

Queensland Competition Authority

Subsequent report

Gladstone Area Water Board price monitoring 2020–25

October 2023

We wish to acknowledge the contribution of the following staff to this report:

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EXECUTIVE SUMMARY

In June 2019, we were directed by the Queensland Government to conduct a price monitoring investigation of Gladstone Area Water Board (GAWB) for the pricing period 1 July 2020 to 30 June 2025.¹ We published our final report in May 2020, setting out our findings on prudent and efficient expenditures and indicative prices for GAWB's bulk water services.²

The government's referral and direction notice requires us to prepare a subsequent midterm price monitoring report that compares prices GAWB actually charged its customers between 1 July 2020 and 30 June 2023 to the indicative prices from our May 2020 final report.

As a light-handed regulatory framework, the price monitoring regime is intended to have an informative rather than determinative purpose and does not directly bind the regulated business. The general objective of price monitoring is to present incentives that constrain the provider of a monopoly service from exercising its market power.³ In this way, the regime serves to support transparency and accountability in GAWB's price-setting process. However, GAWB may depart from our findings and set prices differently, subject to its contractual agreements and pricing principles.

GAWB provided a submission to the QCA in July 2023 which identified the prices it actually charged, and identified several departures from the findings of the QCA's May 2020 final report. GAWB's actual prices⁴ in 2020–21 are higher than the indicative prices we calculated by between 6.3 and 16.6 per cent on average across all pricing zones in 2020–21, depending on the tariff component. These differences are primarily due to GAWB's inflation forecasts (that are not derived using our preferred methodology), revised zonal demand forecasts and updates to other modelling inputs. GAWB's revised revenue requirement for the 2020–25 period is \$7.5 million (2.7 per cent) higher than the QCA's final report revenue requirement.

GAWB's prices in 2021–22 and 2022–23 increased by 1.72 and 6.00 per cent respectively, due to annual indexation for actual inflation.

Our midterm review found that where GAWB's assumptions or inputs departed from our findings, GAWB has transparently applied and explained these deviations, as described in its submission and as communicated to customers. While our final report expressed different views on some matters, GAWB has nonetheless explained its reasons for departing from our findings.

Based on our review, GAWB has demonstrated a sound customer consultation process in setting and explaining its final prices for 2020–21 and its annual price indexation adjustments thereafter. We are satisfied that GAWB has engaged with its customers in an open and transparent way.

¹ Deputy Premier, Treasurer and Minister for Aboriginal and Torres Strait Islander Partnerships, Queensland Government, *Queensland Competition Authority Act 1997 Sections 23A and 24, Referral and direction notice*, 28 June 2019.

² QCA, [GAWB price monitoring 2020–25](#), QCA website, 2023.

³ In the context of regulation of Australian airports, the Productivity Commission has opined that 'Price monitoring, as part of a light-handed regulatory approach, was intended to constrain the misuse of market power by the major airports, while greatly reducing regulatory intrusion into their commercial dealings with airlines and other customers.' See: Productivity Commission, *Review of Price Regulation of Airport Services*, Productivity Commission Inquiry Report No. 40, 14 December 2006, p. 39.

⁴ The term 'actual prices' is used throughout to describe the prices actually charged by GAWB, after all deviations from the QCA final report indicative prices.

Key findings

- GAWB made several discrete adjustments to input values set out in the final report that result in its actual prices departing from the indicative prices in our final report. In total, these adjustments result in a revenue requirement for the 2020–25 pricing period that is \$7.5 million (2.7 per cent) higher than our final report revenue requirement used to derive indicative prices. The resulting zonal prices are between 6.3 per cent and 16.6 per cent higher on average than the indicative prices we derived for 2020–21.⁵
- The majority of GAWB's departures from our findings were anticipated or previously foreshadowed in the final report, or by GAWB. These expected deviations include, for example, updates to the risk-free rate averaging period and debt risk premium, insurance cost estimates, regulatory asset base (RAB) roll-forward updates for 2019–20, use of updated demand forecasts and minor modelling corrections.
- GAWB disagreed with some policy positions expressed in our final report, most notably our position on forecast inflation. GAWB's alternative inflation forecast accounts for around 55 per cent of the difference between our final report revenue requirement and GAWB's revised revenue requirement. We do not accept that GAWB's approach is preferable to our own.
- GAWB's prices in 2021–22 and 2022–23 have increased by actual CPI inflation only, compared with final 2020–21 prices.
- We have reviewed GAWB's revised revenue and price modelling and are satisfied that the departures from our findings have been applied transparently and are as described in GAWB's submission.
- GAWB has actively engaged with customers to explain its 2020–21 prices and its reasons for departing from our final report positions. GAWB also continues to engage with customers to explain annual indexation of prices and offer briefings on key issues.

⁵ Based on the average percentage change in each of the five tariff components across all pricing zones (except Curtis Island).

1 OVERVIEW

1.1 Purpose of this midterm review

The purpose of this review is to provide ongoing oversight of GAWB's pricing practices and provide additional transparency for the benefit of GAWB's customers and stakeholders. It also encourages accountability by providing an opportunity for GAWB to explain and justify its pricing decisions.

As noted in our 2020 final report, GAWB is not compelled to apply our findings when setting prices. GAWB has discretion to set prices in a manner that it considers appropriate, having regard to its pricing principles and contractual arrangements with customers, as well as its various statutory obligations.⁶

Importantly, this review is not a reconsideration of our findings in the 2020 final report. Should we be directed to undertake a price monitoring investigation for the 2025–30 period, we would consider all matters afresh, having regard to GAWB's pricing proposal and other relevant information at that time.

This report should be read in conjunction with our 2020–25 price monitoring final report of May 2020, which provides relevant background and context.

1.2 QCA approach

The referral and direction notice⁷ requires us to compare GAWB's actual prices charged over the period 1 July 2020 to 30 June 2023, with the indicative prices from our 2020 final report.⁸

In undertaking this review, we have sought to:

- identify any differences between the indicative prices we estimated and GAWB's actual prices
- identify and confirm the underlying drivers of those differences
- verify, with reference to GAWB's financial modelling, that GAWB has applied any identified adjustments to prices as stated in its submission
- verify whether GAWB has adequately consulted with customers to explain its prices and any variations from the QCA's findings.

1.3 Stakeholder submissions

The referral and direction notice provides for GAWB to make a submission to us justifying any differences between the prices charged to its customers and the indicative prices in our final

⁶ GAWB is a category 1 water authority, as defined in the *Water Act 2000* (Qld). See section 1.1.2 of our May 2020 final report for a description of the statutory obligations applying to category 1 water authorities.

⁷ Deputy Premier, Treasurer and Minister for Aboriginal and Torres Strait Islander Partnerships, Queensland Government, *Queensland Competition Authority Act 1997 Sections 23A and 24, Referral and direction notice*, 28 June 2019.

