new non-residential properties are forecast annually.

**Table 6.4: Total Non-residential Water Connections (end of year basis)**

| Period | Total Connections |
|---|---|
| Actual at June 2017 | 6,016 |
| Forecast to June 2018 | 6,030 |
| Forecast to June 2019 | 6,044 |
| Forecast to June 2020 | 6,058 |
| Forecast to June 2021 | 6,072 |
| Forecast to June 2022 | 6,086 |
| Forecast to June 2023 | 6,100 |

Wastewater Connections – Residential and Non-residential

Growth in wastewater connections is expected to be proportional to new water connections outlined above, where both water and wastewater services are provided to a particular town. Estimated average growth in residential wastewater property connections is 1.5% per annum (or 852 connections). Mirroring the growth in water connections, the highest growth is expected to occur in the Drouin, Warragul, Traralgon and Sale areas.

**Table 6.5: Total Residential Wastewater Connections (end of year basis)**

| Period | Total Connections |
|---|---|
| Actual at June 2017 | 56,196 |
| Forecast to June 2018 | 57,048 |
| Forecast to June 2019 | 57,960 |
| Forecast to June 2020 | 58,812 |
| Forecast to June 2021 | 59,664 |
| Forecast to June 2022 | 60,516 |
| Forecast to June 2023 | 61,368 |

New connections in non-residential wastewater properties are expected to be significantly less than residential growth during the plan period. Gippsland Water has estimated average growth in non- residential wastewater property connections of 0.3%.

**Table 6.6: Total Non-Residential Wastewater Connections (end of year basis)**

| Period | Total Connections |
|---|---|
| Actual at June 2017 | 5,296 |
| Forecast to June 2018 | 5,310 |
| Forecast to June 2019 | 5,324 |
| Forecast to June 2020 | 5,338 |
| Forecast to June 2021 | 5,352 |
| Forecast to June 2022 | 5,366 |
| Forecast to June 2023 | 5,380 |

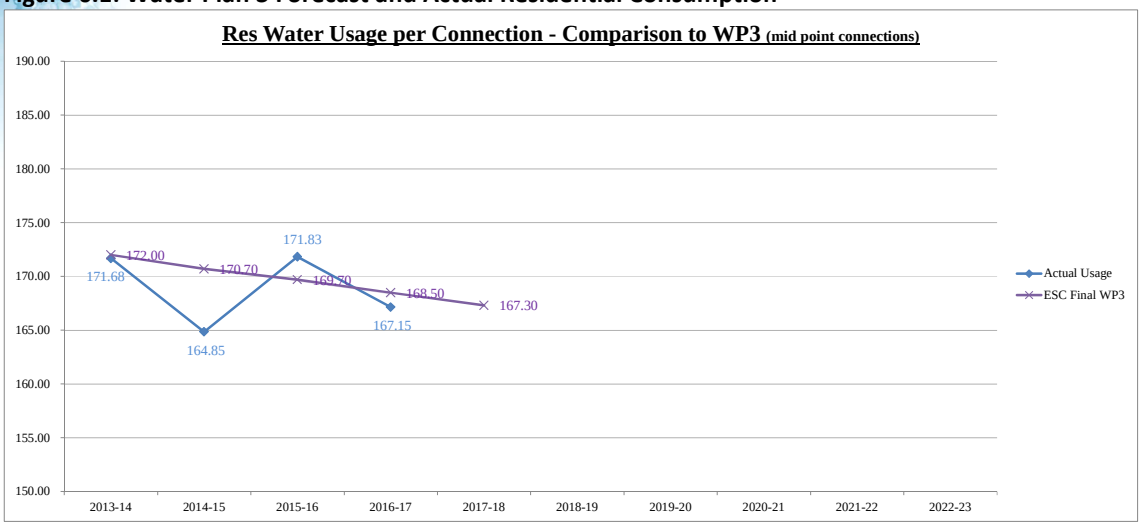
## 6.3 WATER CONSUMPTION FORECASTS

Actual and Forecast Demand – Residential

Gippsland Water is required to develop residential consumption forecasts for the period to June 2023. This task is set against a backdrop of consumption patterns that can vary significantly from year to year, depending on summer rainfall patterns.

To finalise a residential demand forecast for Gippsland Water, for the Water Plan 3 period, the ESC engaged Intelligent Software Design (ISD) to develop a residential consumption forecast. Actual consumption outcomes for the Water Plan 3 period have aligned closely with the forecast set by ISD, as detailed below.

**Figure 6.1: Water Plan 3 Forecast and Actual Residential Consumption**




Given the correlation between the ISD Water Plan 3 forecast and the pattern of actual consumption, Gippsland Water sought to engage ISD to complete its residential demand forecast for the fourth regulatory period. With Ernst and Young now holding the rights to the 'Simulait' model, they were engaged to prepare Gippsland Water's residential demand forecast.

The rationale for seeking external support for the determination of the residential consumption forecast lies in the fact that a 1 kilolitre (kL) variation in forecast consumption produces a revenue impact of approximately $125,000 per annum (given a base of more than 62,000 residential customers). Actual and forecast consumption outcomes for the Water Plan 3 period have been combined with the latest forecast from Ernst and Young's Simulait model below.

**Figure 6.2: Price Submission Forecast and Prior Period Residential Consumption**

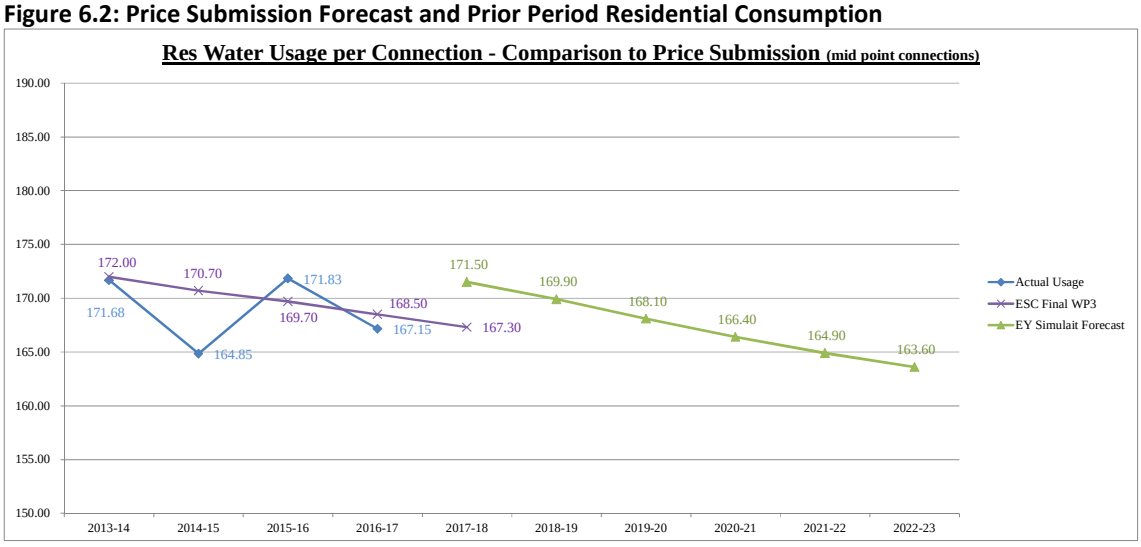


**Table 6.7: Annual Residential Water Consumption (Simulait)**

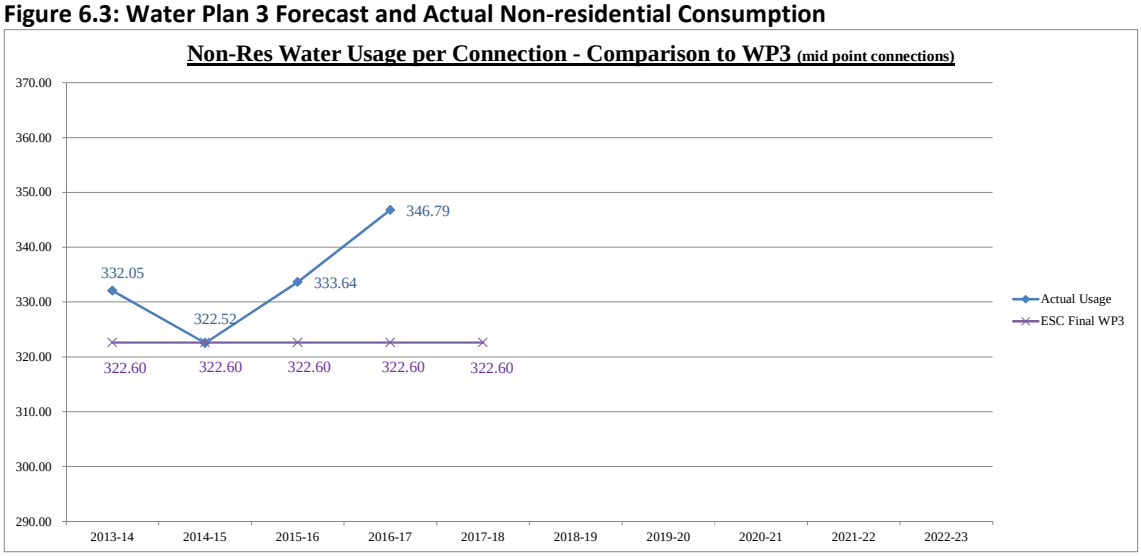
| Year | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Consumption (kL) | 171.5 | 169.9 | 168.1 | 166.4 | 164.9 | 163.6 |

The methodology behind Gippsland Water's residential consumption forecast period is set out in Ernst and Young's report to Gippsland Water, which can be provided on request. Given the ESC's first-hand knowledge of the Simulait model, it is suffice to say here that the model is a behaviour-based tool that takes into account the behaviours that drive the customer decision for usage and the customer decision for change (of products used) which ultimately influence overall water consumption.

Actual and Forecast Demand – Non-residential

Gippsland Water is required to develop non-residential consumption forecasts for the period to June 2023. Unlike forecasts for residential consumption, usage patterns for non-residential consumption do not vary significantly with summer rainfall patterns. In addition, the non-residential consumption forecast error is not as significant (a 1 kL variation in forecast produces a revenue impact of approximately $12,000 per annum, given a base of 6,000 customers). When combined with a reasonably stable historical rate of actual consumption, this allows Gippsland Water to predict with considerable accuracy, a non-residential consumption forecast.

**Figure 6.3: Water Plan 3 Forecast and Actual Non-residential Consumption**




The chart above provides a clear indication that non-residential water consumption has increased, on average, to levels above those forecast during the Water Plan 3 process. Gippsland Water has developed a range of prior year averages, which have recently been updated to include actual consumption for the 2016-17 financial year, as detailed below.

