Queensland Competition Authority

Final report

# Gladstone Area Water Board price monitoring 2020–25 Part B: Accumulated under-recovery

**May 2020**

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# Contents

# 1 INTRODUCTION

Gladstone Area Water Board (GAWB) has been charging prices that have not recovered the full prudent and efficient costs of providing water. The balance of revenue that GAWB has not recovered has grown in each regulatory period due to additional under-recoveries and the compounding of the under-recovery balance at the weighted average cost of capital (WACC) applying in each period.

We have been directed by the Treasurer[1] to provide advice on measures to prevent the further accumulation of GAWB's under-recovery, reduce the existing $124.7 million under-recovery balance and manage the impact of these measures on customers. We have assessed that 19 per cent ($23.1 million) of that balance relates to the cost of raising Awoonga Dam[2], while 81 per cent ($101.6 million) is the accumulated under-recovery of other ongoing costs.[3] Our advice, taking into account GAWB's proposed approach and stakeholder submissions, is to:

- prevent any further accumulation of the under-recovery—GAWB should implement price smoothing over five years (starting 1 July 2020), instead of the 20-year period previously applied
- reduce the existing under-recovery balance in the following way:
  - Existing and future customers should pay for the under-recovery balance associated with raising Awoonga Dam (i.e. efficient spare capacity). To this end, GAWB could capitalise the under-recovery associated with raising the dam and recoup this balance through GAWB's prices.
  - Existing customers should pay for the under-recovery balance not associated with raising Awoonga Dam. To this end, GAWB and its customers should negotiate the repayment method (e.g. an annuity of an agreed term or a lump-sum upfront payment, leaving the choice of the financing arrangements to the customer). If negotiation fails, we consider that appropriate default repayment terms could include annuity repayment terms for industrial and Gladstone Regional Council (council) customers of 30 and 100 years respectively and annuity repayments that reflect the future cost of debt.

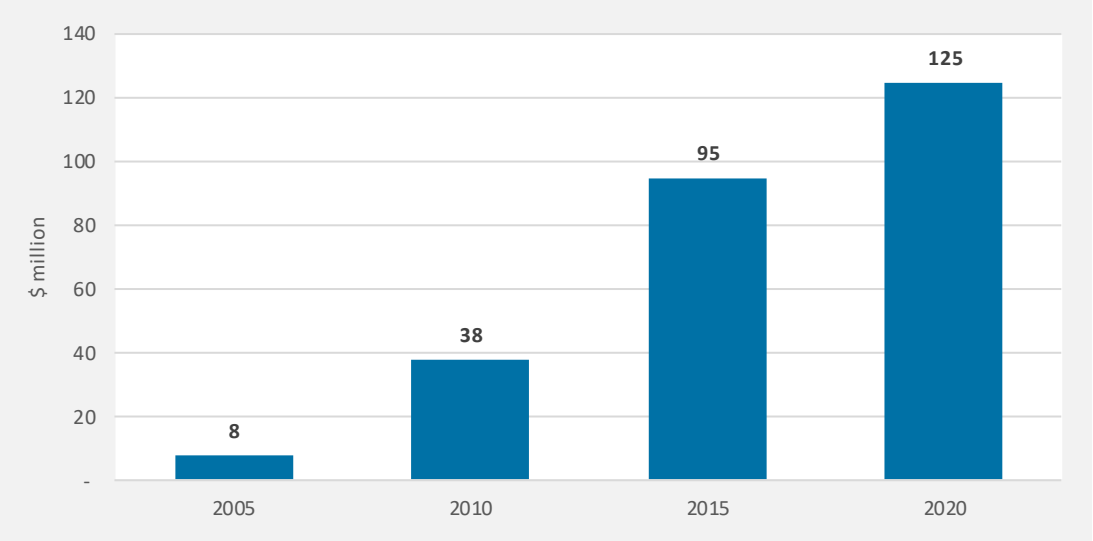
We consider our advice balances the interests of GAWB and its customers. The impact on customers would be on average 35.5 per cent lower relative to GAWB's proposed approach to recoup its under-recovery (on a per annum basis), while GAWB would still be able to recoup its prudent and efficient accumulated under-recovered balance.

[1] This report has been prepared during the terms of two Treasurers. References to 'the Treasurer' in this report apply to the actions of either or both Treasurers, as applicable.
[2] The Awoonga Dam wall raising was commissioned in 2001 and approved by the QCA for inclusion in GAWB's regulatory asset base in 2002.
[3] The breakdown of the under-recovery is discussed in more detail in section 4.1.

## 1.1 Magnitude of GAWB's revenue under-recovery

Each GAWB pricing review has seen a significant increase in the accumulated under-recovery balance (Figure 1).

**Figure 1 Accumulated under-recovery balance**




*Source: QCA calculations*

If GAWB retains its current pricing approach, its revenue under-recovery will continue to accumulate and cause a significant price shock to its customers at some stage in the future if GAWB seeks to recover this growing amount. Indeed, GAWB's under-recovery balance of $124.7 million is more than double our estimated 2019–20 revenue requirement for GAWB of $56.3 million.[4]

## 1.2 GAWB's under-recovery proposal

GAWB's pricing proposal to address the accumulation of revenue under-recoveries reflects its interpretation of the Directions. GAWB proposed a five-year price smoothing approach, rather than a 20-year smoothing period (with under-recoveries included in revenues) that had been used in the past. GAWB further proposed to exclude $124.7 million of under-recovered revenues from the building block calculation of allowable revenue for the 2020–25 regulatory period. Instead, it proposed to recoup these under-recovered revenues via a separate annuity[5] as a separate charge on customers' bills.

GAWB determined the amount of the under-recovery and repayment amounts (annuities) for each customer (Table 1). While some of GAWB's customers would receive a refund, several customers would face a sizable annuity payment.

[4] QCA, *Gladstone Area Water Board Price Monitoring 2015–20*, final report, May 2015, p. 76.
[5] A fixed sum of money paid to someone each year for a specified term.

**Table 1 GAWB's proposed under-recoveries and annuities by customer**

| Customer | *Repayment amount in year 2021 ($)* | *Repayment amount in year 2023[b] ($)* | *Annuity based on repayment amount in year 2023 ($)* | *Annuity term* |
|---|---|---|---|---|
| A | | | | |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |
| F | | | | |
| G | | | | |
| H | | | | |
| I | | | | |
| J | | | | |
| K | | | | |
| L | | | | |
| M | | | | |
| N | | | | |
| O | | | | |
| P | | | | |
| Q | | | | |
| R | | | | |
| S | | | | |
| T | | | | |
| U | | | | |
| Unallocated[a] | | | | |
| **Total** | **124,693,021** | **136,350,384** | n/a | n/a |

*a Amounts attributable to customers that no longer take supplied water or have a GAWB connection.*
*b GAWB proposed that the payments commence in 2022–23.*
*Note: Totals may not add due to rounding.*
*Source: GAWB calculations. Appendix A details how GAWB calculated its proposed annuities.*

## Transparency

Given the scale of the under-recovery—the average per customer is more than $5 million—it is appropriate that customers understand how their respective liabilities were determined. They should know not just what they have to pay, but why they are being asked to pay that amount. However, stakeholders have complained that GAWB has not been sufficiently transparent in this regard.

Various stakeholders, including the council, ConocoPhillips, CS Energy and Callide Power Management, said they did not have enough information to understand how their under-recovery liability had been calculated or allocated. ConocoPhillips said this information needed to be provided to customers.[6]

[6] GRC, sub. 15, p. 6; ConocoPhillips, sub. 16, p. 2; sub. 38, p. 1; CS Energy, sub. 22, p. 1; Callide Power Management, sub. 17, p. 6.

We have sought in this under-recovery report, and other parts of our price monitoring review, to increase the amount of information available to GAWB's customers. The need for greater transparency applies not just to this investigation, but also to future investigations, and to GAWB's day-to-day operations. We discuss the need for greater transparency in more detail in Part A of this final report (see Chapter 11), and provide more information about the under-recovery in Appendix A of this part (Part B).

# 2 REGULATORY FRAMEWORK AND APPROACH

## 2.1 The Treasurer's Directions and GAWB's proposal

In accordance with the referral and direction notice issued by the Queensland Treasurer on 28 June 2019 (the 'Directions'), we have been asked to provide advice on measures that:

- prevent the further accumulation of GAWB's under-recovered revenue[7]
- reduce GAWB's current accumulated under-recovery balance[8]
- manage the impact on customers of any proposed measures in relation to GAWB's under-recovered revenue.[9]

The Directions do not prescribe how we should provide our advice and whether we should simply explore options or put forward a detailed solution.

GAWB, however, chose to put forward a methodology to address the under-recovery as part of its proposal for the pricing practices for 2020–25. We consider GAWB's proposed methodology constitutes relevant information, which should be considered as part of this investigation. GAWB has access to all the necessary information to analyse the under-recovery and has financial incentives to implement appropriate measures.

We therefore use GAWB's proposal as a starting point for our advice on the accumulated under-recovery. In addition, we released relevant information to individual customers regarding GAWB's proposal and provided an additional period for stakeholder comments. Considering stakeholders' comments and our own analysis, the advice contained in this report goes beyond GAWB's proposal in trying to mitigate customer impacts and identify an appropriate way forward.

While not explicitly stated, we understand the Directions were intended to require us to consider continuing the 20-year price smoothing approach (section 1.1(d) of the Directions). However, this is not how GAWB chose to develop its pricing proposal. As such, the data required to estimate prices using a 20-year smoothing approach was not provided. Notwithstanding this constraint, we consider maintaining the 20-year price smoothing approach would lead to the further rapid accumulation of under-recovered revenue, which would be an increasingly difficult problem to resolve in the future. Therefore, we have formed the view that this approach is no longer appropriate and did not request 20-year data from GAWB. In forming our advice on the measures outlined in section 1.3 in the Directions, we considered GAWB's proposal represented a sensible starting position.

Our approach is outlined in more detail in Chapter 2 (of Part A).

[7] Referral and direction notice, section B(1.3)(a).
[8] Referral and direction notice, section B(1.3)(b).
[9] Referral and direction notice, section B(1.3)(c).

## 2.2 Legal framework

In delivering our advice, we have had regard to the Directions, as well as the matters listed in s. 26 of the QCA Act, which include:

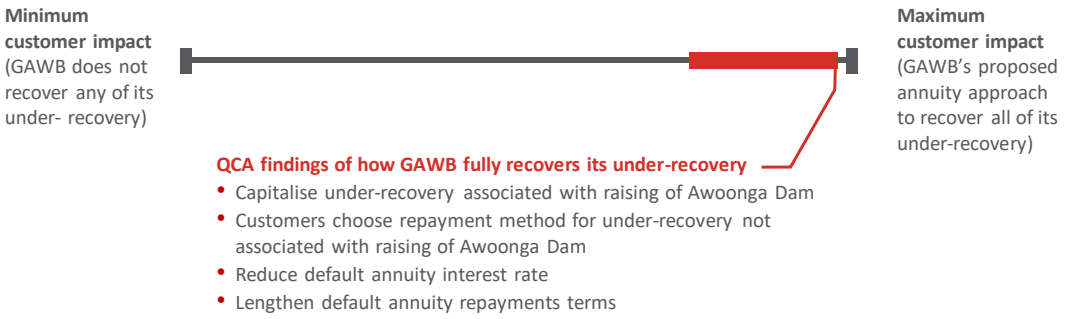
- economic or efficiency factors, including the cost of providing the goods or services in an efficient way, the need for efficient resource allocation, and the protection of consumers from abuses of monopoly power[10]
- non-economic factors, including social welfare and equity considerations, economic and regional development issues, demand management, the availability of goods and services to consumers and the social and environmental impacts of pricing practices[11]
- any other matters we consider appropriate in undertaking our investigation.[12]

We have given priority to economic efficiency considerations. Prices that reflect efficient costs promote efficient resource allocation and help protect consumers from abuses of monopoly power. Economic efficiency promotes the overall public interest, while social and non-economic objectives are best addressed by other government policies.

## 2.3 Options to address the under-recovery

We have identified options that would prevent the further accumulation of GAWB's under-recovery and allow GAWB to deal with the current under-recovery balance. These options have different impacts on GAWB and its customers (Figure 2).

**Figure 2 Spectrum of options and extent of revenue recovery[13]**



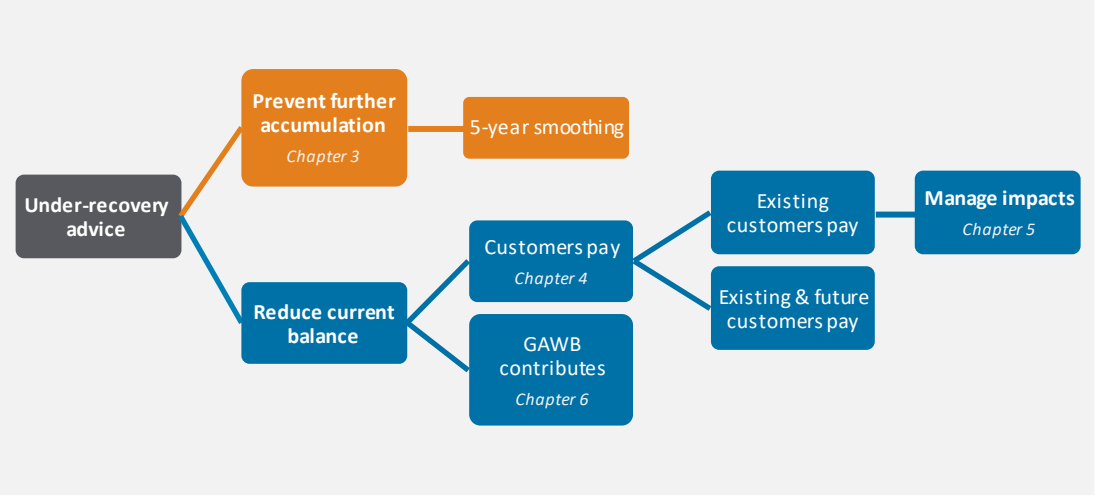

*Source: QCA representation.*

The broad family of options considered in this report (in red in Figure 2) focuses on how:

- to prevent the further accumulation of under-recovered revenues (Chapter 3)
- to reduce the current balance of under-recoveries (Chapter 4)
- to manage the customer impacts of these measures (Chapter 5)
- GAWB could contribute to address the under-recovery (Chapter 6).