⁸ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 35.

report. GAWB provided a submission on 31 July 2023, along with a range of supporting information and financial models.⁹

GAWB also provided a confidential version of its submission detailing actual prices for the Curtis Island pricing zone. These prices are commercially sensitive and are not reproduced in this report.

We received one submission, from CS Energy, which requested that our midterm review present an update on the following matters:

- the quantum of the accumulated under-recovery that has been recovered to date
- GAWB's progress in aligning its asset management plans with its maintenance strategies
- a comparison between forecast and actual outturn demand to date
- updates on the capex program, opex and revenue—so as to anticipate further accumulation of under-recovery during the 2020–25 period.¹⁰

We acknowledge that these matters may be of interest to stakeholders. However, we consider these matters are out of scope of this midterm review of prices, which focusses on a comparison of actual prices charged by GAWB and the indicative prices from our May 2020 final report. The matters raised by CS Energy would be best addressed directly by GAWB through its ongoing customer engagement processes.

1.4 GAWB's customer engagement

After our final report was released, GAWB consulted with customers to explain its prices for the 2020–21 year, including its departures from our findings. We have been provided with evidence that the departures from our findings, which GAWB identifies in its submission, were explained to customers directly.

As part of its customer consultation, GAWB offered to make additional information and supporting documents available to customers. GAWB noted that none of its customers requested any additional supporting information or had any further queries at this time.¹¹

We understand that GAWB continues to engage with customers ahead of each annual price reset to explain the indexation process and prices for the upcoming financial year.

⁹ GAWB, *Mid-term price review*, submission to the QCA, July 2023.

¹⁰ CS Energy, *Gladstone Area Water Board price monitoring—midterm review*, 23 May 2023, p. 1.

¹¹ GAWB, *Mid-term price review*, submission to the QCA, July 2023, p. 23.

2 COMPARISON OF REVENUES AND PRICES

2.1 Overview

Broadly speaking, GAWB's bulk water prices are a function of expected revenue and forecast demand. First, a building block revenue requirement is determined for each of GAWB's 20 pricing zones. Then each revenue requirement is allocated to one or more of five tariff components for each pricing zone. Tariff components are classified as either storage, delivery or administration charges.¹² Customers are charged based on a five-part tariff according to their supply zone. This allocation results in 98 discrete tariff components through which revenues are recovered.¹³

Given the complexity of the pricing and cost allocation framework, it is impractical to meaningfully isolate the impact of GAWB's departures from our findings on zonal prices and tariff components directly. As such, we have focused on the incremental impact that each variation has on GAWB's total revenue requirement in the first instance. We consider this provides a more intuitive approach to understanding the drivers of pricing differences.

Our final report presented indicative bulk water revenues and prices for 2020–21 under four scenarios:

- with and without the Curtis Island pricing zone¹⁴
- with and without the capitalised accumulated revenue under-recovery (ARUR) associated with the raising of the Awoonga Dam wall.¹⁵

Our comparative analysis in this midterm review of prices is primarily focused on the scenario that excludes the ARUR component and the Curtis Island pricing zone. However, some discussion of the impact of adjustments to the ARUR component is contained in section 2.3 of this report. In addition, Curtis Island prices are discussed in a separate appendix to this report, which is confidential and which we have made available to the government.

2.2 Summary of GAWB's adjustments

GAWB's actual prices for 2020–21 are the result of several discrete variations from our final report findings. These variations are illustrated in Figure 1 and discussed below. For modelling and presentation purposes, some smaller items have been grouped together.

GAWB's final revenue requirement for the 2020–25 pricing period is \$7.5 million (2.7%) higher than the revenue requirement in our final report.¹⁶

¹² Tariff components are charged based on either annual reserved volumes (in megalitres (ML)), metered volumes (ML) or reserved maximum daily quantity (MDQ).

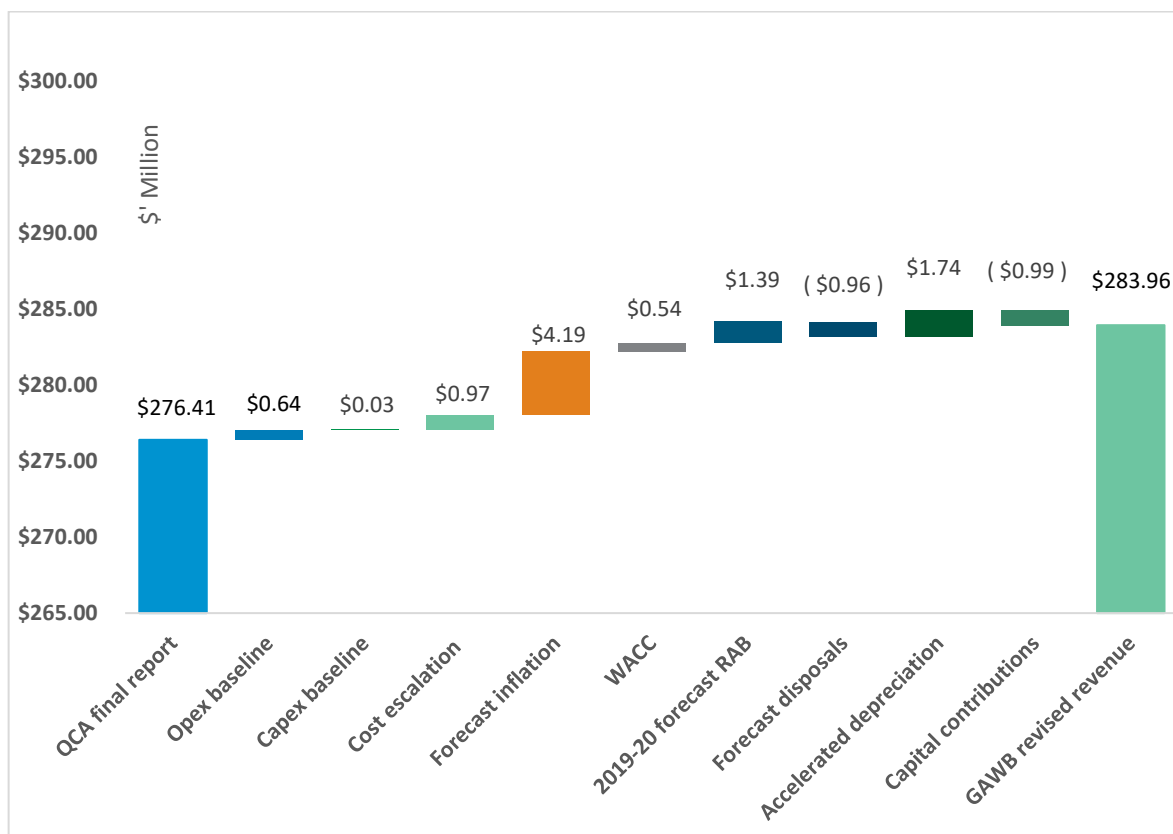
¹³ GAWB also applies 'over-run' charges for exceeding reserved volumes and MDQ, as well as contract length premiums.