**Table 6.8: Historical Averages for Annual Non-residential Water Consumption**

| Consumption per connection (kL) | Last 2 years | Last 3 years | Last 4 years | Last 5 years | Last 6 years | Last 7 years |
|---|---|---|---|---|---|---|
| To June 2016 | 328.08 | 329.40 | 331.29 | 328.08 | 326.93 | 332.35 |
| To June 2017 | 340.21 | 334.32 | 333.75 | 334.39 | 331.20 | 329.77 |

Additional statistical information around the calculation of median data has also been developed. The median value for the last three years is 333.64 kL per annum, while for the last four years the median value is 332.84 kL per annum.

In light of this information, for the fourth regulatory period, Gippsland Water has set non-residential water consumption as follows.

**Figure 6.4: Price Submission Forecast and Prior Period Non-residential Consumption**

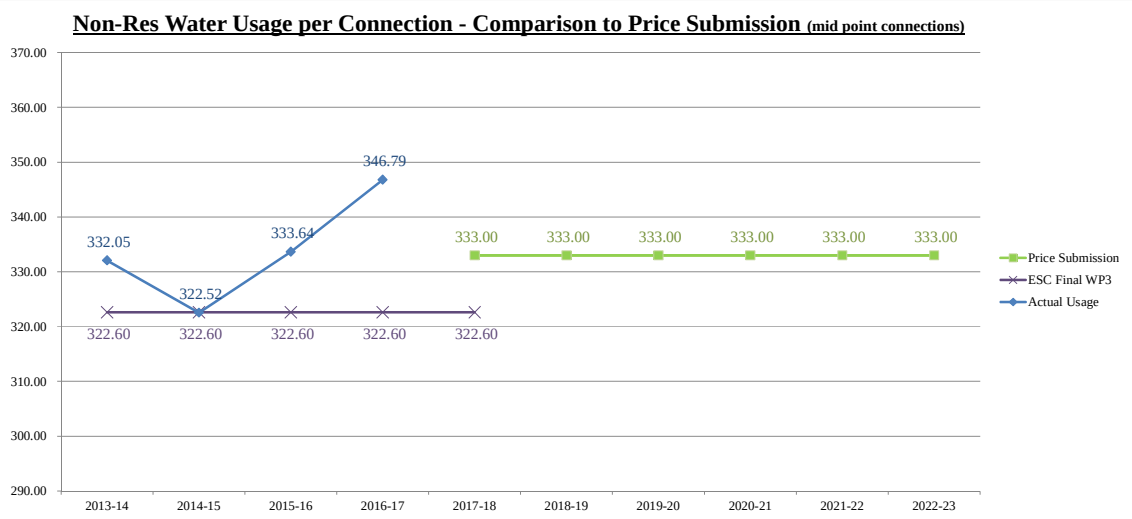



**Table 6.9: Annual Non-residential Water Consumption**

| Year | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Consumption (kL) | 333.0 | 333.0 | 333.0 | 333.0 | 333.0 | 333.0 |

Summary Of Outcomes – Residential And Non-residential Forecasts

Table 6.10 below summarises the outcomes used in this proposal for connections growth and volumetric consumption, based on the discussion presented above.

**Table 6.10: Summary of Residential and Non-residential Demand Outcomes**

| | | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| **Service** | **17/18** | **18/19** | **19/20** | **20/21** | **21/22** | **22/23** |
| **Water connections (end of year basis)** | | | | | | |
| Residential | 63,620 | 64,484 | 65,348 | 66,212 | 67,076 | 67,940 |
| Non-residential | 6,030 | 6,044 | 6,058 | 6,072 | 6,086 | 6,100 |
| total | 69,650 | 70,528 | 71,406 | 72,284 | 73,162 | 74,040 |
| | | | | | | |
| **Wastewater connections (end of year basis)** | | | | | | |
| Residential | 57,048 | 57,960 | 58,812 | 59,664 | 60,516 | 61,368 |
| Non-residential | 5,310 | 5,324 | 5,338 | 5,352 | 5,366 | 5,380 |
| total | 62,358 | 63,284 | 64,150 | 65,016 | 65,882 | 66,748 |
| | | | | | | |
| **Water consumption (average annual)** | | | | | | |
| Residential (kL) | 171.5 | 169.9 | 168.1 | 166.4 | 164.9 | 163.6 |
| Non-res (kL) | 333.0 | 333.0 | 333.0 | 333.0 | 333.0 | 333.0 |
| | | | | | | |
| **Water consumption (total annual)** | | | | | | |
| Residential (kL) [1] | 10,839,518 | 10,886,277 | 10,917,261 | 10,951,693 | 10,996,503 | 11,052,213 |
| Non-residential (kL)[1] | 2,005,234 | 2,010,948 | 2,016,662 | 2,022,376 | 2,028,090 | 2,033,804 |
| Total Consumption (kL) [1] | 12,844,752 | 12,897,225 | 12,933,923 | 12,974,069 | 13,024,593 | 13,086,017 |

Note 1: Total annual consumption is calculated using 'mid-point' connections, rather than connections at the end of a period.

## 6.4 OTHER CONNECTIONS FORECASTS

Fire Service Connections Forecast

Fire service connections are not expected to grow during the fourth regulatory period.

**Table 6.11: Fire Service Connections**

| Size of Service | Current – June 2017 | Forecast – June 2023 |
|---|---|---|
| Total Connections | 1,618 | 1,618 |

Trade Waste Customer Forecast

Trade waste is any liquid waste generated by an industry, business, trade or manufacturing process other than residential waste, which is acceptable for discharge to sewer. Residential waste is water from toilets, sinks, showers, basins and washing machines normally discharged from households.

Under the *Water Act 1989*, all non-residential and industrial properties that discharge trade waste are required to have a written trade waste agreement. The agreement outlines the conditions under which Gippsland Water will consent to the discharge of trade waste to our sewerage reticulation systems.

A trade waste fee is levied on these customers as grease or oil interceptors are not sophisticated enough to remove all the pollutants in wastewater. Further treatment is therefore required downstream at our wastewater treatment plants. Trade waste fees help pay for this treatment and periodic inspections of interceptors.

Gippsland Water has several hundred trade waste customers. In recent years Gippsland Water has invested resources to identify those businesses which are not registered as trade waste customers. The identification process entails a detailed physical verification of each town within the Gippsland Water region that has wastewater services available. Each customer has been personally contacted by Gippsland Water's trade waste officers to ensure compliance.

Trade waste connections are not expected to grow during the fourth regulatory period.

**Table 6.12: Trade Waste Connections**

| Size of Service | Current – June 2017 | Forecast – June 2023 |
|---|---|---|
| Total Connections | 871 | 871 |

## 6.5 MAJOR CUSTOMERS FORECAST

Gippsland Water's major customers include a pulp and paper manufacturer, three brown coal fired power stations and the oil and gas industry. The category also extends to a number of hospitals, linen services, livestock exchanges and a prison.

Major customer water consumption and wastewater volumes vary widely between the customers involved. Some are major contributors to water consumption, while others are major contributors to wastewater volumes. Gippsland Water's major customer forecasts for the fourth regulatory period have been developed on a customer by customer basis.

As noted in the introduction to this section, Gippsland Water has seen significant change within its major customer base in recent years. This includes the closure of three major customers with a combined water consumption of more than 16GL per annum (at full production) –

- Energy Brix (our third largest customer) in September 2014;
- Engie-Hazelwood (Hazelwood Power Station - our second largest customer) at the end of March 2017; and
- Carter Holt Harvey's softwood sawmill located in Morwell in June 2017.

As such, Gippsland Water's forecast for water consumption in our Plan (outlined below) is significantly lower than in previous years, as depicted in the chart below. The significant reduction from 2016-17 to 2018-19 represents the slowdown in consumption associated with Engie–Hazelwood as the demolition and rehabilitation of the complex proceeds over time.

**Figure 6.5: Major Customer Water Consumption (Gigalitres)**

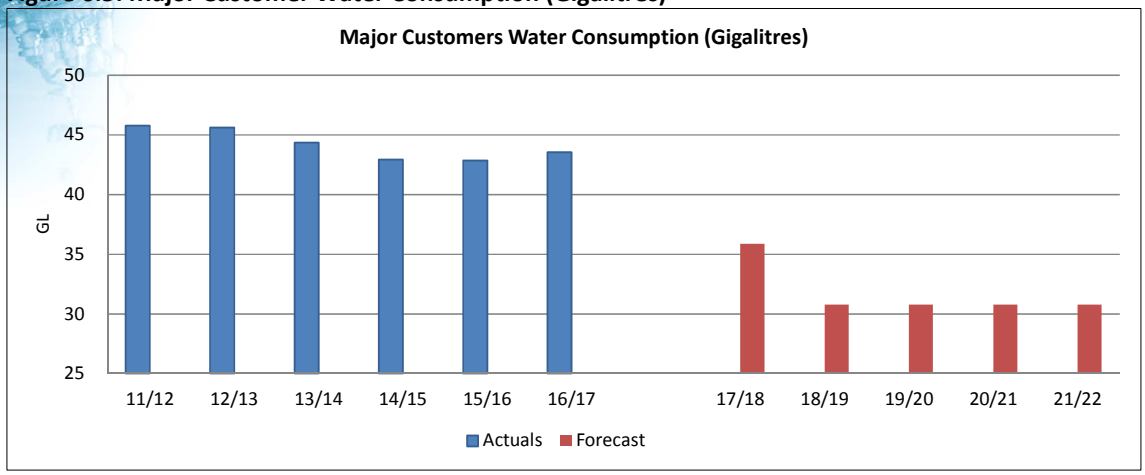



**Table 6.13: Major Customer Water Consumption (kL)**

| Year | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Treated Water | 2,570,050 | 2,570,050 | 2,570,050 | 2,570,050 | 2,570,050 | 2,570,050 |
| Raw Water | 33,304,200 | 28,204,200 | 28,204,200 | 28,204,200 | 28,204,200 | 28,204,200 |
| Recycled Water | nil | nil | nil | nil | nil | nil |
| Total | 35,874,250 | 30,774,250 | 30,774,250 | 30,774,250 | 30,774,250 | 30,774,250 |

## 6.6 NEW CUSTOMER CONTRIBUTIONS

When land is subdivided, or an existing property is redeveloped, the demand on the water and wastewater reticulation systems may increase. Storage capacities and treatment works may have to be enlarged to meet this demand. New customer contributions for headworks (water) and outfall/disposal (wastewater) recover part of the cost of constructing permanent works such as storages, pumping stations, treatment plants, water distribution mains and outfall sewers.