[10] Sections 26(1)(a), (c) and (d) of the QCA Act.
[11] Sections 26(1)(g), (h), (i) and (m) of the QCA Act.
[12] Section 26(3) of the QCA Act.
[13] The options are to recover the under-recovery over the remaining asset life of Awoonga dam.

**Figure 3 Overview of options**




*Source: QCA representation.*

# 3 PREVENTING FURTHER ACCUMULATION

GAWB's under-recovered revenue balance grew over almost two decades as revenue in each five-year regulatory period was less than GAWB's efficient costs. GAWB proposed to recover its full costs during the 2020–25 regulatory period, and address the past under-recoveries separately.

The QCA's key findings on preventing a further accumulation of under-recovered revenues are:

- The accumulation of under-recovered revenue was caused by a misalignment between the regulatory period and the price smoothing period.
- It is appropriate for the price smoothing period to be aligned with the regulatory period (five years), starting 1 July 2020.
- It is not appropriate to further capitalise the under-recovered amount beyond 30 June 2020; rather, the under-recovery should be capped at $124.7 million.

## 3.1 Alignment of regulatory and price smoothing periods

GAWB proposed to align its regulatory and price smoothing periods at five years to prevent the further accumulation of its under-recovery.[14]

The council did not support this proposal. It said the approach:

> conflicts with the QCA's stated principle from prior reviews that the costs of spare capacity are to be shared between current and future users.[15]

ConocoPhillips supported this proposal on the condition GAWB contributed to resolving the problem:

> If GAWB were to agree not to recover or only partially recover its under-recovered revenue to date, we would concur with QCA's finding that going forward it is appropriate to align the regulatory and price smoothing periods at five years to prevent the further accumulation of under-recovery.[16]

The 20-year price smoothing approach was initially implemented to spread costs associated with spare capacity (created by the raised dam wall) across existing and future customers as well as to mitigate price shocks. However, it is important to highlight that GAWB's resulting under-recovery was spread across *all* of GAWB's prudent and efficient costs, while the costs associated with spare dam capacity account for 19 per cent.

As a general principle, price paths over multiple regulatory periods should only be transitional in nature. While such mechanisms can be useful to mitigate price shocks, they should not be ongoing (i.e. they should have an end date), as this can lead to sub-optimal outcomes, including inefficiencies, misaligned price signals and inequities.

We have applied price smoothing/capitalised loss approaches in some of our other reviews. The most similar case to GAWB is Seqwater, which is a statutory authority and monopoly supplier of bulk water in south east Queensland. The state government took over responsibility for bulk water supply from local councils in 2008 and implemented a price path to reduce the price impact

[14] GAWB, sub. 1, pp. 72–75; sub. 34, 8.
[15] GRC, sub. 15, p. 4.
[16] ConocoPhillips, sub. 38, p. 2.

of significant investments made as a result of the millennium drought. Prices initially recovered less than the cost of supplying bulk water, with the accumulated under-recovery, including interest on the capitalised losses, to be repaid by 2028. In line with government referrals to review Seqwater's pricing, most recently for 2018–21, we recommended prices to achieve this repayment timing.[17]

Our recent decision on Queensland Rail's 2020 draft access undertaking also dealt with capitalised losses, in circumstances where forecast demand, at least in the short term, was too low to recover efficient costs. We shared a concern raised by stakeholders that a large capitalised loss would be a disincentive for any new demand that would help reduce the losses. We therefore found it appropriate that the capitalised losses have a 'limited life' and be depreciated if new demand was not found within a reasonable time.[18]

GAWB, unlike Seqwater, has continued to accumulate under-recoveries for almost 20 years, without a clear path for eventually recouping those amounts. There also has not been any measure like the limited-life loss capitalisation envisaged for Queensland Rail to mitigate the negative effects of a large unrecovered balance.

We consider that the appropriate way to halt the growth in GAWB's under-recovery is by aligning GAWB's future regulatory and price smoothing periods at five years. Alignment would provide for GAWB to recover all its prudent and efficient costs within the regulatory period and prevent the need for under-recovery adjustments in future regulatory periods. This is consistent with efficient resource allocation, which is a factor we must have regard to under s. 26(1)(a) of the QCA Act.

### Finding B3.1—Aligning regulatory and price smoothing periods

The QCA finds it appropriate for GAWB to align its regulatory and price smoothing periods at five years to prevent the further accumulation of GAWB's under-recovered revenue.

## 3.2 Further capitalisation of accumulated under-recovery

GAWB proposed that customers start paying down the accumulated under-recovery balance from 2022–23. GAWB proposed to add two years of capitalisation—based on the prevailing weighted average cost of capital (WACC)—to its under-recovery balance from 1 July 2020 to 30 June 2022, taking the balance from $124.7 million to $136.4 million.

We consider that GAWB's proposal to further capitalise its accumulated under-recovery for two years beyond 1 July 2020 would not prevent the further accumulation of under-recovered revenue. Therefore, if customers start paying down the accumulated under-recovery balance after 1 July 2020, the under-recovery balance would need to be capped at $124.7 million.

GAWB said applying WACC to determine the under-recovery balance was to ensure the value at 1 July 2022 appropriately considered the associated opportunity costs, and maintain the real value of the balance. However, GAWB said that, to manage the potential financial impact on customers, it was willing to support the QCA's conclusion and not apply the WACC.[19]

Subject to GAWB capitalising the under-recovery at 1 July 2020, we find it appropriate for GAWB to negotiate repayments starting any time after that date. Our views on these negotiations,

[17] QCA, *Seqwater Bulk Water Price Review 2018–21*, final report, March 2018, pp. iii, iv, 1.
[18] QCA, *Queensland Rail 2020 draft access undertaking*, decision, February 2020, pp. 19–21.
[19] GAWB, sub. 34, p. 9.

including an appropriate rate of return, are discussed in more detail in Chapter 5 of this part of the final report (Part B).

### Finding B3.2—Capping the under-recovery balance

The QCA finds GAWB's proposal to further capitalise the accumulated under-recovery to 30 June 2022 is not appropriate. Rather, GAWB's accumulated under-recovery balance should be capped at $124.7 million (the balance as at 1 July 2020).

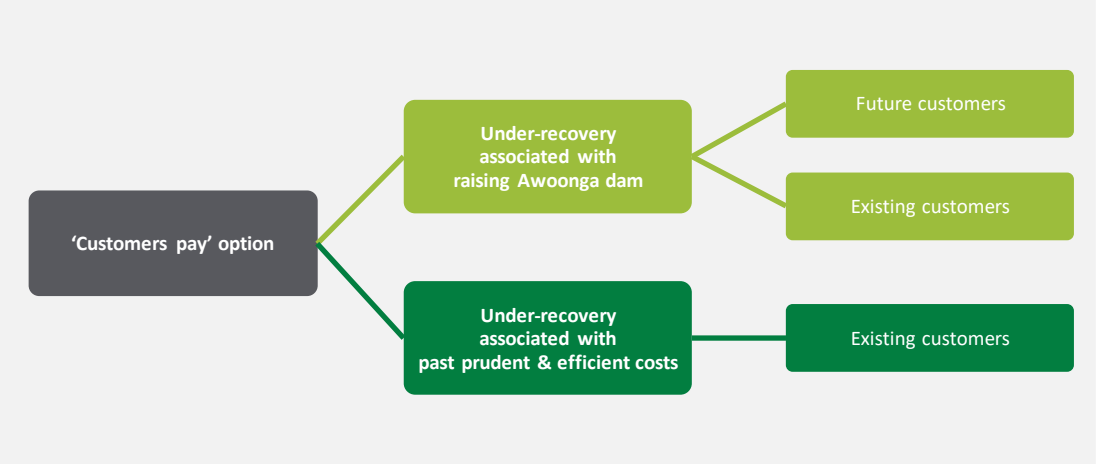
# 4 REDUCING CURRENT BALANCE

Nineteen per cent of GAWB's accumulated under-recovery ($23.1 million) relates to the cost of raising Awoonga Dam, with the rest ($101.6 million) relating to other ongoing costs.

The QCA's key findings on how to reduce the under-recovery balance are:

- The portion of the under-recovery associated with raising Awoonga Dam should be:
  - paid back by both future and existing customers
  - capitalised[20] and charged through water prices over the remaining life of the dam.
- The portion of the under-recovery not associated with raising Awoonga Dam should be:
  - paid by only existing customers
  - paid under terms to be negotiated between GAWB and customers, with default payment terms to be an annuity, but not exactly as proposed by GAWB.

**Figure 4 Overview of reducing current balance**




*Source: QCA representation.*

## 4.1 Current under-recovery balance

GAWB's accumulated under-recovery of revenue as at 1 July 2020 will be $124.7 million. The share of the under-recovery directly associated with raising Awoonga Dam is estimated to be $23.1 million (see Appendix B), while the remaining $101.6 million is related to the rest of GAWB's expenditures. Therefore, the majority of GAWB's under-recovery (81 per cent) relates to prudent and efficient costs not associated with raising the dam.

We find allowing GAWB to recoup these prudent and efficient costs would encourage GAWB to undertake investments—whereas if the under-recovery continues, GAWB may become dis-incentivised to invest.[21]

[20] Meaning this part of the under-recovery is turned into a separate asset. This would activate a return on and of capital, which would be recouped through customer prices over the life of the asset.
[21] Section 26(1)(j) of the QCA Act.

## 4.2 Payments from existing and/or future customers

Reducing GAWB's accumulated under-recovery balance raises the question of 'who pays'. Various principles could be applied when trying to address this question. Section 26(1)(a) of the QCA Act states that the authority must have regard to the need for efficient resource allocation. This can be achieved by the 'user or beneficiary pays' pricing approach—which is based on the idea that the most efficient allocation of resources occurs when consumers pay the full efficient cost of the services or the goods that they consume. Section 26(1)(i) of the QCA Act provides two other important considerations in the context of who pays—social welfare and equity.

GAWB said that, in principle, it is appropriate for the full amount of the under-recovery to be recouped from existing customers, reflecting their use of GAWB's assets while the under-recovery was accumulating. GAWB said most of the accumulated revenue under-recovery relates to the full costs of providing services to existing customers. Therefore, recouping the under-recovery amount from existing customers would ensure they remain responsible for the costs of servicing their demand, along with a (comparatively small) proportion contributing towards the costs of the most recent Awoonga Dam raising, which reflects the benefits they have derived.[22]

In our 2002 review of GAWB's prices, existing customers raised concerns with having to pay for the costs associated with the significant spare capacity created by raising Awoonga Dam. They argued the project driver was to deliver additional capacity for future customers, and hence these costs should be recovered from future customers. The QCA, at the time, determined the costs should be recovered from both existing and future customers.

ConocoPhillips mentioned the unintended consequences if current customers paid for unused capacity:

> GAWB infrastructure has been constructed with significant unutilized capacity, designed to allow future customers to cost [sic] efficient access. Charging this unused capacity to existing customers distorts the market and subsidizes future customers at the expense of current customers.[23]

Rio Tinto also questioned whether current customers should be paying for the under-recovery, considering that the Awoonga Dam is a long-life and significant asset:

> [G]iven the long life and significant capacity of the Awoonga Dam asset (compared to current reserves and demand), the QCA must consider whether it's appropriate the full amount of the under recovery is to be recovered from the current users.[24]

We find it appropriate that existing customers pay for the under-recovery not associated with raising the dam, as it is in accordance with efficient resource allocation.[25] Existing customers effectively have not been paying a price reflecting the full cost of supplying the regulated service. For this reason, existing customers are benefiting from GAWB not receiving revenue that reflects the prudent and efficient costs of the services being provided.

However, we do not find it appropriate that only existing customers pay for the under-recovery associated with raising the dam. We consider existing and future customers should pay for the costs associated with efficient spare capacity, consistent with our previously held view that such an arrangement achieves price stability and intergenerational equity objectives. It is worth noting that, given our demand projections (Part A, Chapter 8), it is likely that it would be some time before both existing and future customers pay for any of the under-recovery associated with

[22] GAWB, sub. 7, p. 9.
[23] ConocoPhillips, sub. 16, p. 2.
[24] Rio Tinto, sub. 19, p. 4.
[25] Section 26(1)(a) of the QCA Act.

raising the dam. This means that in present value terms, existing customers would still pay for most of this part of the under-recovery.

### Finding B4.3—Who should pay?

The QCA finds it is appropriate for existing customers to repay the under-recovery not associated with raising Awoonga Dam, whereas it is appropriate for both existing and future customers to repay the under-recovery associated with raising the dam.