¹⁴ Curtis Island zone prices are commercial in confidence. These prices were addressed in the confidential version of the 2020 final report only, which we supplied to government.

¹⁵ The impact of GAWB's adjustments on the ARUR component is largely isolated to the common storage access charge only. See section 2.3 for further discussion.

¹⁶ All revenue requirements that are referenced in this report reflect the net present value of the total annual revenue requirements over the 2020–25 pricing period.

Figure 1 GAWB's variations to QCA indicative revenue requirements (\$ million, net present value)



Note: Excludes Curtis Island and impact of capitalised ARUR. The QCA and GAWB revenue requirements reflect the net present value of the total annual revenue requirements over the 2020–25 pricing period.

Source: GAWB modelling (July 2023), GAWB submission, p. 19.

Operating expenditure baseline

GAWB made three adjustments affecting its baseline operating expenditure (opex) forecast for the period:

- *An updated estimate of GAWB's QCA levy liability*—During the 2020 price monitoring investigation, we acknowledged GAWB's intention to seek updated fee estimates from us before it set prices for 2020–21.¹⁷ We provided an updated estimate for 2019–20 fees in June 2020, which was around \$0.4 million higher than GAWB's original forecast.¹⁸
- *Updated forecast insurance costs*—GAWB's original insurance cost forecasts were based on broker estimates for the 2019–20 year, escalated over the forecast period. We acknowledged GAWB's intention to seek updated insurance quotes prior to setting prices for 2020–21.¹⁹ GAWB subsequently obtained updated broker estimates and adopted these costs as the revised base year insurance cost, which is then escalated over the pricing period. This results in an overall increase in insurance costs of around \$0.25 million over the 2020–25 period, compared with our findings.²⁰

¹⁷ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 35.

¹⁸ This difference is 'trued-up' through opex in 2020–21.

¹⁹ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 39.

²⁰ Our final report forecast was \$7.66 million, compared with GAWB's final forecast of \$7.91 million.

- *Refinement of allocation methods for opex*—In preparing our indicative prices, we did not have visibility over GAWB's complete allocation models to accurately allocate opex to pricing zones. As such, we relied on some simplifying assumptions to allocate costs to each pricing zone. This was noted in our final report, as was the expectation that GAWB's actual prices may differ as a result.²¹ Before GAWB set the 2020–21 prices, it remodelled the opex allocations using its actual allocation assumptions. This adjustment has a trivial impact on revenues but does contribute to the difference between GAWB's prices and the indicative prices in our final report at the zonal level (section 2.3).

These adjustments are consistent with our expectations, as noted in our final report, and GAWB has explained these adjustments to its customers.

The estimated incremental revenue impact of these adjustments is around \$0.64 million over the 2020–25 period, or around 8.5 per cent of the net difference between GAWB's revenue requirement and the indicative revenue requirement set out in our final report.

Capital expenditure baseline

Our final report prices excluded \$0.94 million in capital expenditure (capex) costs associated with GAWB's Lake Awoonga recreational strategy.²² These costs were excluded on the basis that they were contingency amounts lacking sufficient justification. We found the remaining costs associated with the recreational strategy to be prudent and efficient.

GAWB maintained that the contingency allowance is necessary and retained the expenditure in its forecast capex allowance for setting actual prices.

We note that GAWB's position on this issue is consistent with the position it expressed during the 2020 investigation. GAWB has transparently explained this variation to its customers. In total, the estimated revenue impact of this adjustment is not material, at around \$0.03 million over the 2020–25 period.

Forecast inflation 2020–25

Forecast inflation has several roles in GAWB's revenue and price modelling. These include escalation of operating and capital expenditures, deducting forecast inflationary gain on the RAB (from expected revenue), and smoothing prices.²³

During the 2020–25 investigation, GAWB initially proposed to use a proprietary CPI inflation forecast developed by Deloitte Access Economics (DAE). We did not accept this approach, as it was based on proprietary modelling that could not be readily verified and because it was not in the public domain.²⁴ We instead applied our established method that uses the 10-year geometric mean of forecasts from the Reserve Bank of Australia (RBA) Statement on Monetary Policy for the first two years and the RBA target range midpoint (2.5%) for the remaining eight years. This produced a forecast annual CPI inflation rate of 2.42 per cent over the period.

However, to set actual prices for the 2020–25 pricing period, GAWB chose to adopt the CPI inflation forecast developed by the Australian Energy Regulator (AER) for its 2020–25 determinations on Energex, Ergon Energy and SA Power Networks—which were only released

²¹ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 46.

²² QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, pp. 66–68.

²³ As GAWB's alternative inflation forecast is lower than the QCA's, the amount of forecast inflationary gain on the RAB (deducted from expected revenues) is lower, which leads to a higher revenue requirement.

²⁴ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 22.

shortly after our final report.²⁵ The AER applied a CPI inflation forecast of 2.27 per cent per annum over the period.

Like the QCA, the AER applied a standard inflation forecast approach (at the time) that uses the 10-year geometric mean of RBA short-term forecasts and the midpoint of the target range.²⁶ However, for these particular decisions, the AER departed from its standard approach by using the 'trimmed mean inflation' (TMI) measure of CPI (underlying inflation), rather than 'CPI inflation' (headline inflation), for the first two years of the forecast.²⁷

The AER considered that the TMI measure of short-term inflation better reflected the RBA's expectations of core inflation at the time and acted to smooth the transient volatility in CPI forecasts that existed due to Covid-19.²⁸ GAWB considered this approach was appropriate, given the prevailing circumstances at the time, and noted that the AER determinations were subject to a public review and consultation process.²⁹

Consistent with our established inflation forecasting method, our final report used the headline CPI inflation forecasts from the May 2020 Statement on Monetary Policy. Our final report did not comment on the merits of using the TMI, as that report predated GAWB's proposal to apply the AER's alternative method and estimate.

Subsequently, in October 2021, we published a position paper on inflation forecasting. The paper expressed the view that headline CPI is an appropriate measure of general inflation for revenue and price modelling. We noted it is a relatively timely and simple measure that provides good coverage of goods and services commonly purchased by Australian households. However, we said we might consider using TMI estimates, on a case-by-case basis, in abnormal and transient economic circumstances that result in anomalous changes in headline CPI forecasts.³⁰

We have not formed a view on whether the economic circumstances at the time of setting GAWB's prices would have warranted use of the TMI forecast in this situation, as it was not proposed by GAWB during the 2020 investigation. However, we acknowledge that it was a period of economic uncertainty and note that some regulators adopted the TMI forecasts on that basis. That said, we also note that, as the TMI method was not proposed by GAWB during the 2020 investigation, it was not subject to any stakeholder scrutiny at that time.