During the Water Plan 3 period, Gippsland Water's New Customer Contribution (NCC) charges have reduced, on a glide-path basis, from over $1000 per connection, to $nil per connection, in the 2017-18 financial year.

For this regulatory period, Gippsland Water does not intend to seek an increase in the current NCC charge. This approach is in recognition of the need to support economic growth within the region. While seeking to re-introduce an NCC charge at this time may enhance Gippsland Water's revenues, such a move may well be detrimental to fostering new development opportunities in the local economy, at a time when such opportunities are keenly sought after.

# 7 PERIOD, PRICE CONTROL AND TARIFFS

## 7.1 LENGTH OF REGULATORY PERIOD

The ESC has determined that the minimum regulatory period is five years. Water corporations can seek periods in excess of five years, but must sufficiently justify proposals when doing so. Gippsland Water is seeking to maintain a regulatory period of five years.

## 7.2 FORM OF PRICE CONTROL

Gippsland Water adopted the individual price cap approach to price control for the first, second and third regulatory periods. After comparing the benefits, particularly to customers, of the price cap approach to the tariff basket approach, Gippsland Water believes that price caps will again provide greater certainty for customers, and has adopted this approach for the fourth regulatory period.

## 7.3 PRICES AND TARIFF STRUCTURES

Gippsland Water adopts a uniform tariff across all the towns serviced by treated water and wastewater reticulation systems within the region. Reviews undertaken by Gippsland Water clearly demonstrate that any approach to move to a non-uniform tariff would have a significant impact on customers who rely upon Gippsland Water's smaller reticulation systems. In these instances, the tariffs required to recover operating and capital costs would significantly exceed the levels established under a uniform tariff.

In relation to retail water tariff structures, the current Gippsland Water tariff structure for water is a two part tariff, comprising a fixed service fee, and a volumetric charge. Gippsland Water proposes to continue with this structure in the fourth regulatory period.

In relation to retail wastewater tariff structures, the current Gippsland Water tariff structure for wastewater comprises a fixed service fee for residential customers, while non-residential customers are charged both a fixed service fee and a volumetric charge. Gippsland Water proposes to continue with this structure in the fourth regulatory period.

**TARIFF LEVELS**

Based on an annual average 'real' increase of 0.57% per annum, detailed below are the actual tariffs that Gippsland Water will seek to apply for the period of our Plan. The tariffs are presented on the basis of major service provision, and are thus separated into segments for water, wastewater, major customers, recycled water, trade waste, land development, property connections, rechargeable works and miscellaneous services.

Water Tariffs

a) Water Service Availability Charge

A water service availability charge applies to all properties in all water districts where the water main passes through, or fronts a property or is capable of providing a service to the property.

The water service availability charge is a contribution towards the cost of providing the water supply to the property and is charged according to the size of the service (not the meter itself). Non-connected properties pay the minimum availability charge.

**Table 7.1: Water Service Availability Charge ($ Jan 18)**

| Size of Service | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Non - connected | 87.87 | 88.37 | 88.88 | 89.38 | 89.89 | 90.41 |
| 20mm | 175.90 | 176.90 | 177.91 | 178.92 | 179.94 | 180.97 |
| 25mm | 175.90 | 176.90 | 177.91 | 178.92 | 179.94 | 180.97 |
| 32mm | 450.85 | 453.42 | 456.01 | 458.61 | 461.22 | 463.85 |
| 40mm | 703.72 | 707.73 | 711.76 | 715.82 | 719.90 | 724.00 |
| 50mm | 1,099.63 | 1,105.90 | 1,112.21 | 1,118.54 | 1,124.92 | 1,131.33 |
| 75mm | 2,474.22 | 2,488.32 | 2,502.51 | 2,516.77 | 2,531.12 | 2,545.55 |
| 80mm | 2,815.39 | 2,831.43 | 2,847.57 | 2,863.81 | 2,880.13 | 2,896.55 |
| 100mm | 4,398.72 | 4,423.79 | 4,449.01 | 4,474.37 | 4,499.87 | 4,525.52 |
| 150mm | 9,897.41 | 9,953.82 | 10,010.56 | 10,067.62 | 10,125.01 | 10,182.72 |
| 200mm | 17,600.06 | 17,700.38 | 17,801.28 | 17,902.74 | 18,004.79 | 18,107.42 |

For multi-tenement properties such as flats, units, town houses, shops and shopping arcades etc, connected to the water supply service, a water service availability charge applies to each separate occupancy on that property, irrespective of the size of the service, whether the property is separately metered or whether the property is occupied or vacant.

Where a residential property is separately metered, and subject to a tenancy agreement under the *Residential Tenancies Act 1997*, the tenant pays for water usage only. The water service availability charge is paid by the landlord.

b) Water Usage Charge

The property owner is liable for all water usage charges levied at a rate per kilolitre, unless the property is subject to a tenancy agreement under the *Residential Tenancies Act 1997.*

Tenants and Caravan Park residents who are covered under the *Residential Tenancies Act 1997* are only liable for any water usage charges if their supply of water is measured by a separate meter owned, installed and maintained by Gippsland Water and Gippsland Water has read the meter on receiving notification that a tenant now occupies the residency.

**Table 7.2: Water Usage Charge ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Treated Water per kL | 2.0340 | 2.0456 | 2.0573 | 2.0690 | 2.0808 | 2.0927 |
| Raw Water per kL | 1.1434 | 1.1500 | 1.1565 | 1.1631 | 1.1697 | 1.1764 |

**Table 7.3: Metered Hydrant Charge ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Metered Hydrant per kL | 4.5823 | 4.6084 | 4.6347 | 4.6611 | 4.6877 | 4.7144 |
| Metered Hydrant annual fee | 137.16 | 137.16 | 137.16 | 137.16 | 137.16 | 137.16 |

Customers will continue to be sent accounts every four months for availability charges and water usage charges within two working days after Gippsland Water has read the meter or estimated the meter reading. If an estimated reading is required, it will be calculated by having regard to the quantity of water delivered to the property in any previous or subsequent period or periods, by having regard to the quantity of water delivered to any similar property during the period concerned and in any other way that is prescribed.

Where a property is connected to Gippsland Water's water service but is unmetered, a notional usage charge equivalent to the cost of 209 kilolitres of water per annum is charged.

c) Recycled Water Charge

The only recycled water system currently available is the GWF. The total recycled water output from this facility will be provided under contract to a current major customer. Rates for the supply of recycled water are set out in the contract, and are subject to annual increases to the cost of services provided.

d) Fire Service Availability Charge

Private fire services may be installed without meters provided that every fire-hose tap is sealed in an approved manner and kept sealed unless otherwise approved in writing by Gippsland Water. Except in the case of fire or by written consent of Gippsland Water; no person shall wilfully break the seal affixed to any fire-hose tap. In the event of any such seal being broken the occupier of the property shall, within two working days thereafter, give Gippsland Water notice in writing of such breakage.

Gippsland Water may, by approval given in writing, waive the requirement to keep any hose-tap sealed provided that Gippsland Water is satisfied that no water drawn will be used for purposes other than for fire-fighting, fire-fighting practice or for testing and proving the fire service installation. Gippsland Water may at any time revoke any

approval given and may require that meters shall be fitted at the owner's expense to measure all water supplied.

The following fees shall be payable to Gippsland Water in respect of private fire service installations:

- for each private fire service an annual fee. The fire service availability charge is a contribution towards the cost of providing a water service to hose reels, hydrants or sprinkler systems for fire-fighting purposes only;
- for the provision of design information in accordance with the requirements of the Building Regulations 1994; and
- for sealing by Gippsland Water of fire hose taps.

Fire service availability charges apply to non-residential properties only.

**Table 7.4: Fire Service Availability Charge ($ Jan 18)**

| Size of Service | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| 20mm | 44.03 | 44.28 | 44.53 | 44.79 | 45.04 | 45.30 |
| 25mm | 44.03 | 44.28 | 44.53 | 44.79 | 45.04 | 45.30 |
| 32mm | 112.63 | 113.27 | 113.92 | 114.57 | 115.22 | 115.88 |
| 40mm | 175.93 | 176.93 | 177.94 | 178.95 | 179.97 | 181.00 |
| 50mm | 274.86 | 276.43 | 278.00 | 279.59 | 281.18 | 282.79 |
| 75mm | 618.66 | 622.19 | 625.74 | 629.30 | 632.89 | 636.50 |
| 80mm | 703.75 | 707.76 | 711.79 | 715.85 | 719.93 | 724.03 |
| 100mm | 1,099.63 | 1,105.90 | 1,112.21 | 1,118.54 | 1,124.92 | 1,131.33 |
| 150mm | 2,474.25 | 2,488.36 | 2,502.54 | 2,516.80 | 2,531.15 | 2,545.58 |

Wastewater Tariffs

a) Wastewater Service Availability Charge

A wastewater service availability charge applies to all properties in all wastewater districts where the wastewater main passes through or is adjacent to a property, or is capable of providing a service to the property.

The wastewater service availability charge is a contribution towards the cost of providing the wastewater service to the property. It applies to both developed residential and non-residential properties and vacant land where wastewater services have been constructed and are capable of servicing the property. Non-connected properties pay the minimum availability charge.

For multi tenement properties such as flats, units, town houses, shops and shopping arcades etc, connected to the wastewater service, a wastewater service availability charge applies to each separate occupancy on that property, whether the property is occupied or vacant.

**Table 7.5: Wastewater Service Availability Charge ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Connected property | 808.07 | 812.68 | 817.31 | 821.97 | 826.66 | 831.37 |
| Non-connected property | 404.01 | 406.31 | 408.62 | 410.95 | 413.30 | 415.65 |

b) Wastewater Volumetric Charge

A wastewater volumetric Charge applies to non-residential properties which use in excess of 100 kilolitres of water in any four monthly period, calculated and levied on the following basis:

A = water usage above 100 kilolitres in any four monthly period.
B = wastewater volumetric charge per kilolitre
C = a percentage figure of 95%, 75%, 50% or 25%, based upon the property type (as detailed below).
D = the Wastewater Volumetric Charge to be paid.

The wastewater volumetric charge shall be calculated as D = A x B x C. The charge is set according to the type of development or business conducted on the property.