## 4.3 Annuities for under-recovery not associated with Awoonga Dam

GAWB proposed to exclude the under-recovered revenues from the building block calculation of allowable revenue for the 2020–25 regulatory period. Instead, these revenues would be recouped via a separate annuity as a separate charge on customers' bills.

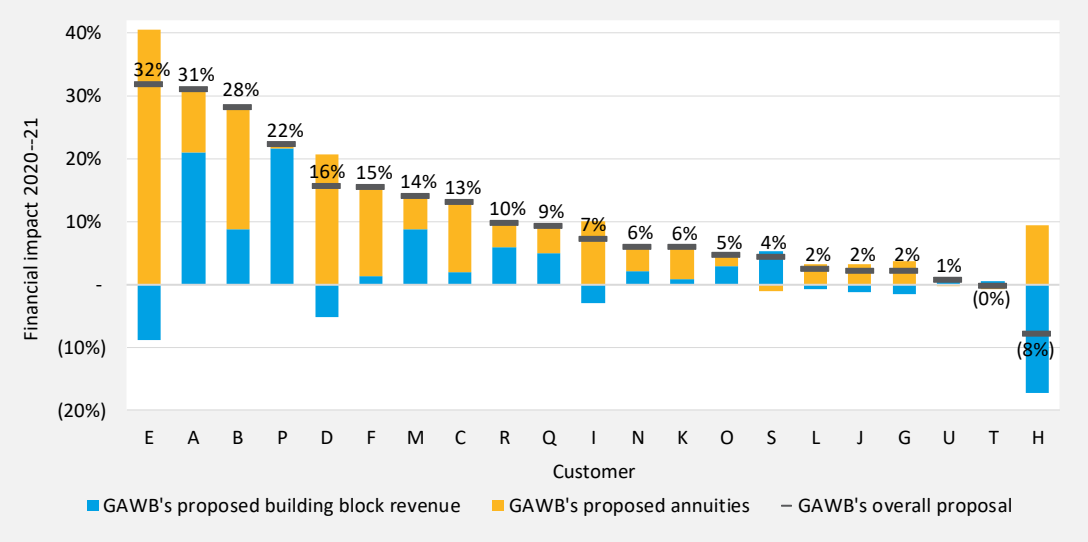
We consider GAWB's proposal to recoup the accumulated under-recovery balance through a separate annuity repayment mechanism is a simple and transparent approach that reduces the balance of the accumulated under-recovery over time. Using annuities has added benefits of providing a fixed charge that can be allocated to customers on a beneficiary pays basis. A separate annuity charge also potentially prevents price distortion, as would be the case if the historical under-recovery was recouped through GAWB's current prices.

In principle, we find that an annuity approach as proposed by GAWB is appropriate to recoup the under-recovery *not* associated with raising Awoonga Dam. This portion of GAWB's under-recovery relates purely to existing customers, who have not been paying the full amount for GAWB's prudent and efficient service provision. Allowing GAWB to recover these costs from existing customers also satisfies s. 26(1)(a) of the QCA Act on the grounds of efficient resource allocation.

However, we consider amendments are required to GAWB's proposal to manage the impact on customers and prevent a price shock (see Chapter 5). If GAWB's proposal was implemented, some customers may face substantial increases in their prices for bulk water (see Figure 5). In particular, we calculated that the council would be facing a real price increase of about 31 per cent in 2020–21.

We also note the negative impact GAWB's proposed price increases could have on some industrial customers who operate as price takers, with commodity prices set within international markets. These customers may have limited ability to pass through GAWB's proposed price increases to end purchasers.

**Figure 5 Approximate financial impact on customers from GAWB's proposal**




*Sources: GAWB, Under-recovery Analysis Model, submission, September 2019; QCA calculations.*

Some stakeholders indicated that a large price increase would harm them and affect future investment around Gladstone. According to Rio Tinto:

> [T]he QCA should consider that price jumps of the magnitude proposed by GAWB have the potential to undermine the competitiveness of customers in the Gladstone area, which may in turn detrimentally impact the opportunity to attract capital to create further investment and employment opportunities at these sites.[26]

And Callide Power Management warned of the effect on its operating costs:

> The revenue under-recovery methodology proposed by GAWB will have a material price shock to Callide C operating costs.[27]

CS Energy said the under-recovery would likely reduce any savings reflected in the 2020–25 water price. It said the extra recovery payments would increase costs for existing customers by 11 per cent if done over five years, or 6 per cent over 10 years.[28]

It is difficult to determine an acceptable price impact for GAWB's industrial customers. The impact is likely to be different for each customer, depending on its size and the proportion of its costs that relate to bulk water. We are therefore unable to formulate a view—we lack detailed information on the cost structures of individual industrial customers.

Some stakeholders suggested potential mitigating factors that might reduce customers' liabilities. WICET said it had paid costs for an additional customer delivery point[29], while Callide Power Management asked whether GAWB was marketing excess water to reduce the under-recovery.[30]

The council said the burden on its customers would be substantial:

> The concern to Council is that the sum impact of the proposed pricing to residents is a 37% [sic] increase per ML by 2025, under Part A and Part B submissions with increased costs to the

[26] Rio Tinto, sub. 19, p. 3.
[27] Callide Power Management, sub. 31, p.1.
[28] CS Energy, sub. 14, p. 2.
[29] WICET, sub. 9, p. 3.
[30] Callide Power Management, sub. 11, p. 5.

> community proposed over this period of $26.8m, despite only a total 2.1% increase in forecast demand over the five-year forecast period in total.[31]

The materiality of the price impact for the council—which passes on GAWB's costs to its retail customers—is somewhat easier to estimate than for industrial customers. We understand the council has approximately 23,300 retail customer connections, so the average annual impact of GAWB's proposed annuity would be $87 per retail customer.[32] We understand that the average annual water bill for council ratepayers is currently about $1,000. On that basis, an $87 annual payment would represent a nearly 9 per cent increase in costs.

GAWB said it was appropriate for existing customers to pay for the under-recovery not associated with Awoonga Dam, while both existing and future customers repaid the under-recovery relating to raising the dam.[33]

While we find it is appropriate for GAWB to recoup the non-dam-related under-recovery through annuities, the Directions require us to provide advice on measures that manage the impact on customers.[34] Our views on how to achieve this are discussed in Chapter 5.

### Finding B4.4—Annuity approach

The QCA finds GAWB's proposal to recoup its under-recovery from existing users through separate annuities is partly appropriate. Specifically:

- it is appropriate for GAWB to recoup the under-recovery *not* associated with raising Awoonga Dam via an annuity
- it is not appropriate for GAWB to implement the annuity approach in its current form, as several customers may face a price shock.

## 4.4 Capitalisation for under-recovery associated with Awoonga Dam

We find GAWB's proposed annuity approach to recoup the under-recovery associated with raising Awoonga Dam is not appropriate. We consider GAWB should capitalise the accumulated under-recovery instead.

### 4.4.1 Spare capacity and existing customers

When the dam was raised, existing major water customers said the cost should be borne by incoming customers, given they created the need for the augmentation.[35] The QCA said at the time that costs of efficient spare capacity generated through raising Awoonga Dam should be recovered across both existing and future customers, provided the common infrastructure represented the least-cost option to meet envisaged demand.[36]

GAWB and its customers continue to disagree about the treatment of spare capacity. GAWB argued in its proposal that existing customers may have benefited from spare capacity since the raising, through deferral of drought management plans and the costs associated with such plans,

[31] GRC, sub. 15, p. 1.
[32] GAWB's proposed council annuity of $2,037,271 divided by 23,300 connections.
[33] GAWB, sub. 34, pp. 10–11.
[34] Referral and direction notice, section B(1.3)(c).
[35] QCA, *Gladstone Area Water Board: Investigation of Pricing Practices*, final report, September 2002, p. 37.
[36] QCA, *Gladstone Area Water Board: Investigation of Pricing Practices*, final report, September 2002, pp. 35–39.

along with increased security of supply.[37] GAWB's consultant Synergies calculated raising the dam wall to full supply level of 40 metres, compared to 35 metres, delivered an economic benefit (avoided cost) to customers in the order of $410 million between July 2003 and December 2019.[38]

GAWB said it accepted the reasons for spreading the dam-related costs over existing and future customers:

> However, given GAWB is mindful of the objective to manage the potential financial impact on customers, GAWB supports the QCA's finding that it is appropriate for both existing and future customers to repay the under-recovery associated with the Awoonga Dam augmentation.[39]

Three customers argued the burden should fall on future users. The council said:

> GAWB must find a way to separate the portion of costs attributable to unused excess capacity over the regulatory period. Customers should not have to pay for capacity they do not need. As customer needs increase, the cost of raising the dam wall (and associated costs) should be included in the charges. Historic 'under-recoveries' should also be adjusted to account for unused excess capacity.[40]

Conoco Phillips considered that the dam was designed with future customers in mind[41], while Rio Tinto said the burden of the under-recovery should reflect the dam's expected life and large size.[42]

Recovering prudent and efficient under-recovered costs associated with raising Awoonga Dam from both existing and future customers could achieve intergenerational equity objectives.[43] However, the counter-argument is that new entrants should not be required to contribute to historical under-recoveries, as it might deter efficient entry.[44] On balance, we consider that the burden should be shared, as the spare capacity enables the new entrants to obtain the supply they need, while existing users benefit from increased security.

### 4.4.2 Capitalisation approach

If the under-recovery associated with raising Awoonga Dam is capitalised in 2020–21, with a life of 132 years (i.e. the remaining asset life of the Awoonga Dam augmentation), costs will be spread across existing and future customers.

Our approach is to turn the dam-related part of the under-recovery (i.e. $23.1 million) into a separate asset as at 1 July 2020. This will activate a return on, and of, capital, which will be paid to GAWB through customer prices over the remaining life of the asset. While unusual, this capitalisation approach is simple to implement.

Recovering these costs across a broader customer base over a longer period reduces the immediate financial impact on customers, relative to GAWB's proposed recovery of these costs entirely from existing customers via shorter-term annuities. Approximately $4 million less revenue would be recouped from customers over the 2020–25 regulatory period using the

[37] GAWB, sub. 1, pp. 67–71.
[38] GAWB, sub. 36, p. 16.
[39] GAWB, sub. 34, p. 10.
[40] GRC, sub. 15, p. 5.
[41] ConocoPhillips, sub. 16, p. 2.
[42] Rio Tinto, sub. 19, p. 4.
[43] Section 26(1)(i) of the QCA Act.
[44] Section 26(1)(a) of the QCA Act.

capitalisation approach, compared with the amount that would be recouped under GAWB's proposed annuity terms.[45]

GAWB said capitalising the under-recovery meant the cost would be shared based on current and future levels of consumption, as opposed to historic consumption patterns. However, GAWB recognised capitalising the under-recovery associated with raising Awoonga Dam reduced the financial impact on customers, and supported this QCA finding.[46]

### Finding B4.5—Under-recovery associated with raising Awoonga Dam

The QCA finds it appropriate for GAWB to recoup the under-recovery directly associated with raising Awoonga Dam:

- from both existing and future users
- by capitalising this portion of the under-recovery.

[45] For comparison, adopting GAWB's proposed 2021 annuities for all of the dam and non-dam under-recovery, $39.5 million would be recouped from customers over the 2020–25 regulatory period. Under our option, $35.5 million would be recouped (i.e. $32 million in annuities on the non-dam amount and $3.5 million in capitalised dam-related costs).

[46] GAWB, sub. 34, p. 10.

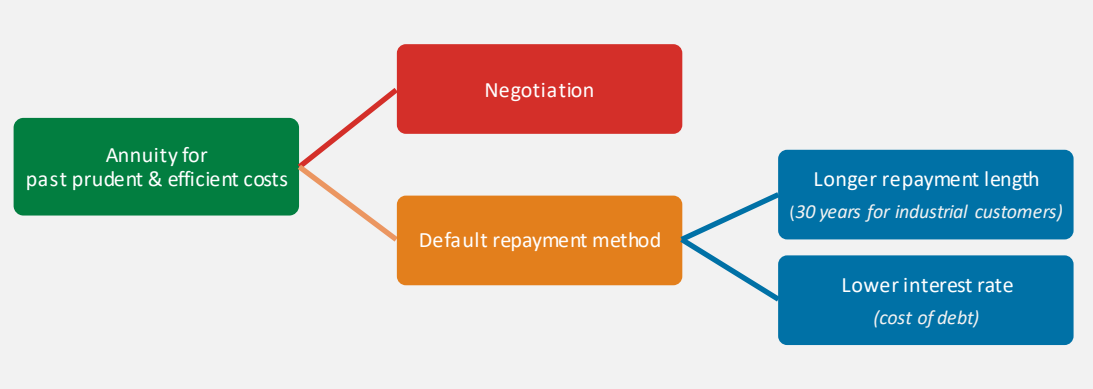
# 5 MANAGING CUSTOMER IMPACT

The under-recovery balance has grown to almost two years' revenue for GAWB—so it represents a large future cost for customers. Most of this balance relates to ongoing operating costs not connected with raising Awoonga Dam.

The QCA's key findings on how to manage the impact on customers of recouping the non-dam portion of the under-recovery are:

- GAWB should provide customers with a choice of repayment methods and negotiate with customers to determine the optimal repayment length.
- If negotiations fail, the default repayment method should be an annuity with:
  - a term of at least 30 years for industrial customers
  - a term of 100 years for the council
  - an interest rate set at GAWB's benchmark cost of debt.