GAWB has discretion to depart from our findings. However, our view is that GAWB has not made a compelling case for using the TMI approach for this period. Rather, GAWB has principally restated positions put forward by the AER in a set of contemporaneous reviews. As such, these general justifications do not explicitly consider the particular circumstances of GAWB and/or its customers at the time. We acknowledge, however, that GAWB appears to have transparently

²⁵ GAWB's revised position was informed by advice from Synergies.

²⁶ More specifically, the AER's standard approach at the time was to calculate a 10-year geometric mean using the RBA's short-term (1-year and 2-year) CPI headline forecasts and the midpoint of the RBA's target band (2.5%) for the remaining eight years of the period. The AER subsequently changed its standard approach to forecasting inflation, in its December 2020 final position paper on the regulatory treatment of inflation.

²⁷ The TMI measure is based on the weighted average of the percentage changes from the middle 70 per cent of the distribution of rankings within the CPI basket, with expenditure classes at the lower and upper ends of the distribution 'trimmed'.

²⁸ AER, *Energex distribution determination 2020 to 2025*, Attachment 3—Rate of return, final decision, June 2020, p. 8.

²⁹ GAWB, *Mid-term price review*, submission to the QCA, July 2023, pp. 13–14.

³⁰ QCA, *Inflation forecasting*, final position paper, October 2021, pp. iii, 43.

explained its use of alternative inflation forecasts to its customers, after determining its actual prices for 2020–21.

Should we be asked to undertake a pricing investigation for GAWB for the 2025–30 period, forecast inflation would be considered afresh, considering the circumstances and information available at the time, and having regard to our inflation forecasting position paper.

The estimated incremental revenue impact of this adjustment is around \$4.19 million over the 2020–25 period. This is around 55 per cent of the total net variance between the indicative prices we presented and GAWB's prices.

Cost escalation

GAWB made several adjustments to cost escalations for opex and capex, specifically:

- using its alternative forecast for CPI inflation for 2020–25 (discussed above)
- applying an alternative CPI inflation estimate for 2019–20
- correcting modelling errors.

The estimated combined incremental revenue impact of these adjustments is around \$0.97 million over the 2020–25 period. This is around 12.8 per cent of the total variance between our indicative and GAWB's actual revenue requirements. The \$0.97 million difference is driven primarily by the increase in 2019–20 CPI inflation, which is somewhat offset by lower forecast inflation on forecast expenditures. These adjustments are explained further below.

Forecast inflation 2020–25

GAWB's opex and capex forecasts use cost escalation factors to account for forecast changes in specific types of costs over time. For many costs, CPI inflation is applied as an escalator. When escalating these costs to derive actual prices, GAWB adopted its alternative forecast of CPI inflation based on the RBA's TMI forecasts. As GAWB's alternative CPI forecast is lower than ours, this will result in lower forecast costs for some cost categories.

As noted above, we have not formed a view on whether GAWB's CPI forecast method was appropriate, as the TMI approach was not proposed by GAWB during the 2020 pricing investigation.

CPI 2019–20 indexation

GAWB's operating cost forecasts were developed in 2018–19 real dollar terms, using either a bottom-up method or a base year extrapolation method.³¹ GAWB then applied indexation to convert these values to nominal terms at the start of the pricing period (1 July 2020). This required an estimate of inflation for the year 2019–20, as full-year actual CPI inflation data was not available when we finalised our May 2020 final report. In its original pricing proposal, GAWB used a CPI inflation forecast for 2019–20 of 1.2 per cent, prepared by DAE.

For the reasons discussed earlier, our final report did not accept the DAE CPI forecast. We instead relied on the RBA short-term CPI inflation forecast of –1.0 per cent for the year ending June 2020.³² This measure of inflation represented the RBA's expectations of the change in CPI over the year (i.e. June quarter 2019 CPI to June quarter 2020 CPI).

³¹ GAWB's opex forecasting approaches are discussed further in our May 2020 final report.

³² Sourced from the RBA's May 2020 [Statement on Monetary Policy](#).

GAWB did not adopt our position on this matter. Based on further advice from DAE, GAWB adopted an inflation forecast for 2019–20 based on the forecast average change in CPI from June 2019 to June 2020. GAWB argued that a measure of 'year-average' CPI for 2019–20 should be preferred over the 'year-ending' measure that we used. It argued that the year-average measure is appropriate given the unique circumstances at the time, as it is more reflective of actual inflation over the year.³³

GAWB's alternative 2019–20 CPI forecast was based on published Australian Bureau of Statistics (ABS) inflation data up to the March quarter 2020 and the RBA short-term forecast for the June quarter. This implied a year-average inflation forecast of 1.2 per cent.³⁴

GAWB's approach is inconsistent with its approach to long-term inflation forecasts, including the CPI inflation measures used to index prices annually, which use year-ending CPI inflation, not year-average inflation. GAWB did not propose this alternative method during the 2020 investigation, and therefore it was not subject to stakeholder scrutiny at the time. Nonetheless, GAWB has explained its alternative approach to its customers.

Cost escalators

For some costs, GAWB used specific escalation factors (i.e. rates other than CPI) to better capture expected changes in input costs. GAWB made minor adjustments to some of these cost escalations at the cost category level before setting 2020–21 prices.

During modelling of indicative revenues and prices for the final report, we applied CPI escalation to the following opex categories:

- engineering consulting services
- pooled asset purchases and minor assets.

GAWB noted that these cost categories should attract specific cost escalation factors ('professional services – engineering' and 'other materials and services' escalators respectively), rather than CPI.

We have reviewed GAWB's modelling and confirmed that these adjustments reflect appropriate corrections to our final report modelling. The revised outcomes are consistent with the intent of our final report findings on cost escalators.

Update to weighted-average cost of capital (WACC) parameters

To estimate WACC parameters for our final report, we relied on a 20-day averaging period ending 31 March 2020. We could not use GAWB's actual nominated averaging period because our final report had to be finalised before that period ended. As such, our expectation was that the risk-free rate and debt risk premium would be updated based on GAWB's actual nominated averaging period, after the release of our final report.³⁵

After our final report was released, GAWB updated the risk-free rate and debt risk premium components of the WACC—based on GAWB's nominated averaging period. The nominated period was the 20 business days commencing 4 May 2020 and ending 29 May 2020. The updated

³³ GAWB, *Mid-term price review*, submission to the QCA, July 2023, p. 14.