*Property types designated at 95% wastewater volumetric charge*
*Aerodrome, Agri-business/Meat and Poultry, Art Gallery, Automotive, Bank, Body Corporate (Non-Res), Church, Cinema/Theatre, Clubs/Facilities/Venues (Meal Preparation), Commercial Storage Units, Community Services (Schools, Hospitals, Prison, Childcare Facilities), Courthouse, Dry Cleaners, Emergency and Public Services, Factory, Hairdresser/Barber, Hotel, Laundromat, Library, Livestock/Saleyards, Medical and Dwelling, Medical Rooms/Facilities (Doctors, Dentists, Chiropractic etc), Museum, Office, Photo Laboratory/Chemical, Post Office, Public Utility (eg Public Toilets), Pump Station, Radio Station, Railway Station, Restaurants and Cafes, Shed, Shops, Shop and Dwelling, Shopping Centre, Supermarket, Telephone Exchange, Timber Yard (retail), Veterinary Centres, Warehouse, Wool Production, Workshop and Dwelling, Wrecking Yard, Undefined.*

*Property types designated at 75% wastewater volumetric charge*
*Accommodation, Food Processing/Manufacturing, Public Swimming Pools, Undefined.*

*Property types designated at 50% wastewater volumetric charge*
*Brewery/Winery (wine making process), Caravan Park, Farms/Animal Husbandry, Funeral Parlour, Horse Stable and House, Kennels/Animal Hospital, Piggery, Undefined.*

*Property types designated at 25% wastewater volumetric charge*
*Bakery, Cemetery, Clubs/Outdoor Facilities (Ground Watering Only), Market Garden, Plant Nursery, Racecourse/Stables, Winery/Vineyard, Timber Factory/Saw Mill, Undefined.*

**Table 7.6: Wastewater Volumetric Charge ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Cost per kL | 3.8498 | 3.8717 | 3.8938 | 3.9160 | 3.9383 | 3.9608 |

Major Customer Tariffs

Major customers, by the nature of their size, the significant volumes of water used, and volumes of waste disposed, have long term contracts in place with Gippsland Water. These contracts stipulate prices at which water is sold, and waste disposed. In some instances, prices are linked directly to the non-residential tariffs for water and wastewater. In other instances, mechanisms within the contract allow for annual increases to the cost of services provided.

In determining the revenue requirement for this regulatory period a significant review of major customer contracts has been undertaken, to ensure that major customer revenues are accounted for correctly.

Quality Based Trade Waste Tariff (QBTW)

Gippsland Water introduced a QBTW tariff for trade waste customers from July 2010. This new tariff effectively replaced the current non-residential wastewater volumetric charge where new and existing trade waste customers present an elevated level of risk to the wastewater treatment process. The introduction of the QBTW tariff sought to provide appropriate signals to trade waste customers about the relative merits of discharging to the sewerage system compared to alternatives such as waste minimisation and on-site treatment.

The QBTW tariff model is designed to be more reflective of Gippsland Water's costs to treat trade waste. The model consists of three core elements:

- a volumetric component (equal to 50% of Gippsland Water's prevailing non-residential wastewater volumetric charge);
- a quality component (comprising individual tariffs for Biochemical Oxygen Demand, Suspended Solids and Total Phosphorus, the combined quality tariffs equate to 50% of Gippsland Water's prevailing non-residential wastewater volumetric charge only when the trade waste quality is equivalent to 'high strength domestic' waste); and
- cost recovery in relation to the trade waste sampling regime.

The quality component is 'weighting based', focusing on those waste quality parameters outlined above that are the focus of treatment (Biochemical Oxygen Demand, Suspended Solids and Total Phosphorus).

The QBTW tariff model is designed to ensure that when trade waste discharge parameters exceed levels equivalent to 'high strength domestic' waste a higher tariff will apply, based on the pollutant load, whereas those customers who are discharging at levels equivalent to 'high strength domestic' waste will pay the equivalent of the non-residential wastewater volumetric tariff. Likewise customers who discharge a pollutant load that is less than 'high strength domestic' waste will pay a reduced tariff. Customers will still be required to meet Gippsland Water's trade waste limits at all times.

Gippsland Water applies the same volumetric excess to the quality based tariff as currently applies to the non-residential wastewater volumetric tariff. In other words, the QBTW tariff will only apply where water consumption exceeds 100 kL in any four month billing period. Where a dedicated wastewater meter exists, the tariff will continue to be applied on the total volume recorded at the meter. In addition, the current annual trade waste agreement fee will remain in place.

**Table 7.7: Quality Based Trade Waste Tariff ($ Jan 18)**

| Waste Parameter | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Volumetric Charge | 1.9247 | 1.9357 | 1.9467 | 1.9578 | 1.9690 | 1.9802 |
| Biochemical Oxygen Demand(BOD) | 0.4809 | 0.4837 | 0.4864 | 0.4892 | 0.4920 | 0.4948 |
| Suspended Solids (SS) | 3.8497 | 3.8716 | 3.8937 | 3.9159 | 3.9382 | 3.9607 |
| Phosphorus(P) | 25.6668 | 25.8131 | 25.9602 | 26.1082 | 26.2570 | 26.4067 |

Trade Waste Tariffs

All customers discharging trade waste to the sewerage system must have:

- applied in writing to Gippsland Water for consent to discharge trade waste to the sewerage system; and
- entered into an agreement with Gippsland Water that details the terms and conditions for discharge to which the customer must comply.

Any existing customer discharging trade waste that does not have an agreement with Gippsland Water to discharge trade waste to sewer must apply for an agreement immediately. Failure to do so may result in Gippsland Water requiring discharge to cease.

**Table 7.8: Trade Waste Annual Charge ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Annual Charge | 312.21 | 313.99 | 315.78 | 317.58 | 319.39 | 321.21 |

Any customer proposing to discharge trade waste to the sewerage system must complete an application and submit it to Gippsland Water for consideration. An

application shall, unless Gippsland Water determines otherwise, comply with the Gippsland Water Trade Waste Policy and be accompanied by the relevant fee. For prospective customers, an estimate of the expected quantity and quality of trade waste will need to be provided to Gippsland Water to allow correct trade waste categorisation.

**Table 7.9: Trade Waste Application Fee ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Application Fee | 126.07 | 126.79 | 127.51 | 128.24 | 128.97 | 129.70 |

New Customer Contributions

During the Water Plan 3 period, Gippsland Water's NCC charges have reduced, on a glide-path basis, from over $1,000 per connection, to $nil per connection, in the 2017-18 financial year. For this regulatory period, Gippsland Water does not seek to reintroduce an NCC charge.

Miscellaneous Services

In addition to providing 'core' water and wastewater services, Gippsland Water provides a wide range of other services to customers. This includes undertaking new connections, providing special meter readings, conducting meter tests, providing property information statements and reviewing applications to build over easements. Gippsland Water also imposes a range of application and 'penalty' fees (such as where customers' cheques are dishonoured).

Gippsland Water has developed a schedule of miscellaneous services that reflect the more common services provided to customers.

**Table 7.10: Miscellaneous Services ($ Jan 18)**

| | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| Meter Installation (per meter) | | | | | | |
| Installation/Supply of 20mm Meter (Incl Couplings) | At cost | At cost | At cost | At cost | At cost | At cost |
| Installation/Supply of 25mm Meter (Incl Couplings) | At cost | At cost | At cost | At cost | At cost | At cost |
| Meter Assembly Fee for Pre-Tapped Properties (per meter) | | | | | | |
| Pre-tapped connection of 20mm meter (Installation of 20mm meter to pre-tapped buried water service) | At cost | At cost | At cost | At cost | At cost | At cost |
| Special Meter Reads (each) | | | | | | |
| Special meter read at the commencement of a tenancy and at | At cost | At cost | At cost | At cost | At cost | At cost |

| | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| the termination of a tenancy | | | | | | |
| Information Statements (each) | | | | | | |
| Preparation of a Property Information Statement, inclusive of a Special Meter Reading performed on settlement date | 73.83 | 73.83 | 73.83 | 73.83 | 73.83 | 73.83 |
| Application for Connection to Wastewater Main (each) | | | | | | |
| Standard residential connection into wastewater connection point | 132.05 | 132.05 | 132.05 | 132.05 | 132.05 | 132.05 |
| Minor repairs/alterations requiring PIC number | 48.90 | 48.90 | 48.90 | 48.90 | 48.90 | 48.90 |
| Small industrial/commercial connection | 173.17 | 173.17 | 173.17 | 173.17 | 173.17 | 173.17 |
| Provision of wastewater connection point to existing wastewater main by accredited pipelayer | 82.34 | 82.34 | 82.34 | 82.34 | 82.34 | 82.34 |
| Application to Build over Gippsland Water's Assets and/or Easements (each) | | | | | | |
| Fees for Application to Build over Gippsland Water's Assets and/or Easements | 32.62 | 32.62 | 32.62 | 32.62 | 32.62 | 32.62 |
| Land Development Fees | | | | | | |
| Application Fee including water supply and wastewater (each) 11-20 lots in subdivision | 619.59 | 619.59 | 619.59 | 619.59 | 619.59 | 619.59 |
| Offer Acceptance Fee including water supply and wastewater (each) 11-20 lots in subdivision | 1,377.11 | 1,377.11 | 1,377.11 | 1,377.11 | 1,377.11 | 1,377.11 |
| Non-core miscellaneous services | | | | | | |
| | At cost | At cost | At cost | At cost | At cost | At cost |