**Figure 6 Overview of managing customer impact**




*Source: QCA representation.*

We propose to capitalise the under-recovery associated with raising Awoonga Dam and thereby spread the costs across a broad range of customers (existing and future customers) over a long time horizon. This is a means to manage the impact on customers.

## 5.1 Choice of repayment method

For the component of the under-recovery balance *not* associated with raising Awoonga Dam, we consider that GAWB should provide customers with a choice of repayment methods—for example, an annuity of an agreed term, or a lump-sum upfront payment.

Some customers may prefer to finance a lump-sum payment via loans (if required), which they may be able to obtain on more favourable terms than at the prevailing WACC proposed by GAWB. This view was also expressed by the council:

> If Council was to accept an appropriate portion of under-recovered revenue, once all necessary information has been reviewed and agreed upon, then it may be more beneficial for it to consider how the overall cost to the public can be minimised, either through guarantee or annuity set at current borrowing rates, rather than the proposed WACC rate, ensuring that the net cost to the community and State is achieved.

> There is approximately a 2.56% p.a. difference between current borrowing rates and the proposed annuity rate by GAWB. The premium rate of return proposed relative to applicable borrowing rates, means that a debt that GAWB is seeking to recover over 100 years can be repaid through debt in only 27 years, at a net saving to the community on a Net Present Value basis of over $43m.[47]

CS Energy said the impacts on customers should be managed through negotiated outcomes.[48]

GAWB might want to offer further discounts to customers who choose to pay upfront as a lump sum. While GAWB would be foregoing some of the under-recovery, an upfront repayment would lower GAWB's prospective risk—and the value of this could be reflected in the discount.

Moreover, we are of the view that GAWB should offer customers with a negative under-recovery balance the option to receive their payment upfront, as opposed to an annuity over time.

### Finding B5.6—Repayment method

The QCA finds it appropriate that, in the first instance, GAWB should provide each customer with a choice of repayment method for the component of the under-recovery balance *not* associated with raising Awoonga Dam.

## 5.2 Default annuity repayment length

We consider GAWB should negotiate with customers to determine the optimal repayment length. However, if negotiation fails, default terms need to be in place.

GAWB proposed the following default arrangements:

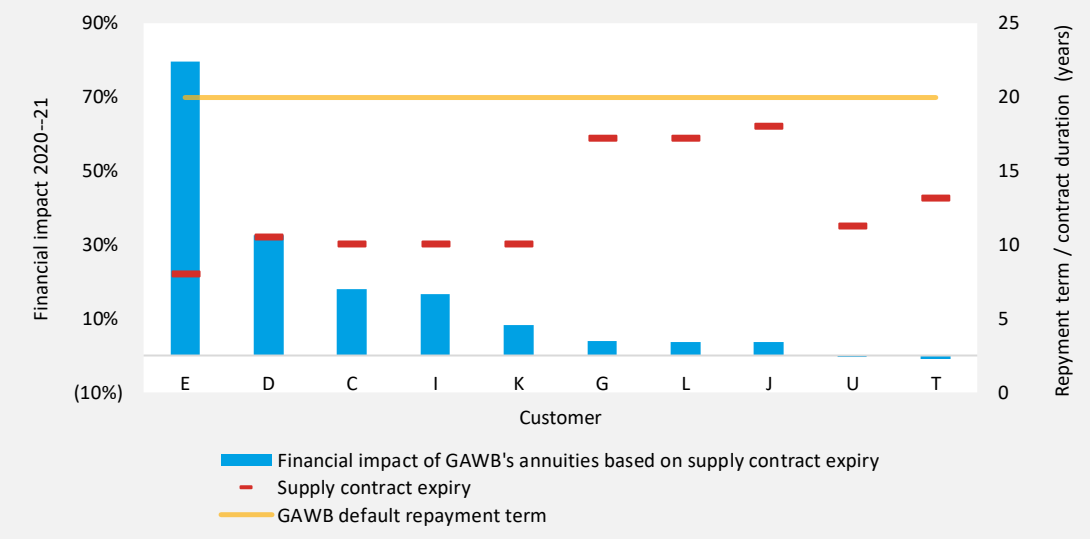
- For industrial and domestic customers[49], a default repayment term of 20 years would apply. GAWB said the default repayment term aligns with the current price smoothing period of 20 years and is the assumed period in which the accumulated under-recovery must be fully repaid. The default repayment term would be the maximum amount of time permitted for customers to repay their accumulated under-recovered revenue. A shorter term for repayment would apply to:
  - customers with a water supply contract that has an expiry date earlier than the default repayment term (i.e. prior to 2042); or
  - customers whose plant has an expected economic life shorter than the default repayment term.[50]
- For the council, a default repayment term of 100 years would apply. GAWB said this longer period is in recognition of the different risk factors associated with the supply of water for residential compared to industrial purposes.[51]

GAWB said it would not support any arrangement where it would be required to collect annuities from some customers after their supply contract ends or plant shuts down.[52]

[47] GRC, sub. 15, p. 7.
[48] CS Energy, sub. 22, p. 1.
[49] GAWB has 28 domestic customers, within close proximity to the Awoonga Dam, who are directly connected to its network.
[50] GAWB, sub. 7, p. 11.
[51] GAWB, sub. 7, p. 12.
[52] GAWB, sub. 34, p. 13.

Those industrial customers with expiry dates listed in their contract all have contracts that expire before 2042—and some of those contracts expire significantly earlier (Figure 7). Applying GAWB's approach (i.e. industrial customers' under-recovery repayment term is the lesser of 20 years or supply contract/plant expiry) would increase the burden on these customers from what would already be a significant impact with a default repayment term of 20 years. Our calculations show that customers would face a real financial impact in 2020–21 of up to 80 per cent if the repayment term is based on customers' supply contract expiry. We therefore consider GAWB's proposal to be overly onerous on some industrial customers.

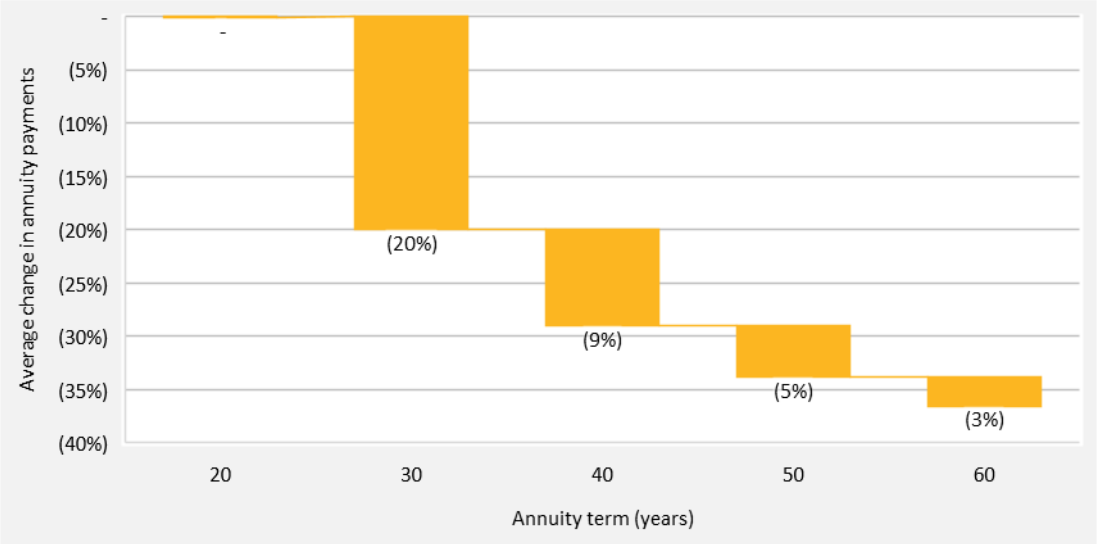
**Figure 7 GAWB customer supply contract expiry dates and impact of GAWB's proposal**




*Sources: GAWB, Under-recovery Analysis Model, submission, September 2019; QCA calculations.*

An option to reduce the price impact of the under-recovery payments on customers would be to spread the repayments over a longer term. Using GAWB's proposed annuity payments approach with different repayment terms, we can calculate the average percentage change in industrial customers' annuity payments relative to those of GAWB's proposed 20-year repayment terms. Increasing the proposed annuity repayment term for industrial customers from 20 to 30 years would reduce the average annual annuity by 20 per cent (Figure 8). For each subsequent 10-year increase to the repayment term, the reduction in annual annuities becomes smaller.

**Figure 8 Average decrease in industrial customers' annuity payments with increasing terms**

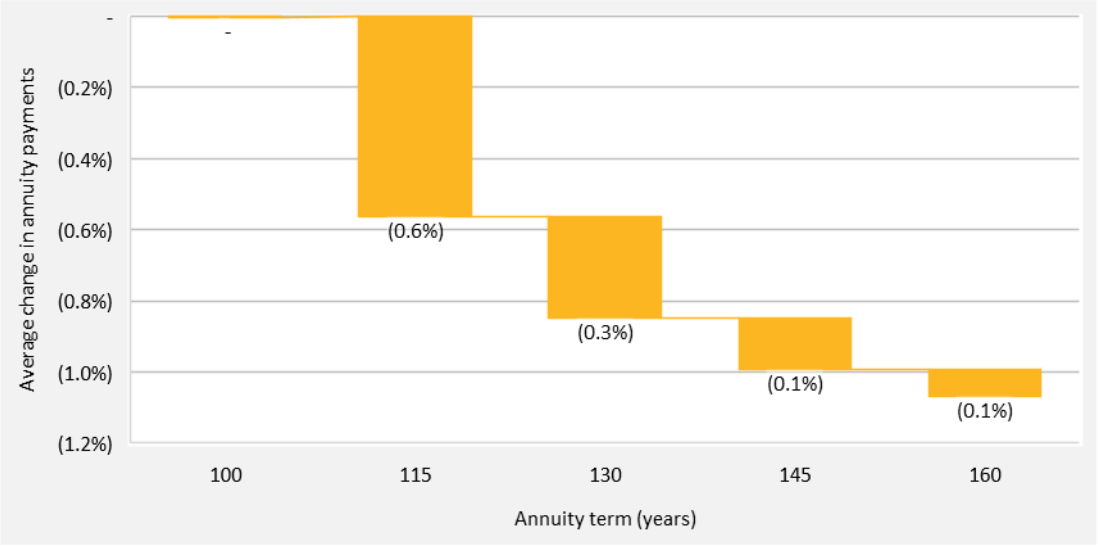



*Sources: GAWB, Under-recovery Analysis Model, submission, September 2019; QCA calculations.*

We consider a default repayment term of 30 years would be more appropriate for industrial customers than the proposed 20 years, as it would significantly reduce the customer impact. However, it would require GAWB to collect annuities from some customers after their supply contract or plant expires. We suggest GAWB engage with its customers to determine a suitable way to collect the subsequent unallocated revenue in these cases. One option could be charging a large single 'balloon' payment if a customer terminates its supply arrangement before the end of the 30-year annuity term, or if the expected economic life of the plant is less than 30 years.

Figure 9 shows the average percentage change in the council's annuity payments relative to those of GAWB's proposed 100-year repayment terms with increasing repayment terms. Increasing the annuity repayment term over GAWB's proposed 100 years has a relatively minor impact. This is due to the capitalisation impact being applied over a substantial period. For example, if annuity payments were stretched from 100 to 160 years (i.e. the repayment term increased by 60 per cent), the average annual payments would only decrease by 1 per cent. We consider GAWB's proposed default repayment term of 100 years is appropriate in terms of balancing the under-recovery impact on GAWB and the repayment impact on the council.

**Figure 9 Average decrease in the Gladstone Regional Council's annuity payments with increasing annuity terms**




*Sources: GAWB, Under-recovery Analysis Model, submission, September 2019; QCA calculations.*

As highlighted above, we encourage GAWB to give its customers choice and flexibility over how they repay their allocated under-recovery, and to negotiate with customers to determine the optimal repayment length. If negotiations between GAWB and its customers fail, we find default annuity terms of 30 and 100 years for industrial and council customers respectively would be appropriate. We consider these default terms balance the interests of GAWB and its customers:

- GAWB will be able to recoup its under-recovery from the council and from industrial customers. In relation to industrial customers, GAWB may need to manage the additional risk relative to repayment terms set to the lesser of supply contract/plant expiry and 30 years. We understand that water supply contracts between GAWB and its customers can be extended and that, if contracts are terminated before the expiry date, GAWB can collect an early termination payment.[53] We consider these contractual measures should largely mitigate GAWB's risk.
- Customers will face an additional charge to pay down their allocated under-recovery balance. However, this impact is reduced with a longer default annuity term for industrial customers of 30 years, where feasible.

We find the default terms of 30 and 100 years respectively will provide a more acceptable price impact for customers.

[53] WICET, sub. 9, p. 1.

### Finding B5.7—Default annuity repayment length

The QCA finds that GAWB's proposed default annuity repayment length of 20 years for industrial customers is not appropriate, while the proposed length of 100 years for the council is appropriate. The QCA finds the appropriate default annuity repayment lengths are:

- 30 years for industrial customers
- 100 years for the council.

## 5.3 Default annuity interest rate

We consider GAWB should negotiate with customers to determine optimal repayment terms. However, default terms need to be in place if negotiation fails.