³⁴ GAWB's year-average approach reflects the difference between the average change in quarterly CPI during 2019–20 and the average change in quarterly CPI during 2018–19.

³⁵ QCA, *Gladstone Area Water Board price monitoring 2020-25, Part A: Overview*, May 2020, pp. 91, 95.

risk-free rate and debt risk premium estimates³⁶ resulted in a final WACC of 4.74 per cent, which is not materially different from our final report estimate of 4.72 per cent.

The estimated incremental revenue impact of this adjustment is around \$0.54 million over the 2020–25 period. This is around 7 per cent of the total net variance between our indicative and GAWB's actual revenues.

Update to forecast RAB for 2019–20

To establish the opening asset base for the 2020–25 pricing period, it was necessary to first estimate the value of asset capitalisation and disposals in the final year of the preceding pricing period (2019–20). This is because pricing decisions must typically be completed before the subsequent pricing period starts, and actual RAB values are not available for the full year.

Before GAWB set actual prices for 2020–21, it updated its modelling for more recent values of actual asset capitalisation and disposals in 2019–20. The need to update the 2019–20 RAB was noted by GAWB in its initial pricing proposal.³⁷ We did not object to this update in our final report.

The estimated incremental revenue impact of this adjustment is around \$1.38 million over the 2020–25 period. This is around 18 per cent of the total net variance between our indicative prices and GAWB's actual prices. This also has an impact on the value of accelerated depreciation, as discussed below.

Changes in actual asset capitalisation in 2019–20 also resulted in some capex, which was not commissioned in 2019–20 as expected, being deferred into the 2020–25 period. There are no additional projects in the capex forecast; however, expected capitalisation and disposal dates have been updated based on the review of actual capitalisation and disposals in 2019–20.³⁸

Forecast asset disposals

During the 2020–25 pricing investigation, GAWB was preparing to sell its corporate headquarters building in Gladstone and relocate to new premises. Our final report did not make any adjustments to GAWB's forecast asset base to reflect this anticipated disposal. However, we noted that GAWB should make an appropriate adjustment to its forecast RAB before setting prices for 2020–21.

Consistent with our expectations, GAWB subsequently recognised the anticipated disposal in the forecast RAB.

The estimated incremental revenue impact of this adjustment is –\$0.96 million over the 2020–25 period. This also has an impact on the value of accelerated depreciation, as noted below.

Accelerated depreciation

GAWB revised some values of accelerated depreciation in its modelling. This is a result of updated actual capitalisation and disposals in 2019–20 and the recognition of the anticipated disposal of its former corporate headquarters building.

³⁶ GAWB applied a revised risk-free rate of 0.91 per cent and a revised debt risk premium of 2.45 per cent, compared with our final report estimates of 0.90 per cent and 2.44 per cent, respectively.

³⁷ GAWB, *Bulk water price review, 2021–25 period: Part A*, submission to the QCA, September 2019, p. 85.

³⁸ We also understand that the allocation of capex between zones can change slightly once a project is completed and commissioned. This is because the scope of capital projects can evolve during construction, potentially leading to expenditure in other zones. These allocations can be more accurately determined once the project is complete.

These adjustments are consequential to the revised 2019–20 RAB and forecast disposals discussed above and are not controversial.

The estimated incremental revenue impact of these adjustments is around \$1.74 million over the 2020–25 period. This is around 23 per cent of the net difference between our indicative and GAWB's actual revenue requirements.

Demand forecasts

After we finalised our 2020 report, GAWB continued to engage with customers with the aim to finalise reserved water volumes and maximum daily quantities (MDQs) for the 2020–25 pricing period. Overall, this resulted in a 2.2 per cent decrease in water reservations (in megalitres (ML)), and a 7.8 per cent decrease in reserved delivery MDQs, compared with the forecasts underpinning our indicative prices. This represents an average difference of 5 per cent overall.

As noted in our final report, it was our expectation that GAWB would continue to refine its demand forecasts in consultation with customers before setting actual prices for 2020–21.³⁹ GAWB's approach is consistent with the methodology accepted by us in the 2020 investigation.

The revised demand forecast results in a modest reduction to revenues, through the effect on capital contributions and therefore rebates (–\$0.99 million).⁴⁰ However, the substantive impact is realised through changes to zonal prices, which are a function of revenue and demand.

Impact of revised demand forecasts on 2020–21 prices

To isolate the impact of the revised demand forecast on prices, we modelled prices applying all of GAWB's adjustments, but holding demand constant at the levels assumed in our final report. Table 1 illustrates the average price impact of GAWB's revised demand forecast in isolation of its other adjustments.

Table 1 Estimated average increases in 2020–21 prices under QCA and GAWB demand assumptions

<i>Tariff denomination</i>	<i>GAWB prices (assuming QCA demand)</i>	<i>GAWB actual prices (GAWB revised demand)</i>	<i>Difference</i>
Average \$/reserved MDQ	1.7 %	6.3 %	4.6 %
Average \$/reserved ML	6.0 %	11.7 %	5.7 %
Overall average	3.8 %	9.0 %	5.1 %

Note: Excludes Curtis Island price changes, and impact of capitalised ARUR.

Table 1 shows simple averages only and impacts at the zonal level vary significantly. However, the average change across these tariff components under our demand assumption (3.8%) is broadly compatible with the overall change at the revenue requirement level (2.7%). As GAWB's revised demand has only a minor effect on the revenue requirement, this outcome is to be expected. Moreover, the overall average difference in price increases due to GAWB's revised

³⁹ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 117.

⁴⁰ We sought further information from GAWB on this matter. We understand this revenue impact arises because rebateable revenues are denominated by the demand of all customers that use the contributed assets, not just the original contributing customer's demand. However, only the original contributing customer is eligible for a rebate in most cases.

demand is around 5 per cent, which is consistent with the overall difference between our and GAWB's final demand assumptions.

The revised demand forecasts appear to have a noticeable impact on delivery access charges in some zones. This is partly because some customers' reserved MDQ levels are quite low to begin with, and even modest adjustments to those assumptions can result in substantial percentage changes in tariff components. However, the nominal bill impact on customers is likely to be less pronounced given the low MDQ values involved.

2.3 Overall impact of adjustments on 2020–21 prices

As a result of the revenue and demand impacts discussed above, GAWB's actual zonal prices in 2020–21 are between 6.3 and 16.6 per cent higher on average than our indicative prices. Table 2 illustrates the simple average of percentage variations in each tariff component across all pricing zones (excluding Curtis Island) for 2020–21, compared with the indicative prices.