# 7.4 CUSTOMER IMPACTS – AVERAGE HOUSEHOLD BILL (EXCLUDING CPI)

Full Service Customer – Average Water Consumption

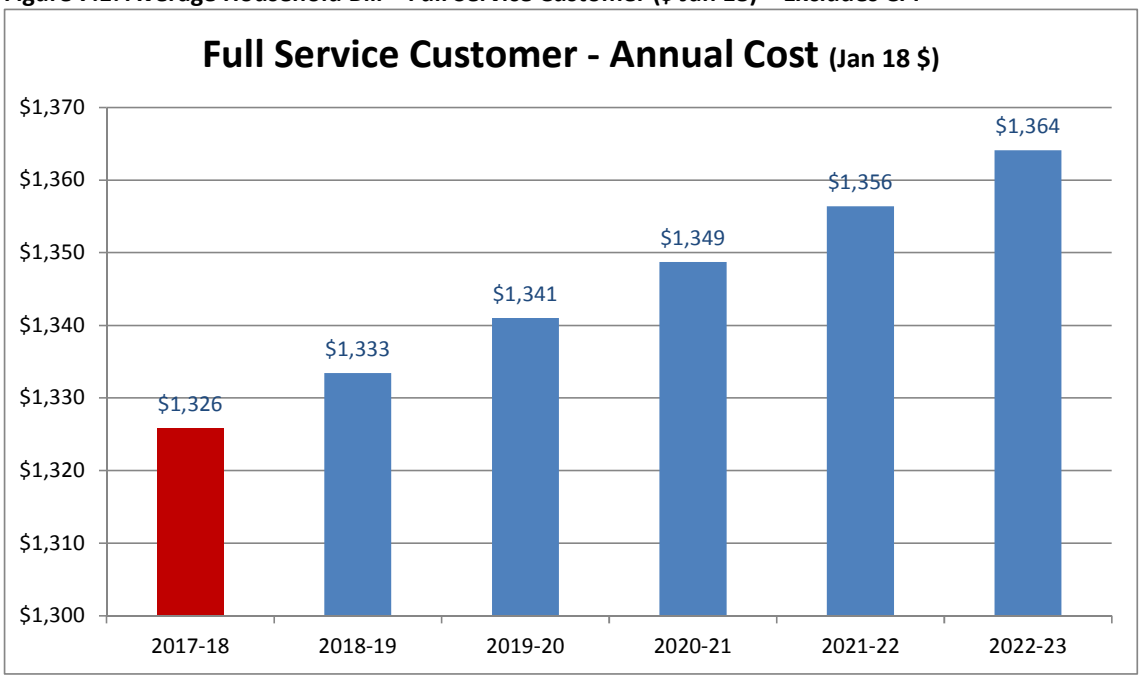
Assuming average water consumption of 168.1 kL per annum (which represents the mid-point usage during the regulatory period), table 7.11 and figure 7.1 below outline a typical household bill for a customer who receives both water and wastewater services, based on Gippsland Water's proposed average '0.57% per annum' real increase.

**Table 7.11: Average Household Bill – Full Service Customer ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| With 168.1 kL water consumption | $1,326 (i) | $1,333 | $1,341 | $1,349 | $1,356 | $1,364 |

Note (i): Excludes Government Water rebate of $36 per annum

**Figure 7.1: Average Household Bill – Full Service Customer ($ Jan 18) – Excludes CPI**




Tenant Customer – Average Water Consumption

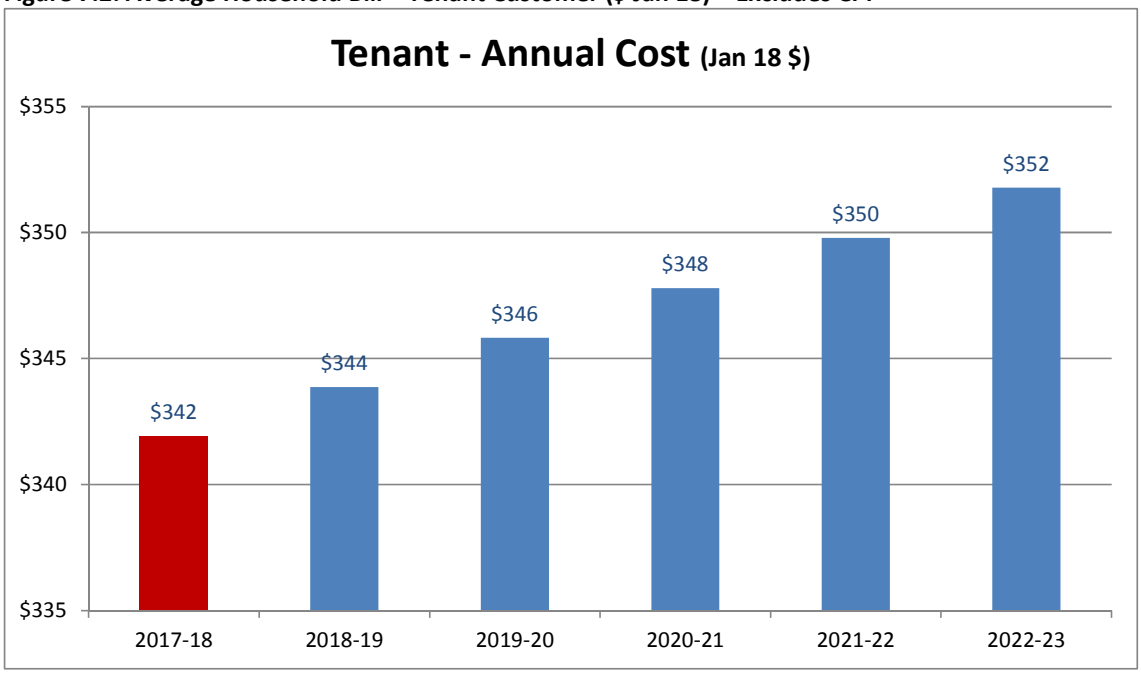
Assuming an average annual water consumption of 168.1 kL per annum (which represents the mid-point usage during the regulatory period), table 7.12 and figure 7.2 below outline a typical household bill for a customer who is a tenant, and would normally pay water volumetric charges only, based on Gippsland Water's proposed average '0.57% per annum' real increase.

**Table 7.12: Average Household Bill – Tenant Customer ($ Jan 18)**

| Type | Current | The fourth regulatory period | | | | |
|---|---|---|---|---|---|---|
| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
| With 168.1 kL water consumption | $342 (i) | $344 | $346 | $348 | $350 | $352 |

Note (i): Excludes Government Water rebate of $10 per annum

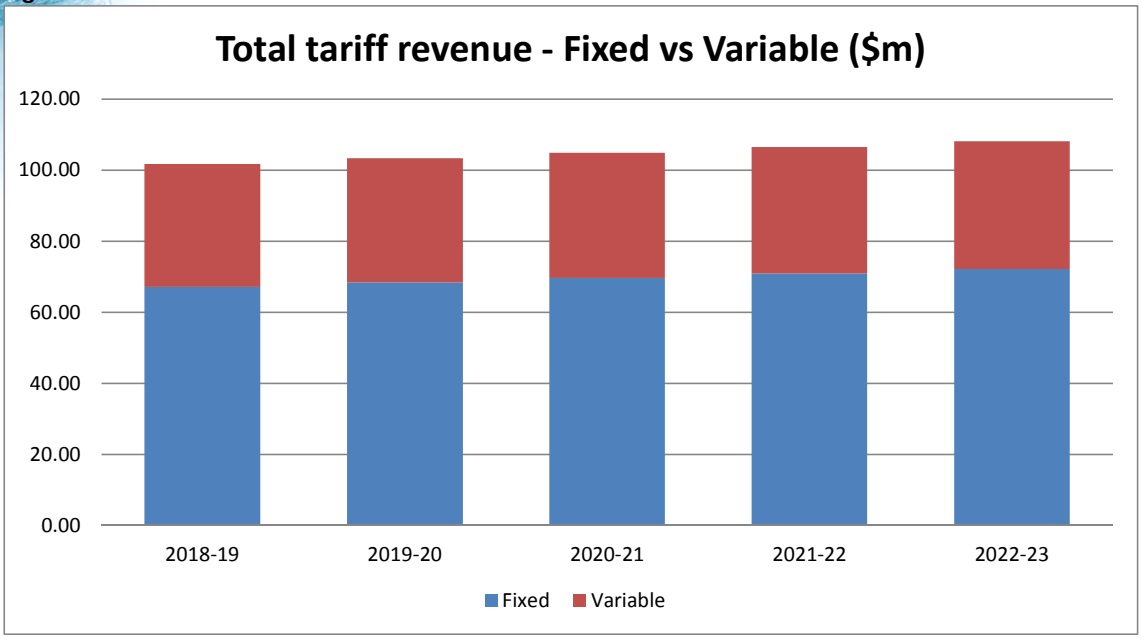
**Figure 7.2: Average Household Bill – Tenant Customer ($ Jan 18) – Excludes CPI**




## 7.5 TARIFF FLEXIBILITY

During the customer engagement undertaken by Gippsland Water since January 2016, customers have consistently raised the issue of not being able to 'control' their water and wastewater bill, given the significant fixed charges applied by Gippsland Water. As shown in figure 7.3 below, on average, Gippsland Water's total tariff revenue is split approximately 65% fixed and 35% variable.

**Figure 7.3: Fixed versus Variable Tariff Revenue**




In fact, this split varies significantly by customer group as follows –

- full service (water and wastewater) customer bills are on average approximately 26% variable,
- water service only customer bills are on average approximately 66% variable;
- while tenant bills are actually 100% variable.

Gippsland Water went to considerable lengths during the customer engagement process to consult with customers in relation to possible trials to test a range of different tariff mix options (eg: full variable to full fixed water tariffs) during the next regulatory period. This included the development of a 'pricing calculator' that allowed customers to model changes in their own water usage to see what impact these changes would have on their water bill. Perhaps not surprisingly, customers were very supportive of Gippsland Water conducting trials.

While Gippsland Water has not proposed to modify tariff structures or tariff mix as part of the price submission, it will seek to learn more about customer preferences and customer behaviours during the next regulatory period, with an aim to provide more flexibility for customers in the future.

It is important to recognise that customers were clear in their feedback on the issue of trials and tariff flexibility that the long-term financial viability of Gippsland Water should not be impacted by any move to provide more flexibility.

# 8 REVENUE REQUIREMENT

## 8.1 RETURN ON THE RAB

**ROLLING FORWARD THE REGULATORY ASSET BASE (RAB)**

The forecast RAB for the fourth regulatory period has been calculated in the following manner:

- opening RAB
- plus forecast gross capital expenditure
- less forecast customer and government contributions
- less forecast proceeds from disposal of assets
- less regulatory depreciation
- equals closing RAB

Gippsland Water's forecast RAB for each year of the fourth regulatory period is shown in Table 8.1, and assumes a closing RAB at 30 June 2017 of $652.10M.

**Table 8.1: Forecast RAB ($ Jan 18 – millions)**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Opening balance | 652.10 | 667.96 | 687.97 | 718.57 | 745.75 | 762.53 |
| Plus Gross Capex | 37.04 | 38.10 | 49.43 | 46.78 | 37.13 | 37.39 |
| Less Government Contributions | - | - | - | - | - | - |
| Less Customer Contributions | 3.62 | 0.05 | - | - | 0.10 | 4.89 |
| Less proceeds for disposals | 0.38 | 0.57 | 0.55 | 0.49 | 0.29 | 0.39 |
| Less Regulatory Depreciation | 17.18 | 17.47 | 18.27 | 19.11 | 19.96 | 20.94 |
| Closing Balance | 667.96 | 687.97 | 718.57 | 745.75 | 762.53 | 773.69 |

Forecast Gross Capital Expenditure

Gippsland Water's forecast gross capital expenditure for each year of the regulatory period is detailed in chapter 5.