We do not find GAWB's proposal to set default repayment terms based on the prevailing WACC is appropriate.[54]

The WACC represents the return required from GAWB by GAWB's benchmark debt and equity investors consistent with the systematic risk of GAWB's cash flows. While the under-recovery balance was accumulating as part of GAWB's regulatory allowable revenue requirement, the WACC was the appropriate rate to apply. However, the under-recovery is no longer a cost component that contributes to GAWB's future prices, as per GAWB's proposal and the findings of this final report.

Taking into account the interests of both GAWB and its customers, and the requirements of the Directions (including managing the impact on customers), we consider GAWB's benchmark cost of debt is a reasonable proxy for the interest rate for the default annuities.

We consider that applying this interest rate would be conducive to reasonable negotiated outcomes as proposed in this final report. Customers would want to negotiate the least costly financing options, which are unlikely to be consistent with GAWB's proposal to charge its WACC. For example, the council said that the appropriate interest rate to apply was the lowest cost of debt available to public authorities.[55]

Applying the lower interest rate would reduce customers' annuity payments significantly—for example, a cost of debt of 3.1 per cent[56] as the default interest rate—as opposed to GAWB's proposed WACC of 4.57 per cent—would reduce GAWB's proposed annuities by 28.6 per cent for the council and 11 per cent for industrial customers. Applying the benchmark cost of debt as the default annuity interest rate would therefore contribute to a more acceptable price impact for customers, should negotiations for a preferred outcome not succeed. As mentioned above, applying the benchmark cost of debt is also an appropriate response to the Directions and has regard to the interests of both GAWB and its customers.

The application of this interest rate would not affect the retrospective under-recovery balance, which has been capitalised at the prevailing WACC. A similar approach was proposed by the

[54] GAWB, sub. 7, p. 13.
[55] GRC, sub. 32, p. 1.
[56] Cost of debt used by GAWB in its preliminary WACC estimates (GAWB, sub. 1, p. 122).

council, which stated that consideration should be given to setting repayments at current borrowing costs, as opposed to the proposed WACC.[57]

GAWB's comments in relation to the default annuity interest rate and our responses are summarised in Table 2).[58]

**Table 2 Annuity interest rate: GAWB comment and QCA response**

| *GAWB comment*[59] | *QCA response* |
|---|---|
| The QTC rate fails to acknowledge regulatory precedent, in that a regulated business should be entitled to receive the benchmark rate of return.<br>WACC return is also consistent with the current regulatory approach where the accumulated revenue under-recovery is rolled forward to the next regulatory period at WACC. | The benchmark rate of return (WACC) is implicit in the time value of the under-recovery balance that GAWB will receive through customer repayments. |
| There are material differences between this situation and those applicable to Seqwater. In the case of Seqwater, as noted by the QCA, the requirement to use the cost of debt as advised by QTC is set out in the referral notice. In the absence of this explicit requirement, the benchmark rate of return would apply. | The Directions require the QCA to provide advice on measures to reduce the balance, including managing the effects on customers of these measures. There is nothing in the Directions to suggest that the GAWB WACC should apply to these measures. |
| The accumulated revenue under-recovery does not represent a loan from GAWB to its customers; it is the delayed repayment of services already delivered to customers. | We consider GAWB's benchmark cost of debt represents a reasonable interest rate for the default annuities that will provide suitable incentives for negotiated outcomes between GAWB and its customers. |

### Finding B5.8—Default annuity interest rate

The QCA finds GAWB's proposal to set annuities based on its prevailing WACC is not appropriate. Annuities from 1 July 2020 based on GAWB's benchmark cost of debt[60] would be appropriate.

[57] GRC, sub. 15, p. 7.
[58] GAWB, sub. 34. p. 14.
[59] GAWB, sub. 34, p. 14.
[60] While we calculated a benchmark cost of debt of 3.44% for the purposes of this final report (see Part A, Chapter 6) using an averaging period of 20 days ending 31 March 2020, GAWB will recalculate its benchmark cost of debt for a 20-day averaging period starting 4 May 2020.

# 6 OPTIONS FOR GAWB

GAWB is financially strong and would remain in business if it did not recoup some or all of the under-recovered amount. This raises the possibility of GAWB contributing to solving the under-recovery.

The QCA's key findings on options for GAWB having a role are:

- Any decision on whether GAWB should not recoup some past accumulated under-recoveries is best addressed by GAWB's board and shareholding minister.
- Should the shareholding minister direct GAWB not to recoup certain past under-recoveries:
  - this would not adversely affect GAWB's financial position[61]
  - the accumulated under-recovery amount for domestic customers should first be considered for non-recovery.
- There is no reliable estimate to establish a clear threshold for GAWB to bear some utilisation risk about past demand forecasts and raising the dam wall.

## 6.1 Potential merits of not recovering certain past under-recoveries

Instead of current and future customers repaying all past under-recoveries, an option could be that GAWB does not recoup certain past under-recoveries. While this constitutes a government policy option and is not traditionally in the realm of the independent economic regulator, we feel compelled to raise this option for the following reasons:

- The Treasurer has sought our advice and we want to make this advice comprehensive.
- We have access to GAWB's regulatory modelling and, second to GAWB, are possibly best placed to assess this option.
- If past revenues of unregulated companies are not collected, their boards have the option to write off those debts and reflect this in their balance sheets according to the accounting standards.

To assess if it is appropriate from a regulatory perspective not to recoup certain past under-recoveries, we have considered economic, equity and regional development criteria, as well as regulatory and pricing principles.

### 6.1.1 Economic criteria

From an economic perspective, we are guided by efficiency factors. Efficiency objectives are generally achieved where prices are cost-reflective and forward-looking and provide adequate revenues for investment and efficient operation.

In this 2020–25 price monitoring investigation, we have assessed efficient forward-looking costs for GAWB (as discussed in Part A). The amount that GAWB has under-recovered is also likely to reflect efficient costs, as it relates to costs we have previously assessed. However, recouping the historical under-recoveries through the indicative prices discussed in Part A of this final report would distort the forward-looking price signals.

[61] Our assessment of GAWB's financial position is described in Appendix C.

We consider this distortion of the price signals can be mitigated if the under-recovery is recouped through a separate charge. We acknowledge that, even with this separation, the forward-looking price signals are likely to be obscured for many customers. For example, the council has historically rolled all GAWB's charges into one price when determining charges for its customers. Industrial customers may also see the annuity simply as an added water charge, as they have not been able to track their allocated under-recovery as a liability over the years it has accumulated. However, the clear separation in our assessment of 'business as usual' and under-recovery charges is the best that can be done to restore efficient price signals over time.

At first glance, it would appear not allowing GAWB to recover its past prudent and efficient costs would fail the revenue adequacy test. However, GAWB has survived with a relatively stable financial position while under-recovering for almost two decades. Based on GAWB's financial position, GAWB may be better placed to absorb the under-recovery, as opposed to customers repaying the under-recovery. GAWB's financial position is discussed in more detail in Appendix C.

Moreover, while GAWB has been monitoring the under-recovery accumulation since 2002, customers were not aware of their individual share of the under-recovery before this 2020–25 review and have therefore not been able to manage this liability.

Another important efficiency issue to consider is whether the extra cost of paying back GAWB's historical under-recoveries would affect industrial customers' future investment decisions.[62] For example, the increase in overall water costs from the under-recovery charge may drive industrial customers to invest in their own water supply and not buy anything from GAWB once their contracts expire. If it is clear which part of the water price relates to forward-looking costs, and which part is a temporary impost to recoup the under-recovery, this is less likely to happen. Bypass of natural monopolies is generally an inefficient outcome.

### 6.1.2 Equity criteria

There could potentially be equity and social welfare considerations that support GAWB not recouping certain past under-recoveries. These issues are often associated with the broad concept of 'fairness'. The 'beneficiary pays' principle is consistent with the idea that it is fair for any given user of a service, or individual/entity that causes costs to be incurred, to pay for the costs directly associated with their use or action.

Since GAWB's 20-year price smoothing mechanism was implemented, GAWB's customers have in effect not paid the full prudent and efficient costs of bulk water provision. Therefore, based on the 'beneficiary pays' test of fairness, it seems appropriate for GAWB to recoup its under-recovery from its customers.

The price-smoothing approach sought to address concerns about intergenerational equity, by deferring recovery of some of GAWB's costs until later to reduce the financial burden for customers at the start of the smoothing period. But it relied on demand growth forecasts that turned out to be overly optimistic. This contributed to the accumulation of the under-recovery, as actual demand fell short of expectations. Customers may consider that they are not

[62] Rio Tinto said 'price jumps of the magnitude proposed by GAWB have the potential to undermine the competitiveness of customers in the Gladstone area, which may in turn detrimentally impact the opportunity to attract capital to create further investment and employment opportunities at these sites' (Rio Tinto, sub. 19, p. 3).

responsible for imperfections in the pricing approach that sought to achieve intergenerational equity, or for the errors in demand forecasting, and therefore object on fairness grounds.[63]

### 6.1.3 Regulatory and pricing principles

Investment in water utilities is lumpy, and in terms of minimising total costs, investments are undertaken to not only meet existing demand, but also allow for a reasonable (expected) level of growth in demand. Therefore, prudent planned excess capacity—where the planned excess capacity is considered necessary to produce the lowest long-run total cost on a present value basis—should be included in the asset base.

Our assessment in 2002 found that raising the dam was prudent and efficient, given demand forecasts at that time. GAWB was therefore allowed to recover this cost, consistent with revenue adequacy principles. In line with our generally accepted regulatory principles, including regulatory certainty, this was confirmed in subsequent reviews despite evidence that demand was unlikely to meet expectations.

### 6.1.4 Overall assessment

On efficiency and equity grounds, the argument for GAWB not recouping certain past under-recoveries is weak and, from a regulatory and pricing principles perspective, we would not endorse or recommend non-recovery of costs that have been deemed prudent and efficient. However, GAWB could opt not to recoup part of its under-recovery balance as a way to discourage inefficient bypass by industrial customers (at the expiry of existing supply contracts) and address customer fairness concerns. We are also of the view that GAWB's financial position is strong enough that it could choose to not recoup certain past under-recoveries.

ConocoPhillips said that, given that it would not adversely affect GAWB if it did not recoup its under-recovered revenue, it was appropriate to ensure that domestic and industrial customers were not adversely impacted during 2020–25.[64]

GAWB said it did not support options for it to contribute to solving the under-recovery.[65]

We consider that any decision in relation to GAWB not recouping certain past under-recoveries is best left to GAWB's board and shareholding minister.

[63] For example, Rio Tinto submitted that the QCA should consider whether it was 'fair and equitable' for current users to compensate for all capital costs for a service that significantly exceeded their needs (Rio Tinto, sub. 19, p. 3). ConocoPhillips said: 'Charging this unused capacity to existing customers distorts the market and subsidizes future customers at the expense of current customers (ConocoPhillips, sub. 16, p. 2).

[64] ConocoPhillips, sub. 38, p. 2.

[65] GAWB, sub. 34, p. 15.

### Finding B6.9—GAWB not recouping certain past under-recoveries

The QCA considers it is appropriate that any decision in relation to GAWB not recouping certain past under-recoveries be left to GAWB's board and shareholding minister. The QCA finds that if GAWB did not recoup certain past under-recoveries, GAWB's financial position would not be adversely affected.

## 6.2 Absorbing under-recovery allocation to domestic customers

GAWB could absorb the under-recovery allocation to its domestic customers. The owners of these 28 direct connections within close proximity of Awoonga Dam have potentially changed hands in the past and could do so in the future. This brings into question whether the current and future owners of the connections are responsible for using GAWB's assets over the duration of the under-recovery mechanism and proposed annuity repayment scheme.

We note the relative insignificance of this allocation in GAWB's overall under-recovery balance (i.e. $17,770 out of $124.7 million[66]) and the potential significance of the annuity payments to these customers (i.e. GAWB's proposed average annuity for these customers is $51 for 20 years). It might not be efficient for GAWB to spend the time and effort to recover this amount from the 28 domestic customers.

If GAWB's domestic customers' share of the under-recovery is not recouped, the differential treatment between GAWB's domestic customers and the council's customers may be seen as unfair. The council's share of GAWB's under-recovery is significant, however, and not recouping that amount would mean GAWB would forgo a large sum, unlike the under-recovered amount from direct domestic customers. We consider managing the impacts on the council's retail customers is best addressed through our identified customer repayment options.

### Finding B6.10—Absorbing domestic customers' under-recovery

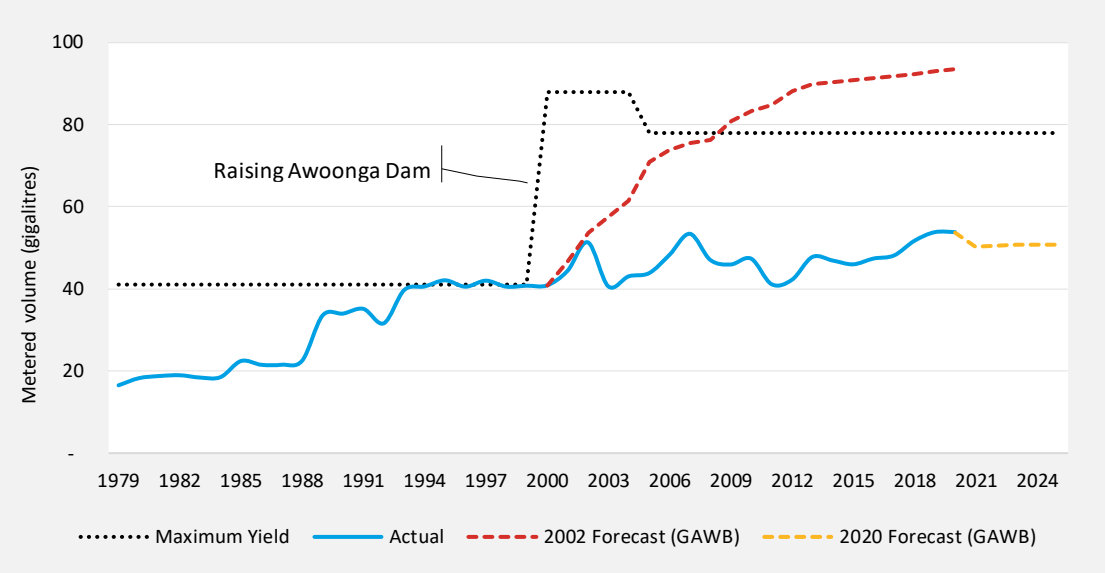
If it is decided that GAWB should not recoup certain past under-recoveries, GAWB's direct domestic customers' under-recovery should first be considered.