Table 2 Average differences in 2020–21 prices, by tariff component

<i>Tariff component</i>	<i>Average change from QCA indicative prices</i>
Storage volumetric charge (\$/metered ML)	7.9 %
Storage access charge (\$/reserved ML)	6.8 %
Delivery volumetric charge (\$/metered ML)	8.2 %
Delivery access charge (monthly, \$/reserved MDQ)	6.3 %
Administration charge (\$/reserved ML)	16.6 %

A comparison of our prices and GAWB's actual prices for 2020–21 for each zone is set out at Appendix A (for completeness). Price differences vary across pricing zones, most notably for delivery access charges. Broadly speaking, these zonal differences can be attributed to a combination of factors, including:

- revised reserved volumes and MDQs of customers within each zone—some customers revised their demand substantially, while others made no revisions. Prices are denominated by the sum of customer demand in each zone; therefore, impacts will vary between zones. The impact of a change to demand is more pronounced in zones that supply a small number of customers, and/or have relatively low overall demand. For example, in the Fisherman's Landing Potable zone, which only services a small number of relatively low volume customer connections, a modest decrease in reserved MDQs has given rise to a relatively pronounced increase in the delivery access price (21%)
- refinement of the opex allocation assumptions between pricing zones
- updated values for 2019–20 capitalisation and asset disposals
- price changes in upstream pricing zones—zonal delivery access prices in any given zone are the sum of incremental prices in the preceding (upstream) zones. A change in delivery access prices for a particular zone will therefore impact prices in all zones downstream.

Delivery access prices that are lower than our indicative prices can be partly explained by increases in zonal demand forecasts compared with the assumptions in our final report. For example, this appears to be the case for the delivery access charge in the Boat Creek to East End

zone, which has decreased by 8.6 per cent, partly due to an increase in reserved MDQs in that zone.

Prices for 2021–22 and 2022–23

Under GAWB's pricing principles framework, GAWB can adjust its prices annually for changes in actual CPI inflation.

Our final report provided indicative prices for 2020–21 only. In describing our potential approach to this midterm review in our final report, we said:

To make the comparison relevant for 2021–22 and 2022–23, our indicative prices will need to be adjusted for actual rather than forecast inflation. However, given both our indicative prices and GAWB's actual prices will be escalated by actual CPI for the comparison, our expectation is that any differences between our prices and GAWB's in those two years will be the same (for the same reasons) as in 2020–21.⁴¹

GAWB's prices for 2021–22 and 2022–23 are based on its final 2020–21 prices, escalated for actual CPI inflation. GAWB has made no other substantive adjustments to prices beyond those applied in 2020–21. As such, we have not presented a comparison of these prices—the differences would remain proportional to the difference observed in 2020–21 prices, after indexation for actual inflation. GAWB's final zonal prices for 2021–22 and 2022–23 are set out at Appendix A for completeness.

Table 3 sets out GAWB's CPI indexation for setting prices in 2021–22 and 2022–23. We have verified that GAWB has applied CPI indexation using the methods described in its submission and as communicated to customers, consistent with our 2020 final report.⁴² The indexation method uses the change in the March quarterly CPI index for the 'All groups Brisbane' measure of inflation, as published by the ABS.

Table 3 GAWB's annual indexation of prices

<i>Quarter</i>	<i>All groups Brisbane CPI</i>	<i>Annual indexation % change</i>
March 2020	116.2	–
March 2021	118.2	1.72
March 2022	125.3	6.01

Note: Percentage changes have been rounded for presentation purposes. GAWB's indexation calculations use unrounded values.

Source: GAWB, Midterm price review submission, July 2023, p. 27.

Accumulated revenue under-recovery

Part B of our 2020 final report set out our considerations and findings on the accumulated revenue ARUR in detail.⁴³ In summary, we found that GAWB's ARUR should be addressed by:

- capitalising the amount of ARUR attributable to the raising of the Awoonga Dam wall (\$23.08 million), to be recovered from existing and future customers through bulk water charges, over the remaining asset life of the dam (commencing 1 July 2020)

⁴¹ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 142.

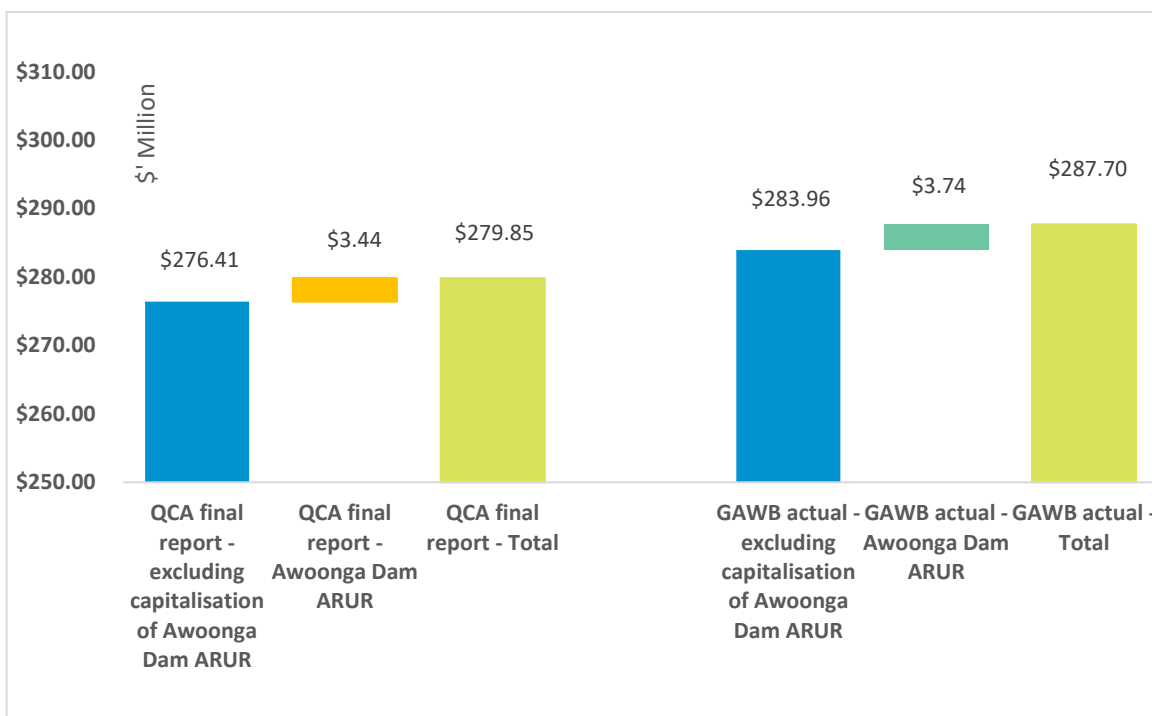
⁴² QCA, *Gladstone Area Water Board price monitoring 2020–25, Part A: Overview*, May 2020, p. 135.

⁴³ QCA, *Gladstone Area Water Board price monitoring 2020–25, Part B: Accumulated under-recovery*, May 2020.