Forecast Government Contributions

Gippsland Water has not forecast any government contributions towards capital projects during the fourth regulatory period.

Forecast Customer Contributions

As noted previously in this document, during the Water Plan 3 period, Gippsland Water's NCC charges have reduced, on a glide-path basis, from over $1,000 per connection, to $nil per connection, in the 2017-18 financial year. As Gippsland Water does not intend to seek an increase in the current NCC charge during this regulatory period, no NCC based revenues are included above.

The large customer contributions shown above for the 2017-18 and 2022-23 financial years represent forecast contributions in relation to capital projects constructed by Gippsland Water to service specific major customer needs (see for example the Saline Waste Outfall Pipeline – Stages 4 and 5 upgrade in chapter five).

Forecast Proceeds From Disposal of Assets

Forecast proceeds from disposal of assets represents Gippsland Water's estimated proceeds resulting from the sale of motor vehicles as part of our ongoing fleet replacement program.

Regulatory Depreciation

Regulatory depreciation comprises depreciation on existing assets and depreciation on new assets. Consistent with the approach adopted by Gippsland Water in previous regulatory periods, regulatory depreciation has been calculated using a straight line approach.

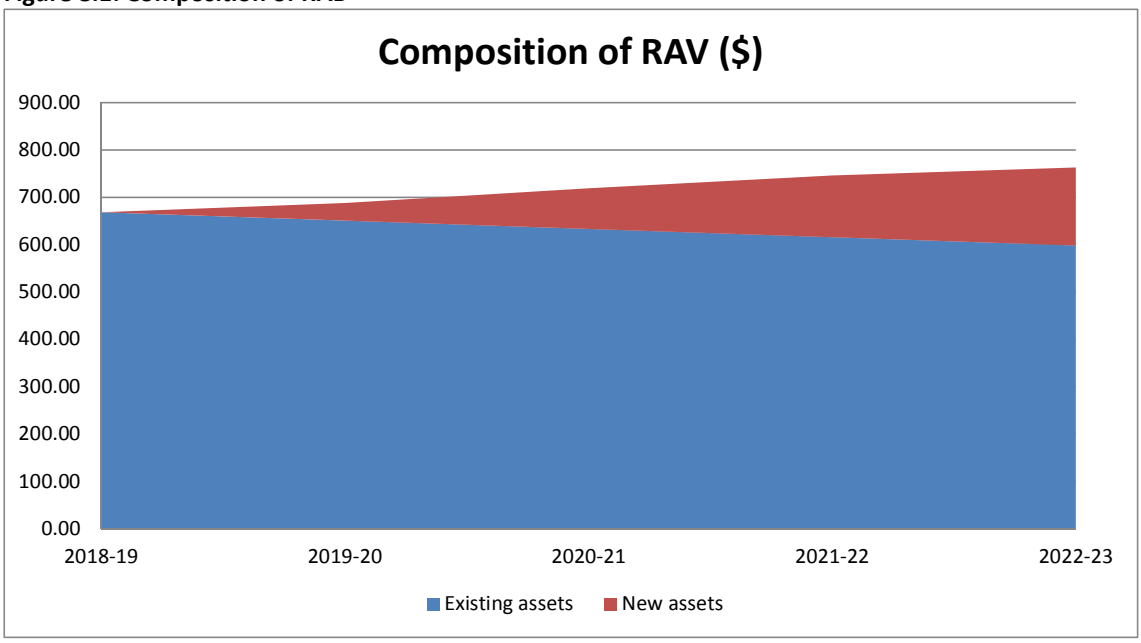
Gippsland Water has reviewed the remaining lives of existing assets against its accounting records and applied a weighted average life for all existing assets, to determine regulatory depreciation on these existing assets.

Regulatory depreciation of new assets has been calculated based upon an average life of 60 years for infrastructure related assets and 10 years for non-infrastructure assets which is again consistent with the approach adopted by Gippsland Water in previous regulatory periods.

Composition of the RAB

The composition of the RAB for the fourth regulatory period, in terms of new and existing assets, is shown in figure 8.1 below.

**Figure 8.1: Composition of RAB**



The Value of Gifted Assets

Gifted assets represent assets constructed by developers and then handed over to Gippsland Water to operate and maintain. Typically, most gifted assets comprise the reticulation systems created to service new residential developments. Gifted assets are excluded from the RAB calculations above as they are funded directly by developers during the regulatory period.

**Table 8.2: The Value of Gifted Assets ($ Jan 18 – millions)**

| | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|---|
| Gifted Asset Forecast | 6.13 | 6.13 | 6.13 | 6.13 | 6.13 | 6.13 |

## 8.2 DETERMINING GIPPSLAND WATER'S REVENUE REQUIREMENT

Detailed in Table 8.2 is an overview of the revenue requirement for Gippsland Water to meet its obligations and deliver services during the regulatory period. The revenue requirement consists of several components, namely:

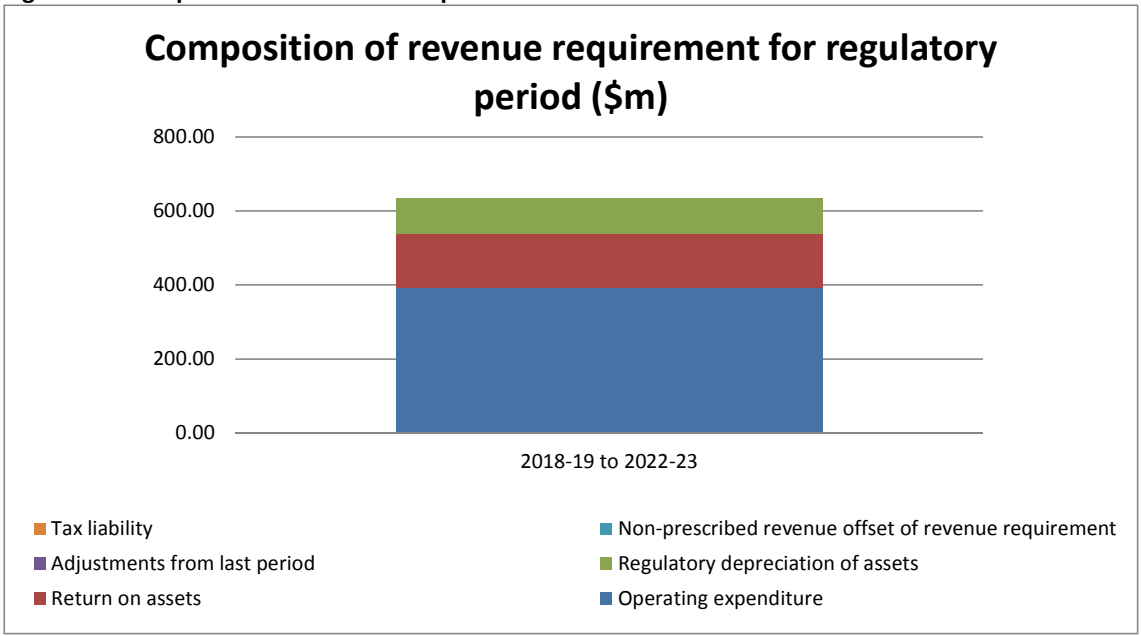
- operating expenditure – representing the expenditure outlined in chapter 4 that Gippsland Water believes should be incurred to ensure the delivery of obligations during this period;
- return on assets to June 2018 - representing a cost of capital return, based on the agreed regulatory return, on pre-existing assets, whether those assets were constructed during the first, second or third regulatory period, or before the commencement of regulation by the ESC in 2005/06;
- regulatory depreciation of assets to June 2018 - representing the costs associated with the use, wear and tear of pre-existing assets;
- return on new assets - representing a cost of capital return, based on the agreed regulatory return, on assets to be constructed during this regulatory period, the details of which are outlined in chapter 5; and
- regulatory depreciation on new assets - representing the costs associated with the use, wear and tear of new assets brought into service during this regulatory period.

**Table 8.3: Revenue Requirement by Year – Fourth Regulatory Period ($ Jan 18 – millions)**

| | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 |
|---|---|---|---|---|---|
| Operating Expenditure | 78.62 | 78.33 | 77.48 | 78.28 | 79.37 |
| Return on assets to 30/6/18 | 26.37 | 25.66 | 24.96 | 24.26 | 23.56 |
| Regulatory depreciation of assets to 30/6/18 | 17.07 | 17.07 | 17.07 | 17.07 | 17.07 |
| Return on new assets | 0.75 | 2.47 | 4.33 | 5.91 | 7.16 |
| Regulatory depreciation on new assets | 0.40 | 1.21 | 2.05 | 2.89 | 3.88 |
| Total Revenue Requirement | 123.21 | 124.74 | 125.88 | 128.40 | 131.04 |

Gippsland Water's total revenue requirement increases from a base of $123.21M in 2018/19 to total of $131.04M in 2022/23. This increase of $7.83M from the 2018/19 year stems from a $0.75M increase in operational expenditure over the fourth regulatory period combined with a $7.08M increase resulting from movements in new and existing assets (return on assets and regulatory depreciation). Figure 8.2 below displays the composition of the revenue requirement.

**Figure 8.2: Composition of Revenue Requirement**




## 8.3 PREMO RATING

The regulatory return reflected in prices has been established by Gippsland Water via the PREMO incentive mechanism, which links the regulatory return to the level of ambition proposed in this price submission. Appendix 4 outlines the ESC's scoring system for developing a PREMO rating.

Gippsland Water has self-assessed the level of ambition in this price submission as 'standard', as outlined in table 8.4 below. This is Gippsland Water's best offer and represents an honest assessment of overall PREMO rating, after consideration of the self-rating process conducted over the four individual elements (outcomes, engagement, management and risk).

Gippsland Water's detailed self-assessment outcomes have been documented, and are available on request, should the ESC seek transparent and credible evidence to justify the ratings.

**Table 8.4: Gippsland Water – PREMO Self-rating Assessment**

| PREMO Element | GW self-assessment |
|---|---|
| Risk | 2.75 |
| Engagement | 2.75 |
| Management | 2.5 |
| Outcomes | 2.75 |
| **Total Score** | **10.75 or 'Standard'** |

Based on this assessment, Gippsland Water has included a real per annum return on equity rate of 4.5 percent, in accordance with the regulated return model outlined by the ESC.

## 8.4 TAX ALLOWANCE

Gippsland Water became subject to the National Tax Equivalent Regime from July 2002. Gippsland Water adopts the liability method of Tax Effect Accounting in accordance with the requirements of accounting standards.