## 6.3 Absorbing utilisation risk with raising Awoonga Dam

The Awoonga Dam wall raising has resulted in spare capacity of around 25 per cent since being commissioned in 2001 (Figure 10). It could be argued that current users have benefited from the first 20 gigalitres provided by the higher dam, while it is not clear whether they have benefited from the remaining 17 gigalitres.

[66] GAWB, sub. 8, p. 12.

**Figure 10 GAWB's metered volume relative to maximum yield**




*Source: GAWB historical demand data; QCA analysis.*

Rio Tinto suggested GAWB should bear some utilisation risk for the Awoonga Dam raising:

> Rio Tinto submits that GAWB should bear a degree of utilisation risk associated with capital projects to ensure capital is deployed in an efficient manner. If a capital or augmentation project by a monopoly provider has benefits which are far beyond those then required by the users, then it should be considered whether the monopoly provider should have some responsibility for funding such excess.[67]

Callide Power Management also raised concerns that GAWB's proposed cost-recovery methodology for the under-recovery effectively transferred demand risk from GAWB to current users.[68]

Until now, customers have been responsible for paying for the raising through GAWB charges, so—aside from the carried-over under-recovered amount—responsibility for unused spare capacity has rested with the existing customers. One way in which GAWB could take responsibility for the spare capacity would be by absorbing the difference in capital costs between the original cost of raising the dam and that of an optimal augmentation for the current and forecast demand. This approach would require a cost estimate of a lower raising of the Awoonga Dam wall.

The original report, prepared for us by engineering consultant SMEC, explained that at the time, the Awoonga Dam was being raised from a full supply level of 30 metres to 40 metres, its current dam height. However, SMEC noted that the embankment design was engineered to accommodate a future 'stage 2', raising the dam height to a full supply level of 45 metres. SMEC said it could not reliably estimate the cost if the dam height had been scaled to a lower level, such as 38 metres.[69] Due to time constraints associated with this review, we are not in a position to determine this difference in cost (by appointing an expert to build a retrospective cost estimate for a lower dam wall than was built, for example).

Therefore, we consider the available information does not provide a reasonable basis for an adjustment to the accumulated under-recovery. However, we are conceptually in favour of this

[67] Rio Tinto, sub. 19, p. 3.
[68] Callide Power Management, sub. 17, p. 5.
[69] SMEC, *Gladstone Area Water Board Asset Valuation Study – Stage 2 Report*, volume 1, 2002, pp. 81–82.

approach, or other similar approaches, in which GAWB absorbs some responsibility for what has, in hindsight, been an over-investment based on forecast demand that has not materialised. GAWB would be best placed to propose an estimate of the value of an optimised dam wall, as it may have more information than we have on the costs of various options at the time to substantiate such an estimate. GAWB's board or shareholding minister could also make the decision to optimise GAWB's asset base.[70]

There may also be plausible arguments for optimising the asset based on a prospective analysis. Such an analysis would consider what it would cost now—with advances in technology and design—to build the appropriate infrastructure to meet the changed demand circumstances. Under such circumstances, part of GAWB's assets for which a previous investment decision was assessed as prudent and efficient on the basis of a forward-looking analysis would subsequently be written out of the asset base.

### Finding B6.11—Absorbing utilisation risk with raising Awoonga Dam

The QCA finds it is not appropriate for GAWB to absorb the utilisation risk in relation to raising Awoonga Dam, because there is no reliable cost estimate to establish a clear threshold. However, the QCA considers that there may be a case for GAWB to propose an optimisation of its asset base.

[70] Water Act 2000 (Qld), ss. 652–658; 675–676.

# 7 QCA ADVICE

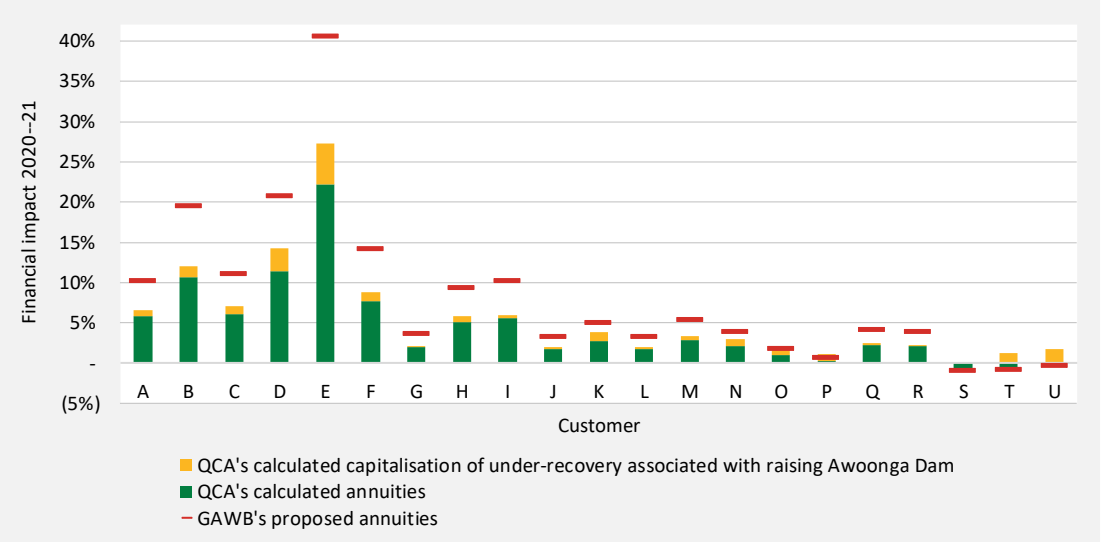
## 7.1 Key points and financial impact on customers

The QCA broadly finds GAWB's proposal to recoup accumulated under-recoveries from customers via a separate charge is appropriate. However, the following adjustments should be adopted for implementation:

- GAWB should capitalise the under-recovery associated with raising Awoonga Dam and recoup this balance through GAWB's prices, as opposed to a separate charge or arrangement.
- For the under-recovery balance not associated with raising Awoonga Dam, GAWB should negotiate with its customers in relation to the repayment method (e.g. an annuity of an agreed term, or a lump-sum upfront payment), leaving the choice of the financing arrangements to the customer. GAWB could consider offering discounts to customers for a prompt payment.
- Where negotiation fails, we consider that appropriate default repayment terms should include:
  - an annuity repayment term of 30 years for industrial customers and 100 years for council customers
  - annuity repayments that reflect GAWB's benchmark cost of debt.

We consider these modifications balance the interests of GAWB and its customers. GAWB would be able to recoup its prudent and efficient accumulated under-recovered balance, while the financial impact on customers would be on average 35 per cent lower, relative to GAWB's proposed approach to recoup its under-recovery (Figure 11).

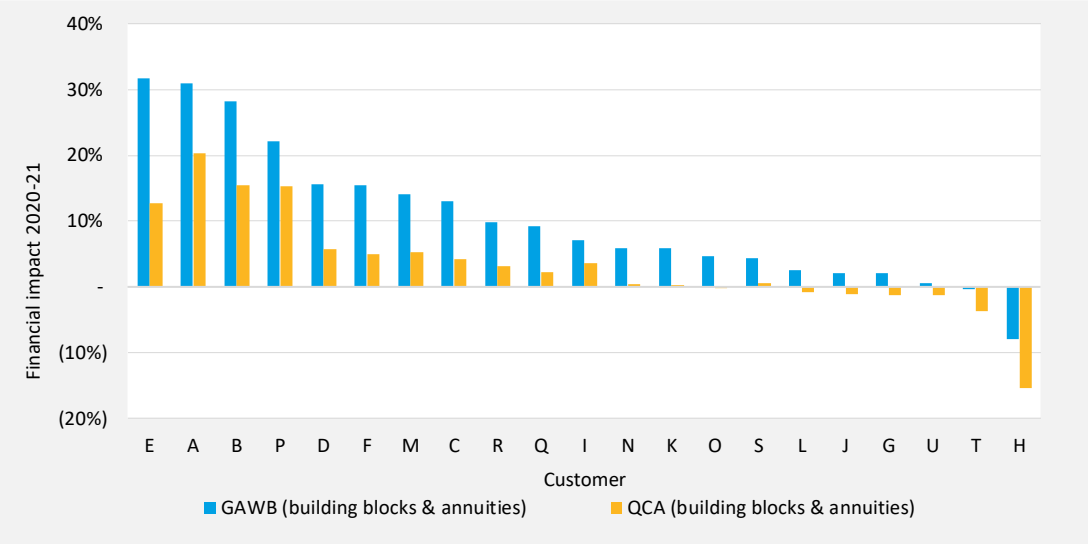
**Figure 11 Customer financial impact of the QCA's preferred approach relative to GAWB's proposal**




*Sources: GAWB, Under-recovery Analysis Model, submission, September 2019; QCA calculations.*

The overall financial impact on customers of the indicative prices we have calculated (see Part A of this final report) and the changes to the under-recovery approach (discussed in this part, Part B) relative to GAWB's proposal is 8 per cent lower (Figure 12).

**Figure 12 Overall financial impact on customers**




*Sources: GAWB, Under-recovery Analysis Model, submission, September 2019; QCA calculations.*

We recalculated the indicative prices for each pricing zone adding the capitalisation of the Awoonga Dam's portion of the under-recovery (Table 3).

**Table 3 QCA indicative prices—including capitalisation of under-recovery associated with raising Awoonga Dam (1 July 2020)**

| *Pricing zone* | *Reservation and storage* | | *Delivery* | | *Admin* | *Indicative average price* |
|---|---|---|---|---|---|---|
| | *Storage access* ($/reserved ML) | *Storage volumetric* ($/metered ML) | *Delivery access* ($/reserved MDQ) | *Delivery volumetric* ($/metered ML | ($/res. ML) | ($/res. ML) |
| Awoonga | 363.61 | 1.71 | — | — | 30.86 | 395.92 |
| Awoonga to Toolooa | 363.61 | 1.71 | 6,046.73 | 32.93 | 92.58 | 748.91 |
| Toolooa to Fitzsimmons | 363.61 | 1.71 | 7,646.21 | 32.93 | 92.58 | 817.86 |
| Boyne Raw | 363.61 | 1.71 | 10,330.70 | 32.93 | 92.58 | 975.14 |
| Central Raw | 363.61 | 1.71 | 9,467.74 | 32.94 | 92.58 | 899.56 |
| Fitzsimmons to Gladstone | 363.61 | 1.71 | 8,155.18 | 32.93 | 92.58 | 839.22 |
| QAL | 363.61 | 1.71 | 9,840.48 | 32.93 | 92.58 | 916.82 |
| Fishermans Landing Raw | 363.61 | 1.71 | 13,274.97 | 33.52 | 92.58 | 1,329.72 |
| Gladstone WTP | 363.61 | 1.71 | 23,549.11 | 111.83 | 216.02 | 1,623.06 |
| Gladstone City | 363.61 | 1.71 | 26,745.76 | 111.83 | 216.02 | 1,753.13 |
| Gladstone WTP to South Gladstone | 363.61 | 1.71 | 28,169.61 | 111.87 | 216.02 | 1,801.07 |
| Calliope | 363.61 | 1.71 | 40,532.51 | 127.08 | 216.02 | 2,320.59 |
| South Gladstone to Toolooa | 363.61 | 1.71 | 36,447.29 | 114.90 | 216.02 | 2,151.60 |

| *Pricing zone* | *Reservation and storage* | | *Delivery* | | *Admin* | *Indicative average price* |
|---|---|---|---|---|---|---|
| | *Storage access* ($/reserved ML) | *Storage volumetric* ($/metered ML) | *Delivery access* ($/reserved MDQ) | *Delivery volumetric* ($/metered ML | ($/res. ML) | ($/res. ML) |
| Boyne Potable | 363.61 | 1.71 | 43,970.04 | 115.19 | 216.02 | 2,470.29 |
| Benaraby | 363.61 | 1.71 | 66,617.25 | 138.01 | 216.02 | 3,396.61 |
| Yarwun WTP | 363.61 | 1.71 | 32,400.68 | 107.98 | 216.02 | 2,554.29 |
| North Industrial Potable | 363.61 | 1.71 | 38,794.63 | 109.27 | 216.02 | 3,156.18 |
| Fishermans Landing Potable | 363.61 | 1.71 | 55,928.50 | 109.27 | 216.02 | 5,823.51 |
| Boat Creek to East End | 363.61 | 1.71 | 91,013.78 | 292.33 | 216.02 | 11,245.08 |

*Source: QCA calculations.*

We also calculated the price changes from the indicative prices we found (Part A, Chapter 10, table 34)—the differences are presented in Table 4. The effects of the capitalisation are an increase to the storage access charge, delivery access charges and admin charges.