- recovering the remaining ARUR (\$101.6 million) from existing customers by negotiation or—if a negotiated outcome cannot be reached—as an annuity over a default repayment period of 30 years commencing in July 2022 (100 years for Gladstone Regional Council).⁴⁴

Our final report estimated that capitalising the dam-related ARUR would result in incremental revenues over the pricing period of \$3.4 million. GAWB's departures from the final report findings increases the incremental revenue associated with the ARUR by around 9 per cent to \$3.74 million (Figure 2). This increase is largely due to a combination of GAWB's revisions to the WACC, forecast CPI inflation and demand forecasts (reserved ML).

Figure 2 Revenue impact of capitalisation of Awoonga Dam wall ARUR, excluding Curtis Island (\$million, net present value)



Note: Values are the net present value of annual revenue requirements over the 2020–25 pricing period.

Source: GAWB, Mid-term price review, submission, 31 July 2023, p. 18.

Our 2020 final report presented indicative prices for 2020–21 with, and without, recovering the capitalised portion of the ARUR.

The capitalised ARUR is allocated to the Awoonga pricing zone and recovered through the storage access charge.⁴⁵ All customers pay the same charge, based on annual reserved volumes (ML). The difference between our indicative and GAWB's actual access storage charge, including the ARUR, is set out in Table 4. GAWB's annual increases after 2020–21 are attributable to CPI indexation only.

⁴⁴ QCA, Gladstone Area Water Board price monitoring 2020–25, Part B: Accumulated under-recovery, May 2020, p. 1.

⁴⁵ Including the ARUR also has a slight effect on the delivery access charge. We understand this is due to the impact of adding the ARUR value to the Awoonga zone RAB, which subsequently changes the relative allocation of the overall tax allowance between zones. The differences on average are less than 0.01%, and a full comparison of those prices is not warranted.

Table 4 Storage access charges inclusive of Awoonga Dam ARUR (\$ nominal)

	<i>QCA final report</i>	<i>GAWB actual prices</i>	<i>Difference (\$)</i>	<i>Difference (%)</i>
Storage access charge (\$/ reserved ML) 2020–21	363.61	388.87	25.26	6.9
Storage access charge (\$/ reserved ML) 2021–22	n/a	395.56	–	–
Storage access charge (\$/ reserved ML) 2022–23	n/a	419.32	–	–

Recovering the remaining ARUR

The remaining ARUR of \$101.6 million (not associated with raising the Awoonga Dam wall) is to be recovered through individually negotiated arrangements with customers.

GAWB submitted that it started to engage with all customers in July 2021 regarding repayment arrangements. We understand that GAWB has reached confidential, negotiated repayment terms with some customers.⁴⁶ In some instances, customers had a negative ARUR amount. GAWB issued refunds to these customers in July 2022.⁴⁷

The ongoing recovery of the remaining ARUR is a matter for GAWB and its customers.

2.4 Conclusion

As noted in our 2020 final report, GAWB is not bound by our indicative prices or methods and has discretion to depart from our findings. Our 2020 final report primarily serves to provide information to stakeholders and foster accountability on the part of GAWB through independent oversight; it does not impose direct or binding price regulation.

For the most part, the adjustments GAWB described were anticipated by us in our final report and accord with our intended policy positions, or GAWB otherwise foreshadowed the adjustments during the 2020 investigation. Our review of GAWB's financial modelling indicates that the adjustments have been applied as stated in GAWB's submission, and as communicated to its customers.

GAWB has disagreed with some of our positions, notably on forecast inflation. Our views on these matters are documented in our 2020 final report and reflect our positions at the time. Should we be directed by government to undertake a pricing review of GAWB for the 2025–30 pricing period, we would consider all matters afresh on their merits and based on the best information available at the time.

GAWB has offered evidence of active consultation with its customers to explain its departures from the positions in our final report and has engaged with customers annually regarding each price reset. GAWB's customers have not raised any concerns directly with us during this review, neither regarding GAWB's prices, nor its engagement processes.

⁴⁶ GAWB, *Mid-term price review*, submission, July 2023, p. 21.

⁴⁷ GAWB, *Mid-term price review*, submission, July 2023, p. 21.

APPENDIX A: PRICE COMPARISON TABLES

Table 5 Comparison of QCA and GAWB prices, 2020–21 (excl. ARUR)

Pricing zone	QCA indicative prices—2020 final report					GAWB actual prices				
	Storage access (\$/reserved ML)	Storage volumetric (\$/metered ML)	Delivery access monthly (\$/reserved MDQ)	Delivery volumetric (\$/metered ML)	Administration charge (\$/reserved ML)	Storage access (\$/reserved ML)	Storage volumetric (\$/metered ML)	Delivery access monthly (\$/reserved MDQ)	Delivery volumetric (\$/metered ML)	Administration charge (\$/reserved ML)
Awoonga	351.60	1.71	–	–	30.86	375.42	1.84	–	–	35.99
Awoonga to Toolooa	351.60	1.71	6,046.48	32.93	92.58	375.42	1.84	6,623.11	35.72	107.98
Toolooa to Fitzsimmons	351.60	1.71	7,645.91	32.93	92.58	375.42	1.84	8,394.08	35.72	107.98
Boyne Raw	351.60	1.71	10,330.18	32.93	92.58	375.42	1.84	12,213.18	35.72	107.98
Central Raw	351.60	1.71	9,467.34	32.94	92.58	375.42	1.84	10,547.93	35.72	107.98
Fitzsimmons to Gladstone	351.60	1.71	8,154.89	32.93	92.58	375.42	1.84	8,928.21	35.72	107.98
QAL	351.60	1.71	9,840.13	32.93	92.58	375.42	1.84	10,854.97	35.72	107.98
Fishermans Landing Raw	351.60	1.71	13,274.38	33.52	92.58	375.42	1.84	14,710.37	36.35	107.98
Gladstone WTP	351.60	1.71	23,548.62	111.83	216.02	375.42	1.84	24,013.32	120.63	251.95
Gladstone City	351.60	1.71	26,745.24	111.83	216.02	375.42	1.84	27,146.85	120.63	251.95
Gladstone WTP to South Gladstone	351.60	1.71	28,169.00	111.87	216.02	375.42	1.84	28,592.69	120.68	251.95
Calliope	351.60	1.71	40,531.29	127.08	216.02	375.42	1.84	42,842.88	138.83	251.95
South Gladstone to Toolooa	351.60	1.71	36,446.41	114.90	216.02	375.42	1.84	37,003.86	123.93	251.95
Boyne Potable	351.60	1.71	43,968.85	115.19	216.02	375.42	1.84	44,950.67	124.24	251.95

	QCA indicative prices—2020 final report					GAWB actual prices				
Benaraby	351.60	1.71	66,615.50	138.01	216.02	375.42	1.84	64,226.58	148.99	251.95
Yarwun WTP	351.60	1.71	32,399.83	107.98	216.02	375.42	1.84	34,474.20	116.68	251.95
North Industrial Potable	351.60	1.71	38,793.46	109.27	216.02	375.42	1.84	40,215.14	118.00	251.95
Fishermans Landing Potable	351.60	1.71	55,926.59	109.27	216.02	375.42	1.84	67,703.93	118.00	251.95
Boat Creek to East End	351.60	1.71	91,009.93	292.33	216.02	375.42	1.84	83,193.45	316.32	251.95

Source: GAWB, *Mid-term price review, submission, July 2023*, pp. 28–30.