While Gippsland Water expects to generate operating profits during the fourth regulatory period, Gippsland Water has not forecast tax obligations in the fourth regulatory period. Gippsland Water's current tax losses will shield the corporation from the requirement to pay tax during this period.

## 8.5 NON-PRESCRIBED SERVICES

The Water Industry Regulatory Order (WIRO) outlines declared services in respect of which the ESC has the power to regulate standards and conditions of service. The WIRO also outlines prescribed services in respect of which the ESC has the power to regulate prices. Gippsland Water's activities that fall outside the scope of the WIRO are outlined in more detail below.

The operating and capital expenditures in, and revenues generated by these non-prescribed activities are excluded from the expenditures and revenues outlined in this price submission.

Soil and Organic Recycling Facility (SORF)

In accordance with the *Water Act 1989*, Gippsland Water operates a prescribed (industrial) waste treatment and storage facility at its Dutson Downs property. The facility is approved by the EPA for this purpose due mainly to its large buffer distances, its thick clay overlays and its well-developed management practices. The 356 hectare site was initially established in order to dispose of industrial wastes utilising landfill technology.

The SORF has been designed to treat and recycle soil and solid organic material using advanced in-vessel composting technology. Based on proven methods, the SORF has been operational for several years, producing compost that is fully compliant to the Australian standard for a market suitable soil reconditioner.

In addition, a liquids processing operation treats and recycles organic liquid wastes using in-vessel separation technology (tank farm). The liquid organic wastes, treated in the liquids processing operation will allow the extraction of products of value prior to dewatering and incorporation into the composting process.

**Table 8.6: SORF Revenue and Expenditure Summary ($ Jan 18 – millions)**

| Activity | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Revenue | 8.35 | 7.56 | 7.56 | 7.56 | 7.68 | 38.71 |
| Operational Expenditure | 4.90 | 4.80 | 4.93 | 4.94 | 5.07 | 24.64 |
| Capital Expenditure | 2.79 | 1.93 | 1.38 | 2.52 | 2.09 | 10.71 |

Agribusiness

The Gippsland Water Agribusiness is operated across twelve broad-acre land assets (10,000 hectares) owned or vested in the corporation. These lands support a large mixed farming enterprise, encompassing livestock, plantation, grain and fodder. These form integrated components of the land management business, with each enterprise providing support services to Gippsland Water in the provision of sustainable water and wastewater services to the region.

Gippsland Water's long term Agribusiness plan includes among other things:

- development of a robust agribusiness built around holistic farming practices focusing on sustainability and flexibility providing greater profitability;
- building a livestock enterprise and management systems to match stocking rate to carrying capacity, minimising climatic risk;
- continuing to develop sustainable fodder and grain cropping enterprises while maintaining the ability to capitalise on ever changing market conditions; and
- weed management and land reclamation projects including removal of noxious weeds and the levelling of previously excavated spiny rush earth stockpiles.

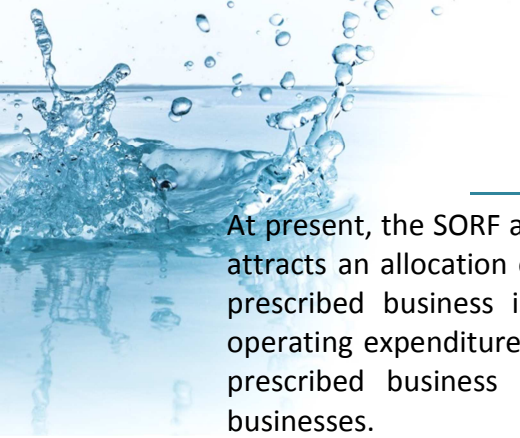
These initiatives seek to develop a sustainable business that actively manages ongoing climatic risk but maintains the flexibility to capitalise on changing market conditions. Livestock and cropping activities both remain important to the business but the mix of these will need to have the ability to change at short notice to capitalise on market opportunities and deliver consistent profitability.

**Table 8.7: Agribusiness Revenue and Expenditure Summary ($ Jan 18 – millions)**

| Activity | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | Total |
|---|---|---|---|---|---|---|
| Revenue | 3.54 | 4.25 | 3.87 | 5.45 | 3.87 | 20.98 |
| Operational Expenditure | 3.39 | 3.55 | 3.61 | 3.58 | 3.64 | 17.77 |
| Capital Expenditure | 0.67 | 0.80 | 0.54 | 0.42 | 0.93 | 3.36 |

The Allocation of Shared Costs Between Prescribed and Non-prescribed Services

Gippsland Water allocates corporate costs across the SORF and the Agribusiness activities. Allocations are made on the basis that each of the non-prescribed activities is an independent stand-alone business.



At present, the SORF attracts an allocation of $170,000 per annum, while Agribusiness attracts an allocation of $130,000 per annum. The impact of these allocations to the prescribed business is to reduce the total value of corporate costs included as operating expenditure in the revenue requirement. In other words, customers of the prescribed business are not subsidising corporate costs of the non-prescribed businesses.

# 9 MANAGING RISK

## 9.1 SIGNIFICANT RISKS THAT MAY IMPACT ON CUSTOMER PRICES

Gippsland Water has identified a number of risks that may impact on customer prices during the next regulatory period. These risks are outlined below.

Closure of Major Customers

As noted in the 'demand' section of this submission, Gippsland Water has seen the closure of the Hazelwood Power Station (our second largest customer) in recent months (end of March 2017). The Power Station / mine complex consumed more than 11GL of water per annum and was a significant source of revenue for Gippsland Water.

Engie–Hazelwood are currently managing the demolition and rehabilitation of the complex. Significantly, our Plan assumes that Engie-Hazelwood will continue to be a reduced yet significant revenue stream (comprising both fixed and volumetric revenues) for the duration of this Plan, well beyond the current contract expiry date of mid-2021. This is a bold inclusion as it presents a significant risk to our forecast revenues over the regulatory period.

In addition, with uncertainty continuing to surround the longevity of the brown coal based local power industry, Gippsland Water also faces significant risks in relation to the revenues included in our Plan for our remaining power industry based major customers. In total, when combined with the revenues for Engie–Hazelwood, our Plan includes revenues of more than $4M per annum from the local power industry, much of which is derived from the two most 'at-risk' power stations.

Forecast Connections Growth

As noted in the 'demand' section of this submission, Gippsland Water has evidenced a significant slowdown in recent developer activity within the Latrobe Valley region coinciding with the announcement of major customer closures. For the first time in many years, Gippsland Water failed to declare any new serviced properties in the Latrobe Valley region for both the first and second quarters of the 2017 calendar year.

Gippsland Water has updated all connection forecast models with actual data for the period to 30 June 2017. This data indicates that a slowdown in the rate of residential connections occurred for the financial year to 30 June 2017. While baseline data has been adjusted for actual connections, Gippsland Water has elected not to amend forecasts for future annual residential connections growth.

Gippsland Water has also chosen to take an optimistic view of future major customer viability, underlying economic activity and connections growth. Rather than limit forecast growth for our four main Latrobe Valley towns (Churchill, Moe, Morwell and Newborough) our Plan assumes total growth of more than 80 connections per annum for these towns, for the duration of the regulatory period.

Given the economic uncertainty in the region at present, these assumptions present another significant risk to our forecast revenues over the regulatory period.

Environmental Risk Assessments for Wastewater Treatment Plants

The water industry has sought guidance from the EPA in relation to the requirement to conduct environmental risk assessments at WWTP's during the fourth regulatory period. The EPA have not yet provided final advice as to the extent of the environmental risk assessment requirements for each of our WWTP's.

A review of the matter continues to occur with the EPA and the water industry. Depending on the final requirements, Gippsland Water may be required to fund significant costs which have not been allowed for in our Plan. Estimated costs for a full environmental risk assessment range from $0.01M to $0.10M per site, depending on the complexity of the risk assessment required. Gippsland Water has 14 sites which may require a full environmental risk assessment.

Securing a Bulk Entitlement for the Warragul/Drouin Water Supply System

Gippsland Water's water systems now provide high supply reliability with one exception, the Tarago System, in particular the part of the Tarago System that supplies Warragul/Drouin. Gippsland Water's bulk entitlement for this system only provides access to run-of-river flows in the west branch of the Tarago River with no access to storage in Tarago Reservoir. Our 2017 Urban Water strategy identified the 2018-23 period as the time to take action to secure a long term solution for the Warragul/Drouin system. A decision on the most appropriate action, or suite of actions is yet to be made. Consequently, this Plan does not contain any funding for the purchase of any additional water entitlement.

Contingency for Major Events

Gippsland Water is required to fund responses to a range of major events, such as managing emergencies (both bushfires and floods), significant failures of infrastructure and even the purchase of additional water during a period of drought. Given the level of uncertainty about both the likelihood and consequence of these types of events, Gippsland Water has not included any funding for major events in the fourth regulatory period.

Unfunded Superannuation Liability Contributions

In June 2012, Gippsland Water was required to record a liability $4.6M associated with the Local Authorities Superannuation Fund Defined Benefit Plan. This was the second call made during the second regulatory period; and was Gippsland Water's share of a total unfunded liability of $453M, net of contributions tax.

In accordance with the *Superannuation Industry (Supervision) Act 1993*, actuarial investigations are required at intervals of not more than three years. The fund trustee has advised that future experience may be better or worse than expected. If experience is worse than expected, then the trustee is likely to require additional top-up contributions. Gippsland Water has not provided for any top-up contributions in the fourth regulatory period.

## 9.2 THE ALLOCATION OF RISK IN OUR PLAN

Gippsland Water has heeded the ESC's request for water corporations to consider the allocation of risk between the corporation and its customers, as part of the development of our Plan. In response, Gippsland Water adopted two significant actions:

- firstly, Gippsland Water sought external expertise to ensure that financial estimates for major capital projects were robust;
    - every major capital project has been subjected to review by an external party;
    - this action was taken to ensure that the estimates for capital projects were robust, and did not overstate the total value of the project;
- secondly, in recognition that the timing for construction of shared assets (with Developers) is inherently volatile, Gippsland Water has elected to reduce the value of all shared asset capital projects to 50% of their forecast total project cost. This is a very different approach to previous regulatory periods and is a genuine attempt to reallocate some of this risk away from customers.

## 9.3 ADJUSTING PRICES

Gippsland Water has identified a number of significant risks that may have a major impact on Gippsland Water's revenues during the fourth regulatory period.