**Table 4 Comparison of QCA indicative prices including and excluding capitalisation of under-recovery associated with raising Awoonga Dam (1 July 2020)**

| *Pricing zone* | *Reservation and storage* | | *Delivery* | | *Admin* | *Indicative average price* |
|---|---|---|---|---|---|---|
| | *Storage access* ($/reserved ML) | *Storage volumetric* ($/metered ML) | *Delivery access* ($/reserved MDQ) | *Delivery volumetric* ($/metered ML | ($/res. ML) | ($/res. ML) |
| Awoonga | 12.02 | — | — | — | 0.00 | 12.02 |
| Awoonga to Toolooa | 12.02 | — | 0.25 | — | 0.00 | 12.03 |
| Toolooa to Fitzsimmons | 12.02 | — | 0.29 | — | 0.00 | 12.03 |
| Boyne Raw | 12.02 | — | 0.52 | — | 0.00 | 12.04 |
| Central Raw | 12.02 | — | 0.40 | — | 0.00 | 12.04 |
| Fitzsimmons to Gladstone | 12.02 | — | 0.29 | — | 0.00 | 12.03 |
| QAL | 12.02 | — | 0.35 | — | 0.00 | 12.04 |
| Fishermans Landing Raw | 12.02 | — | 0.59 | — | 0.00 | 12.06 |
| Gladstone WTP | 12.02 | — | 0.48 | — | 0.00 | 12.04 |
| Gladstone City | 12.02 | — | 0.52 | — | 0.00 | 12.04 |
| Gladstone WTP to South Gladstone | 12.02 | — | 0.62 | — | 0.00 | 12.05 |
| Calliope | 12.02 | — | 1.22 | — | 0.00 | 12.07 |
| South Gladstone to Toolooa | 12.02 | — | 0.88 | — | 0.00 | 12.06 |
| Boyne Potable | 12.02 | — | 1.18 | — | 0.00 | 12.07 |
| Benaraby | 12.02 | — | 1.75 | — | 0.00 | 12.09 |
| Yarwun WTP | 12.02 | — | 0.85 | — | 0.00 | 12.07 |
| North Industrial Potable | 12.02 | — | 1.17 | — | 0.00 | 12.10 |
| Fishermans Landing Potable | 12.02 | — | 1.91 | — | 0.00 | 12.21 |
| Boat Creek to East End | 12.02 | — | 3.85 | — | 0.00 | 12.50 |

*Source: QCA calculations.*

## 7.2 Implementation via the pricing principles

GAWB made a submission in 2009 to our investigation of GAWB's pricing practices (completed in 2010), in which it provided a set of pricing principles that it had developed.[71] GAWB said these principles accorded with the recommendations we made following the investigations we completed in 2002 and 2005.[72] GAWB also said in its proposal for this 2020–2025 investigation

[71] GAWB, submission to the QCA, *Commercial Framework and Pricing Principles for the 2010 price review*, September 2009, Appendix E, https://www.qca.org.au/wp-content/uploads/2019/05/4266_W-GAWB2010-GAWB-Submission1-040909-1.pdf.

[72] GAWB, submission to the QCA, *Commercial Framework and Pricing Principles for the 2010 price review*, September 2009, p. 43.

that its commercial arrangements recognise this element of the regulatory framework and refer to it as the 'price smoothing carryover'.[73]

Accordingly, we have assumed that the pricing principles in the users' contracts[74]—insofar as they relate to the 'price smoothing carryover'—are on the following, or substantially similar, terms:

> The first step in calculating prices is to determine an Aggregate Revenue Requirement (ARR) for GAWB in each year of a 20-year planning period.
>
> The ARR will include:
>
> …
>
> - an amount to recover the present smoothing effects from the previous review period (the Price Smoothing Carry-over)[75]

Callide Power said it would like the QCA and GAWB to be aware of the pricing principles in its supply agreement. It said GAWB should consider 'sound commercial negotiations made in good faith' for amending them.[76]

GAWB said our approach for amending the pricing principles could be reasonable, subject to GAWB's position on using its WACC rather than the QTC cost of debt for calculating annuity payments.[77]

We are of the view that using GAWB's benchmark cost of debt is an appropriate compromise for calculating annuity payments (see section B5.3). Therefore, to reflect our advice on the under-recovery, we consider the pricing principles should be amended as set out below.

[73] GAWB, sub. 1, p. 56.
[74] Other than that for Callide Power Management Pty Ltd—see Callide Power Management, sub. 17, p. 7.
[75] GAWB, submission to the QCA, *Commercial Framework and Pricing Principles for the 2010 price review*, September 2009, p. 124.
[76] Callide Power Management, sub. 31, p. 1.
[77] GAWB, sub. 34, p. 7.

### Finding B7.12—Amendment to pricing principles

The QCA finds it appropriate that the pricing principles in the user contracts be amended in the following ways:

- The amount required to recover the present smoothing effects from the previous review period (the price smoothing carry-over) should be removed from the calculation of the aggregate revenue requirement, save in relation to the under-recovery associated with raising Awoonga Dam.[a]
- The under-recovery associated with raising Awoonga Dam should be capitalised in 2020–21, and recouped through customer prices over the remaining asset life of the Awoonga Dam.
- The amount required to recoup the present smoothing effects from the previous review period (the price smoothing carry-over), less the amount included in the aggregate revenue requirement for raising Awoonga Dam, be recoverable from each current user (in the appropriate amount) through an annuity, or a lump-sum payment, as agreed between GAWB and the applicable customer. Failing such agreement, the amount should be repaid by that customer through an annuity over a term of 30 years (for industrial customers) and 100 years (for the council), with the annuity repayments reflecting GAWB's benchmark cost of debt.

[a] Raising Awooga Dam refers to the capital works, commissioned in 2001, to increase the maximum height of the Awoonga Dam reservoir to 40 metres.

# GLOSSARY

| | |
|---|---|
| ARR | Aggregate Revenue Requirement |
| CFO | cash flow from operations |
| CPI | consumer price index |
| Council | Gladstone Regional Council |
| the Directions | the Treasurer's referral and direction notice to the QCA dated 28 June 2019 |
| ESC | Essential Services Commission Victoria |
| FFO | funds from operations |
| FSL | full supply level |
| GAWB | Gladstone Area Water Board |
| GRC | Gladstone Regional Council |
| IPART | Independent Pricing and Regulatory Tribunal |
| MDQ | maximum daily quantity |
| ML | megalitre |
| NERA | National Economic Research Associates |
| QCA | Queensland Competition Authority |
| QTC | Queensland Treasury Corporation |
| WACC | weighted average cost of capital |
| WICET | Wiggins Island Coal Export Terminal |
| WTP | water treatment plant |

# APPENDIX A: DETERMINING GAWB'S PROPOSED ANNUITIES

Several stakeholders raised concerns about the information they received about their under-recovery liabilities (see discussion of transparency in section B1.2).[78] ConocoPhillips suggested 'that further information should be requested from GAWB on the methodology to be applied in determining any additional payment.'[79] This appendix seeks to provide this information to customers.

Our investigation shows that in order to determine the allocation of the under-recovery to customers, GAWB:

- calculated the revenue that was unrecovered annually by pricing zone
- solved for an incremental zonal price to extinguish these annual under-recoveries from each pricing zone
- applied the incremental zonal prices to the historic demand of each customer in order to identify the amount of revenue that was unrecovered for each customer
- presented the revenue stream as a present value amount for each customer as at 1 July 2020.[80]

Once GAWB determined the amount of the under-recovery for each customer, it calculated repayment amounts. This was achieved using an annuity approach.

GAWB proposed that the following measures should be applied with each price reset in the context of a new five-year regulatory period:

- Calculate the annual annuity payment for each customer that would extinguish the outstanding balance, having regard to the maximum repayment term.[81] The initial annual annuity payments will be based on the WACC used to set prices commencing 1 July 2020.
- Each customer gets a repayment schedule with five annual payments (called annuities).
- All remaining payments due in the five-year regulatory period, including a balloon payment, become due and payable if the customer terminates its supply arrangements before the end of the regulatory period.
- If supply is to occur in the following regulatory period, the 'balloon payment' identified in year five of the repayment schedule will be used to set the new annuity for the next regulatory period.[82]

ConocoPhillips said this explanation was insufficient:

> Whilst Appendix A helpfully sets out principles that have been applied by GAWB in relation to the proposed under-recovery, it does not explain the way in which the proposed additional payment has been calculated or applied to us. We have requested this information several times directly from GAWB but to date it has not been provided … this information needs to be provided to customers.[83]

[78] GRC, sub. 15, p. 6; ConocoPhillips, sub. 16, p. 2; sub. 38, p. 1; CS Energy, sub. 22, p. 1; Callide Power Management, sub. 17, p. 6.
[79] ConocoPhillips, sub. 16, p. 2.
[80] GAWB, Under-recovery Analysis Model, submission, September 2019.
[81] For industrial customers, GAWB proposed the lesser of supply contract termination/plant expiry dates and 20 years. For the council, GAWB proposed 100 years.
[82] GAWB, sub. 7, p. 12.
[83] ConocoPhillips, sub. 38, p. 1.

Customers' under-recovery liabilities differ for a variety of reasons, including the period over which they have contracted, and the make-up of the services that they receive from GAWB. We consider that GAWB should provide sufficient customer-specific information during negotiations over annuity terms, so that each customer can clearly understand why it has the liability that GAWB is seeking to recoup from it.

# APPENDIX B: UNDER-RECOVERY RELATED TO RAISING AWOONGA DAM

| *Item* | *Awoonga Dam raising* | |
|---|---|---|
| 1 | Asset life | 150 years |
| 2 | Opening asset value | $99.2 million |
| 3 | QCA approval | 2002 |
| 4 | WACC[a]:<br>2002–03 to 2004–05<br>2005–06 to 2009–10<br>2010–11 to 2014–15<br>2015–16 to 2019–20 | <br>8.72%<br>8.05%<br>9.46%<br>5.41% |
| 5 | Awoonga Dam raising revenue requirement (2002–03 to 2019–20)<br>Return on asset<br>*plus* depreciation<br>*less* inflation<br>Total | <br>$166.5 million<br>$15.7 million<br>$53.2 million<br>$129.0 million |
| 6 | GAWB's overall revenue requirement (2002–03 to 2019–20)[b] | $696.7 million |
| 7 | Awoonga Dam raising under-recovery portion<br>= (item 5 ÷ item 6) × total under-recovery<br>$129.0 million ÷ $696.7 million × $124.7 million | <br><br>$23.1 million |

*a Prevailing WACC for each review period.*
*b See previous QCA final reports for GAWB*
*Note: All dollar amounts in the table are nominal.*
*Sources: QCA calculations; QCA, Gladstone Area Water Board: Investigation of Pricing Practices, final report, September 2002, pp. 51, 101; ABS, Consumer Price Index, Australia, Sep 2019, cat. 6401.0, Table 5—CPI: Groups, Index Numbers by Capital City, All groups CPI, Brisbane.*

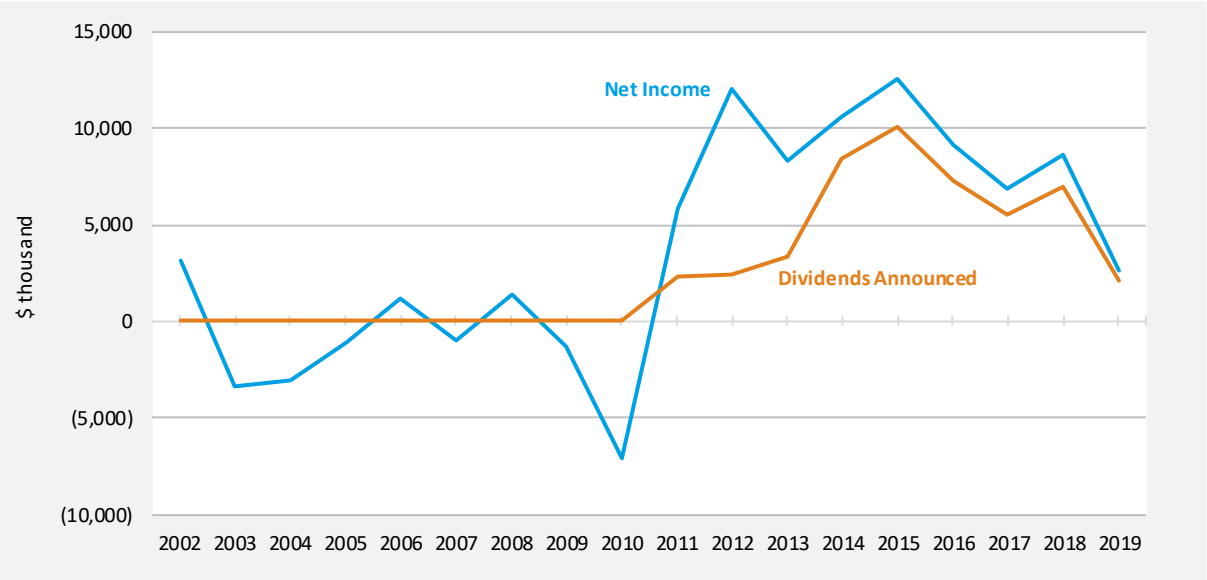
# APPENDIX C: ASSESSING GAWB'S FINANCIAL POSITION

We have undertaken an indicative assessment of GAWB's financial position over the period since the initial raising of Awoonga Dam up until now.