Table 6 Percentage difference between GAWB actual prices and QCA indicative prices by zone—2020–21 (excl. ARUR)

	Storage access (\$/reserved ML)	Storage volumetric (\$/metered ML)	Delivery access monthly (\$/reserved MDQ)	Delivery volumetric (\$/metered ML)	Administration charge (\$/reserved ML)
Awoonga	6.8%	7.9%	–	–	16.6%
Awoonga to Toolooa	6.8%	7.9%	9.5%	8.5%	16.6%
Toolooa to Fitzsimmons	6.8%	7.9%	9.8%	8.5%	16.6%
Boyne Raw	6.8%	7.9%	18.2%	8.5%	16.6%
Central Raw	6.8%	7.9%	11.4%	8.5%	16.6%
Fitzsimmons to Gladstone	6.8%	7.9%	9.5%	8.5%	16.6%
QAL	6.8%	7.9%	10.3%	8.5%	16.6%
Fishermans Landing Raw	6.8%	7.9%	10.8%	8.5%	16.6%
Gladstone WTP	6.8%	7.9%	2.0%	7.9%	16.6%
Gladstone City	6.8%	7.9%	1.5%	7.9%	16.6%
Gladstone WTP to South Gladstone	6.8%	7.9%	1.5%	7.9%	16.6%
Calliope	6.8%	7.9%	5.7%	9.2%	16.6%

	<i>Storage access (\$/reserved ML)</i>	<i>Storage volumetric (\$/metered ML)</i>	<i>Delivery access monthly (\$/reserved MDQ)</i>	<i>Delivery volumetric (\$/metered ML)</i>	<i>Administration charge (\$/reserved ML)</i>
South Gladstone to Toolooa	6.8%	7.9%	1.5%	7.9%	16.6%
Boyne Potable	6.8%	7.9%	2.2%	7.9%	16.6%
Benaraby	6.8%	7.9%	-3.6%	8.0%	16.6%
Yarwun WTP	6.8%	7.9%	6.4%	8.1%	16.6%
North Industrial Potable	6.8%	7.9%	3.7%	8.0%	16.6%
Fishermans Landing Potable	6.8%	7.9%	21.1%	8.0%	16.6%
Boat Creek to East End	6.8%	7.9%	-8.6%	8.2%	16.6%
Average percentage change	6.8%	7.9%	6.3%	8.2%	16.6%

Note: Percentage differences are based on unrounded numbers and may not be replicable using the rounded values in Table 5.

Source: QCA analysis.

Table 7 GAWB actual prices for 2021–22 and 2022–23 (excl. ARUR)

<i>Pricing zone</i>	<i>GAWB actual prices, 2021–22</i>					<i>GAWB actual prices, 2022–23</i>				
	<i>Storage access (\$/reserved ML)</i>	<i>Storage volumetric (\$/metered ML)</i>	<i>Delivery access monthly (\$/reserved MDQ)</i>	<i>Delivery volumetric (\$/metered ML)</i>	<i>Administration charge (\$/reserved ML)</i>	<i>Storage access (\$/reserved ML)</i>	<i>Storage volumetric (\$/metered ML)</i>	<i>Delivery access monthly (\$/reserved MDQ)</i>	<i>Delivery volumetric (\$/metered ML)</i>	<i>Administration charge (\$/reserved ML)</i>
Awoonga	381.88	1.87	–	–	36.31	404.82	1.98	–	–	38.81
Awoonga to Toolooa	381.88	1.87	6,737.11	36.33	109.84	404.82	1.98	7,141.79	38.51	116.44
Toolooa to Fitzsimmons	381.88	1.87	8,538.56	36.33	109.84	404.82	1.98	9,051.45	38.51	116.44
Boyne Raw	381.88	1.87	12,423.39	36.33	109.84	404.82	1.98	13,169.63	38.51	116.44
Central Raw	381.88	1.87	10,729.48	36.33	109.84	404.82	1.98	11,373.97	38.51	116.44
Fitzsimmons to Gladstone	381.88	1.87	9,081.88	36.33	109.84	404.82	1.98	9,627.41	38.51	116.44

	GAWB actual prices, 2021–22					GAWB actual prices, 2022–23				
QAL	381.88	1.87	11,041.80	36.33	109.84	404.82	1.98	11,705.06	38.51	116.44
Fishermans Landing Raw	381.88	1.87	14,963.56	36.98	109.84	404.82	1.98	15,862.39	39.20	116.44
Gladstone WTP	381.88	1.87	24,426.63	122.71	256.29	404.82	1.98	25,893.88	130.08	271.68
Gladstone City	381.88	1.87	27,614.09	122.71	256.29	404.82	1.98	29,272.80	130.08	271.68
Gladstone WTP to South Gladstone	381.88	1.87	29,084.82	122.76	256.29	404.82	1.98	30,831.88	130.13	271.68
Calliope	381.88	1.87	43,580.28	141.22	256.29	404.82	1.98	46,198.05	149.70	271.68
South Gladstone to Toolooa	381.88	1.87	37,640.76	126.06	256.29	404.82	1.98	39,901.75	133.63	271.68
Boyne Potable	381.88	1.87	45,724.35	126.38	256.29	404.82	1.98	48,470.91	133.97	271.68
Benaraby	381.88	1.87	65,332.03	151.55	256.29	404.82	1.98	69,256.37	160.65	271.68
Yarwun WTP	381.88	1.87	35,067.56	118.69	256.29	404.82	1.98	37,173.99	125.82	271.68
North Industrial Potable	381.88	1.87	40,907.31	120.03	256.29	404.82	1.98	43,364.52	127.24	271.68
Fishermans Landing Potable	381.88	1.87	68,869.23	120.03	256.29	404.82	1.98	73,006.05	127.24	271.68
Boat Creek to East End	381.88	1.87	84,625.35	321.76	256.29	404.82	1.98	89,708.60	341.09	271.68

Source: GAWB, *Mid-term review, submission, July 2023*, pp. 34–35, 38–39.