In particular, Gippsland Water considers that the risks in relation to power industry based revenues, and the impact of any economic slowdown on growth within the region (and more particularly the Latrobe Valley), to be of such significance that both issues warrant inclusion as uncertain events.

Gippsland Water proposes to work with the ESC on a price adjustment mechanism should either of the issues identified have a significant impact on revenues during the fourth regulatory period.

As part of the transition to a 'trailing average' approach to estimating the cost of debt the ESC asked water businesses to propose a price adjustment mechanism (including price control formulas) that allows for prices to adjust on an annual basis to reflect movements in the cost of debt.

Gippsland Water notes that the price mechanism process should not produce significant movements in the regulatory rate of return. Gippsland Water proposes to work with the ESC on a price adjustment mechanism that is applicable across the industry, as part of the 2018 Price Review Process.

# 10 APPENDICES

# APPENDIX 1 BOARD ASSURANCE

As at the 26th of September 2017, the directors of Central Gippsland Region Water Corporation (Gippsland Water), having made such reasonable inquiries of management as we considered necessary, or having satisfied ourselves that we have no query, attest that, to the best of our knowledge, for the purpose of proposing prices for the Essential Services Commission's 2018 Water Price Review:

- information and documentation provided in the price submission and relied upon to support Gippsland Water's price submission is reasonably based, complete and accurate in all material aspects;
- financial and demand forecasts are the business's best estimates, and supporting information is available to justify the assumptions and methodologies used; and
- the price submission satisfies the requirements of the 2018 Water Price Review Guidance paper issued by the Essential Services Commission in all material respects.

Therese Ryan
Chair
Central Gippsland Region Water Corporation

## APPENDIX 2 CUSTOMER FEEDBACK – PHASES ONE, TWO, THREE

| Phase One testing | | Phase Two testing | | Phase Three testing | |
|---|---|---|---|---|---|
| **Customer outcomes** | **Insights from community engagement** | **Customer outcomes** | **Insights from community engagement** | **Customer values** | **Customer Experience** |
| Safe and secure drinking water | Critical and mandatory for customers. Customers also valued the quality and purity of Gippsland Water and the region. Reliability and dependability of the service needs to be captured. | Safe and dependable | This is Gippsland Water's reason for being. | Do your job well | Provide safe, pure drinking water, always<br>Remove and treat wastewater |
| Dependable services | Could be collapsed into the area of safe and secure drinking water. Reference to wastewater was important and missing from original list. | Maintain and minimise disruption | Important expectation. Too wordy. No interest in service reduction even if it meant cheaper bills. 'Keep me informed' is important but belongs in a separate communications section. | | Invest wisely to maintain and improve the integrity of the system<br>Respond to needs and deal with interruptions promptly |
| Low effort and convenient services | 'Low effort' was not well received and customers preferred 'easy'.An important area | Be responsive and easy to communicate with | Very good and all were valued by customers but could be further simplified. | Be easy to deal with | Keep me informed in ways that suit me<br>Be able to answer and resolve |

| Phase One testing | | Phase Two testing | | Phase Three testing | |
|---|---|---|---|---|---|
| **Customer outcomes** | **Insights from community engagement** | **Customer outcomes** | **Insights from community engagement** | **Customer values** | **Customer Experience** |
| | related to communications. | | | | |
| Information and advice | Could be collapsed into Low Effort and Convenient Services, since both were about communications. | | | | Be easy to understand |
| Affordable bills | Agreed about affordable bills but there was a bigger component here around financial management and spending wisely to maintain services. | Be value focussed and cost conscious | Well accepted, but too long with too many ideas. Paying for those who struggle financially was odd and rejected. Investing in maintenance and improvements could fit under 'dependable services'. 'Investment' in system maintenance and improvement could be moved. | Be affordable and fair | Give me water at a fair price<br>Make allowances for those who struggle to pay their bills |
| Community involvement | Important to include but not critical. Lack of | Be involved | Yes, but not if it adds to cost of service provision | Be involved | Be local |

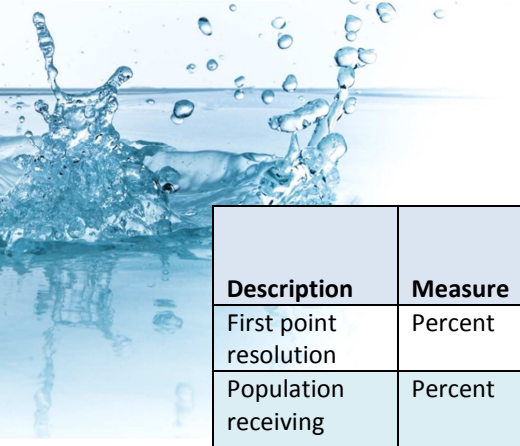
| Phase One testing | | Phase Two testing | | Phase Three testing | |
|---|---|---|---|---|---|
| **Customer outcomes** | **Insights from community engagement** | **Customer outcomes** | **Insights from community engagement** | **Customer values** | **Customer Experience** |
| | awareness of current activity here. | | overall. Also needs to be in areas that maximize value for the widest possible audience. | | Be engaged in our community |
| Two areas of value were missing: environment and waste water management | | Prepare for change | Protect this precious resource: Look after the environment and water resources. | Prepare and protect | Be prepared for population growth |
| | | | | | Secure our precious resource and be prepared for droughts, floods, fires and disasters |
| | | | | | Conserve and preserve the natural environment from which we take and return water |

# APPENDIX 3 SERVICE STANDARDS

During the development of our Plan, discussions with ESC staff have clearly identified a number of mandatory service standards that the business is required to set targets for, as set out in section 9.2 of the ESC's Customer Service Code.

A complete list of all service standards proposed by Gippsland Water for the fourth regulatory period is set out below.

| Description | Measure | GW KPI # | Current Target | Performance Last 5 yrs | WP4 Proposal | ESC Mandatory Standard | Report to Customers |
|---|---|---|---|---|---|---|---|
| Average time taken to attend bursts and leaks (priority one) | Minutes | KPI #2 | 35.0 | 28.7 | 35.0 | Yes | No |
| Unplanned water supply interruptions restored within 5 hours (percent) | Percent | KPI #5 | 98.0 | 98.7 | 98.0 | Yes | Yes |
| Planned water supply interruptions restored within 5 hours (percent) | Percent | KPI #6 | 90.0 | 97.3 | 90.0 | Yes | No |
| Average time to attend sewerage spills and blockages | Minutes | KPI #16 | 40.0 | 30.9 | 40.0 | Yes | No |
| Average time to rectify a sewer blockage | Minutes | KPI #17 | 95.0 | 90.8 | 95.0 | Yes | Yes |
| Sewer spills contained within 5 hours | Percent | KPI #18 | 98.0 | 99.0 | 98.0 | Yes | Yes |
| Customers receiving more than 3 sewer blockages in the year | Number | KPI #19 | 0.00 | 0.00 | 0.00 | Yes | No |
| Complaints to Energy and Water Ombudsman Victoria | Per 1000 Customers | KPI #20 | 0.08 | 0.03 | 0.03 | No | Yes |





| Description | Measure | GW KPI # | Current Target | Performance Last 5 yrs | WP4 Proposal | ESC Mandatory Standard | Report to Customers |
|---|---|---|---|---|---|---|---|
| First point resolution | Percent | KPI #21a | na | na | 88.0 | No | Yes |
| Population receiving water meeting e.coli standards | Percent | KPI #22 | 100.0 | 97.7 | 100.0 | No | Yes |
| Total co2 equivalent emissions | Tonnes - 000s | KPI #25 | 70.0 | 50.3 | Various | No | Yes |
| Biosolids re-use | Percent | KPI #27 | 100 | 100 | 100 | No | Yes |

# APPENDIX 4 ESC PREMO RATING TABLE

This table has been extracted from the ESC's Guidance Paper and outlines how an aggregated score across the four PREMO elements to be rated leads to a final PREMO rating.

| Rating | Possible scores for each element of PREMO | Aggregated score for overall PREMO rating |
|---|---|---|
| Leading | 4 Very confident the element is 'Leading' | 15.5 to 16 |
| | 3.75 Confident the element is 'Leading' | |
| Advanced | 3.5 Very confident the element is 'Advanced' | 11.5 to 15.25 |
| | 3.25 Confident the element is 'Advanced' | |
| | 3 Satisfied the element is 'Advanced' | |
| | 2.75 Reasonably confident the element is 'Advanced' | |
| Standard | 2.5 Very confident the element is 'Standard' | 7.5 to 11.25 |
| | 2.25 Confident the element is 'Standard' | |
| | 2 Satisfied the element is 'Standard' | |
| | 1.75 Reasonably confident the element is 'Standard' | |
| Basic | 1.5 Very confident the element is 'Basic' | 4 to 7.25 |
| | 1.25 Confident the element is 'Basic' | |
| | 1 Satisfied the element is 'Basic' | |

# APPENDIX 5 KEY REFERENCES

Gippsland Water has made reference throughout this Plan to a number of key documents that can be provided on request. These documents are listed below, by chapter.

| Chapter | Description | GW reference |
|---|---|---|
| 2 | Engagement Report – Insync (GW Phase One) | COR/17/35189 |
| 2 | Engagement Report – Redhanded (GW Phase Two) | COR/17/33808 |
| 2-3 | Engagement Report – Redhanded (GW Phase Three) | COR/17/39290 |
| 5 | Business Case for the Drouin WWTP | COR/17/57818 |
| 5 | Strategic Assessments for major capital projects and programs | Various |
| 6 | Residential Demand Forecast by Ernst and Young (Simulait Model) | COR/17/66826 |
| 8 | Gippsland Water's PREMO self-assessment | COR/17/66827 |

# APPENDIX 6 ABBREVIATIONS

| | |
|---|---|
| CPI | Consumer Price Index |
| EPA | Environment Protection Authority |
| ESC | Essential Services Commission |
| GL | Gigalitre |
| GSL | Guaranteed Service Level |
| GWF | Gippsland Water Factory |
| IAP2 | International Association for Public Participation |
| ISD | Intelligent Software Design Pty. Ltd. |
| kL | Kilolitre |
| KPI | Key Performance Indicator |
| NCC | New Customer Contribution |
| PIC | Plumbing Inspection Certificate |
| PREMO | PREMO Assessment Tool |
| QBTW | Quality Based Trade Waste |
| RAB | Regulatory Asset Base |
| ROS | Regional Outfall System |
| SORF | Soils and Organics Recycling Facility |
| VIF | Victoria In Future |
| WIRO | Water Industry Regulatory Order |
| WTP | Water Treatment Plant |
| WWTP | Wastewater Treatment Plant |