## Net income and cash flow analysis

Looking at GAWB's publicly available financial data contained within its annual reports, we were able to determine net income and cash flow metrics. We found that GAWB has been making sufficient revenues to achieve a positive net income consecutively since 2010–11, especially in the past five-year period, despite under-recovering revenues. GAWB did not pay dividends from 2001–02 to 2011–12; it was incurring losses in that period (Figure 13).[84] However, GAWB's financial position after 2011–12 has been robust enough to sustain dividend payments out of net income.

**Figure 13 Net income and dividends announced**

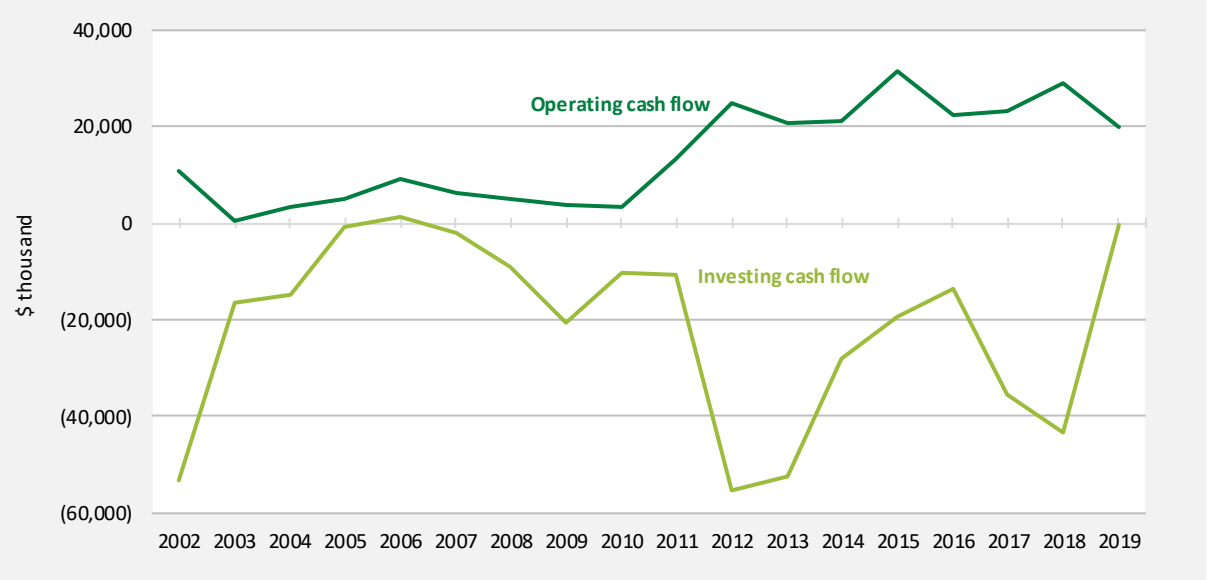



*Source: GAWB's annual reports.*

In addition, GAWB's operating cash flows have been steady, signifying that the revenue from water supply tariffs have been adequate. Operating income has been similarly stable and has trended upwards since 2001–02. GAWB's net cash flows have historically been very volatile due to unstable investing cash flows from acquisitions of property and intangible assets. However, when considering operating cash flow, which stems from water supply tariffs, GAWB has produced consistently positive cash flows with positive growth since the dam raising. This signifies a robust revenue stream from customers and relatively stable performance, despite having volatile cash flows from investing activities (Figure 14).

[84] The figure shows dividends announced, not dividends paid. GAWB pays dividends in the financial year after the financial year in which they are announced. However, the financial year of announcement is a more accurate representation of GAWB's ability to pay dividends, as the dividend announced in a particular financial year correlates to the net income of the same financial year.

**Figure 14 Operating and investing cash flows**




*Source: GAWB's annual reports.*

## Financeability

Financeability refers to the capacity of a business to finance its activities—including its day-to-day operations and its capital investments to renew and expand the infrastructure required for these activities. One indicator of a business's financeability is the credit rating that credit rating agencies such as Moody's, Standard & Poor's and Fitch Ratings assign it.

Many businesses regularly rely on debt and equity markets to finance new capital expenditure and refinance debt related to past capital expenditure. Lenders typically focus on credit ratings to determine how much they will charge, and businesses with a lower credit rating usually face higher debt financing costs. If a business's rating falls below investment grade, it may have difficulty raising finance at a cost it can afford, and this may threaten its short-term financial viability.

We applied the financeability test adopted by GAWB during our 2015 price monitoring review to GAWB's 2019 annual report data.[85] GAWB adopted the following four financial ratios recommended by National Economic Research Associates (NERA)[86] in its 2013 report to the Essential Services Commission (ESC) on financeability tests for regulated water service providers:

- funds from operations (FFO) interest cover
- net debt to regulatory asset value
- FFO to net debt
- retained cash flow to capital expenditure.

Table 5 shows the financial ratios target ranges to determine if businesses are investment grade (i.e. BBB rating) and QCA estimates for GAWB. GAWB noted that the internal financing metric is likely to be viewed as less important than the first three metrics.[87]

[85] GAWB, submission to the QCA, *2015 Price Monitoring Investigation*, September 2014, pp. 86–87.
[86] NERA Economic Consulting, *Assessing the Financeability of Regulated Water Service Providers*, final report, October 2013, p. 8.
[87] GAWB, *2015 Price Monitoring Investigation*, submission, September 2014, p. 86.

**Table 5 Financial ratios and ranges**

| *Indicator* | *Calculation* | *Range for BBB rating* | *QCA estimate* | *Evaluation* |
|---|---|---|---|---|
| **FFO interest cover**<br>Measures the extent of the cash flow buffer a business has to meet its debt obligations | (FFO + net interest) ÷ net interest | 2.5 to 4.5 times | 2.98 times | FFO interest cover estimates GAWB's rating to be **BBB** |
| **Net debt to regulatory asset base (gearing)**<br>Measures the debt component of the regulatory capital structure | (Interest bearing liabilities – cash) ÷ regulatory asset value | 55 to 70 per cent | 38 per cent | Net debt to regulatory asset value estimates GAWB's rating to be **above BBB** |
| **FFO to net debt**<br>Measures the extent to which the serviceability of debt is improving, remaining stable, or declining | FFO ÷ (Interest bearing liabilities – cash) | 10 to 15 per cent | 8.73 per cent | FFO to net debt estimates GAWB's rating to be slightly **below BBB** |
| **Retained cash flow to capital expenditure (internal financing)**<br>Measures the extent to which an entity has cash remaining to finance a prudent portion of capital expenditure after making dividends | (FFO – dividends) ÷ net capital expenditure | 1 to 1.5 times | 1.09 times | Retained cash flow to capex indicates a **BBB** rating for GAWB |

*Notes:*
1. *To undertake this test on GAWB, we calculated the financial ratios using financial data from GAWB's annual reports, except for GAWB's regulatory asset base, which was sourced from GAWB's building block model.*
2. *Our credit rating estimator ratios are for the 2019 financial year.*
3. *Interest-bearing liabilities were taken as current and non-current loans and borrowings.*
4. *FFO was defined by NERA as pre-tax profit, plus depreciation, minus tax paid, minus change in working capital. We have assumed, however, cash flow from operations (CFO) is a substitutable proxy for FFO as the calculation method for CFO is broadly the same.*
5. *IPART (in 2015) proposed to use CFO prior to changes in working capital for FFO.* [88] *IPART (in 2018) also reviewed their financiability test and used a similar definition for FFO, calculating FFO as CFO less interest payments.*[89] *In GAWB's case, IPART included interest payments in CFO. Both IPART reports indicate operating cash flow as an appropriate proxy for FFO.*
6. *The ESC (in 2013) used CFO less sources of non-recurrent revenue as its approximation for FFO.*[90] *As GAWB's operating cash flow does not have non-recurrent inflows, we consider operating cash flow is an appropriate proxy for FFO.*
7. *Our proxy of CFO for FFO broadly in line with the approach used by the Corporate Finance Institute (CFI).* [91]

*Source: GAWB's annual reports; QCA calculations.*

We recognise the ratios (Table 5) provide indicative results only, with an indicative BBB rating for GAWB by the financial metrics being available. However, we encourage GAWB to undertake its own assessment in response to this final report using its financial data.

Although we deem a BBB rating appropriate, we acknowledge certain limitations to this method, in particular the lack of diversity of metrics. NERA and Moody's both recommend that a quantitative assessment receive approximately a 40 per cent weighting when considering the overall rating of a company, with considerable weighting going to qualitative factors such as business practices.

[88] IPART, *Final Decision—Financeability ratios*, fact sheet, April 2015, p. 2.
[89] IPART, *Review of our financeability test*, final report, November 2018, p. 44.
[90] ESC, *Assessing the Financeability of Victorian Water Businesses*, consultation paper, December 2013, p. 8.
[91] CFI, Cash Flow from Operations, viewed 21 May 2020, https://corporatefinanceinstitute.com/resources/knowledge/accounting/cash-flow-from-operations/.

We also highlight the use of metrics such as FFO, which do not have a standardised method of calculation and are not commonly used in this manner for regulated water utilities, but rather for real estate investment trusts. Although regulators and consultants have adopted various versions of FFO to use in financeability tests, there is no consensus regarding the method of calculation.

# APPENDIX D: LIST OF SUBMISSIONS

The submissions that we received during our review of GAWB's pricing proposal (1 July 2020 to 30 June 2025) are listed below. The submissions are numbered for reference purposes only—the numbers are used in the footnotes in the final report. The submissions are available on our website.

**Table 6 Submissions**

| *Stakeholder* | *Sub. no.* | *Type of submission* | *Date* |
|---|---|---|---|
| Benaraby Progress Association | 25 | Submission on the QCA draft report | 26 March 2020 |
| Boyne Burnett Inland Rail Trail Inc. | 24 | Submission on the QCA draft report | 25 March 2020 |
| Boyne Tannum Hookup Association | 23 | Submission on the QCA draft report | 24 March 2020 |
| Callide Power Management | 11 | Submission on GAWB's proposal | 28 October 2019 |
| | 17 | Submission in response to under-recovery | 29 November 2019 |
| | 31 | Submission on the QCA draft report | 27 March 2020 |
| The Community Shed Boyne Valley | 27 | Submission on the QCA draft report | 26 March 2020 |
| ConocoPhillips (APLNG) | 16 | Submission in response to under-recovery | 29 November 2019 |
| | 38 | Submission on the QCA draft report | 27 March 2020 |
| CS Energy | 14 | Submission on GAWB's proposal | 25 October 2019 |
| | 18 | Submission in response to under-recovery | 29 November 2019 |
| | 22 | Submission on the QCA draft report | 23 March 2020 |
| Gladstone Area Water Board | 1 | GAWB's proposal, Part A | 30 September 2019 |
| | 2 | GAWB's proposal, Part A—confidential version | 30 September 2019 |
| | 3 | Attachment 1—Referral and direction notice | 30 September 2019 |
| | 4 | Attachment 2—*Cost escalation factors (2020–21 to 2024–25),* prepared for GAWB by Deloitte Access Economics, August 2019 | 30 September 2019 |
| | 5 | Attachment 3—*Review of the WACC for Gladstone Area Water Board*, prepared for GAWB by Synergies, September 2019 | 30 September 2019 |
| | 6 | Attachment 4—Capital contributions framework | 30 September 2019 |
| | 7 | GAWB's proposal, Part B | 30 September 2019 |
| | 8 | GAWB's proposal, Part B—confidential version | 30 September 2019 |
| | 12 | Submission in response to WICET's initial submission | 28 October 2019 |

| *Stakeholder* | *Sub. no.* | *Type of submission* | *Date* |
|---|---|---|---|
| | 33 | Response (Part A) to the QCA draft report Part A | 27 March 2020 |
| | 34 | Response (Part B) to the QCA draft report Part B | 27 March 2020 |
| | 35 | Attachment A to response part A— *Response to KPMG report: Draft Report – GAWB expenditure review 2020*, prepared for GAWB by Deloitte Access Economics, 25 March 2020 | 27 March 2020 |
| | 36 | Attachment A to response part B—*A retrospective analysis of water security benefits from the raising of Awoonga Dam*, prepared for GAWB by Synergies Economic Consulting, March 2020 | 27 March 2020 |
| | 37 | Covering letter | 27 March 2020 |
| Gladstone Area Promotion and Development Ltd | 29 | Submission on the QCA draft report | 27 March 2020 |
| Gladstone Chamber of Commerce and Industry Inc. | 30 | Submission on the QCA draft report | 27 March 2020 |
| Gladstone Engineering Alliance | 28 | Submission on the QCA draft report | 27 March 2020 |
| Gladstone Regional Council | 15 | Submission on GAWB's proposal | 8 November 2019 |
| | 32 | Submission on the QCA draft report | 27 March 2020 |
| Nevin, O | 10 | Submission on GAWB's proposal | 21 October 2019 |
| Rio Tinto | 19 | Submission on GAWB's proposal and under-recovery | 29 November 2019 |
| Ubobo Progress Association | 26 | Submission on the QCA draft report | 26 March 2020 |
| Wiggins Island Coal Export Terminal (WICET) | 9 | Initial submission | 30 September 2019 |
| | 13 | Submission on GAWB's proposal | 28 October 2019 |

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