Queensland Competition Authority

Gladstone Area Water Board price monitoring investigation 2025–30

Final report

April 2025

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Our price monitoring task

The Gladstone Area Water Board (GAWB) provides bulk raw and potable water to industries located in the Gladstone region and to the Gladstone Regional Council. GAWB charges bulk water prices determined through commercial negotiation between it and its customers.

We have been directed by the Queensland Government to undertake a price monitoring investigation relating to GAWB's proposed bulk water prices for the period 1 July 2025 to 30 June 2030 (the 2025–30 price monitoring period).[1]

Price monitoring should allow GAWB to operate commercially without intrusive regulatory intervention and provide incentives to reduce compliance costs, as well as improve price transparency to customers and promote accountability on GAWB.

As required by the referral, our GAWB price monitoring investigation is required to:

- determine appropriate prices to apply for the 2025–30 price monitoring period and prepare:
  - a draft report by 29 November 2024 – outlining our preliminary views
  - a final report by 30 April 2025 – outlining our findings on appropriate prices
- deliver a mid-term report by 31 October 2028 – comparing the prices GAWB charged over the period to 30 June 2028 with our final report findings on appropriate prices.

This final report considers the appropriate prices by examining the factors that influence GAWB's allowable costs and revenues to establish a baseline of forecasts for the monitoring period. This includes assessing the prudency and efficiency of GAWB's proposed capital expenditure and operating costs, as well as evaluating its forecast demand. Our mid-term report then compares GAWB's actual prices against the appropriate prices in our final report to identify differences and the reasons for them.

In this way, our investigation is informative rather than deterministic. It supports transparency and accountability around GAWB's proposed expenditure and price setting processes by providing a baseline of forecast costs and prices that we then monitor against. Transparency gives GAWB's customers, the community, and government a better understanding of GAWB's costs and pricing, including anticipated changes – and in turn makes GAWB accountable for its actions, including investment decisions and actual pricing outcomes.

[1] The way in which we conduct the investigation, and the matters we must consider, are set out in the referral notices dated 14 December 2023 as amended on 23 May 2024 (referral notice is at Appendix A and on our website) and the QCA Act.

Executive summary

On 14 December 2023, the Queensland Government directed us to conduct a price monitoring investigation of GAWB's bulk water supply activities from 1 July 2025 to 30 June 2030 (the price monitoring period).[2] On 23 May 2024, the direction was amended to exclude the consideration of the Fitzroy to Gladstone pipeline from our investigation.[3]

In this report, we set out our findings on GAWB's appropriate prices for its bulk water services for the price monitoring period and explain how we arrived at them. This involves considering forecast demand, allowable costs and allowable revenue for each year in the price monitoring period.

'Allowable costs' and 'allowable revenue' are terms used in the referral. They essentially direct our consideration to the nature or category of the costs we should be considering. These terms should not be interpreted to be some sort of limit on the costs GAWB can incur or the revenues it can collect.

Our price monitoring findings are not directly binding – we do not set GAWB's costs, revenues or prices. Rather, we transparently provide information to interested parties that in turn makes GAWB more accountable for its actions, including its commercial practices.

Our mid-term report activities will commence in 2028.

Our findings

We have set out our findings on the appropriate prices for the 2025–30 price monitoring period (Chapter 10). The appropriate prices reflect our assessment of GAWB's prudent and efficient costs of supplying bulk water, given forecast demand.

Overall, we consider that the allowable revenue that GAWB could be expected to recover through appropriate prices between 2025–2030 is $688.23 million, which is $50.06 million (or 6.8%) lower than GAWB proposed. The primary drivers for this difference relate to our findings on the rate of return and operating costs.

When compared with the 2020–25 monitoring period, prices for the 2025–30 period are also higher. These increases are driven by forecast growth in GAWB's asset base, a higher rate of return due to increases in the risk-free rate, and GAWB's increases in operating costs.

In summary, we found that:

- forecast operating expenditure of $235.88 million over the monitoring period is appropriate. This is $8.84 million lower than GAWB's proposed $244.72 million. The primary reason for differences between GAWB's proposal and our assessment relate to step changes ($7.63m), with some minor differences in forecast escalation and the consequential application of GAWB's proposed 0.2% efficiency factor

[2] The referral and direction were issued in accordance with ss 23A and 24 of the QCA Act.
[3] This would allow the impacts associated with the Fitzroy to Gladstone pipeline to be considered with greater precision in a subsequent QCA investigation closer to the commissioning of the project. See the amending referral.

- GAWB's estimated actual capital spend of $84.16 million for the 2020–25 period is prudent and efficient. We have added this value into the closing asset base at 30 June 2025, subject to minor modelling adjustments
- GAWB's estimate of prudent and efficient forecast capital expenditure over the period 2025-30 of $504.95 million, of which $309.88 million is attributable to network augmentations to support new demand from customers, provides an appropriate overall estimate of prudent and efficient capital expenditure for the monitoring period (noting the uncertainties associated with GAWB's forecast capital program)
- the forecast regulatory asset base will increase to $1,203.77 million over the monitoring period, driven by GAWB's forecast capital expenditure
- the indicative rate of return of 7.39% would be appropriate, reflecting a benchmark gearing of 50%, a cost of equity of 8.47% and a cost of debt of 6.32%. This is 48 basis points lower than GAWB's submitted rate of return of 7.88%
- other cost and revenue components should be adjusted as set out in this report.

There is uncertainty surrounding the emergence of new hydrogen industry[4] customers in the Gladstone region, and their likely demands during the 2025–30 period. Ultimately, the scope, timing and size of investments to support new demand will impact the prices GAWB actually charges to recover its capital and operating costs.

GAWB was not in a position to provide a revised capex forecast and pricing model for our consideration in this final report because it was reviewing its demand and expenditure forecasts in light of changing customer demand expectations. GAWB noted this may result in changes to the forecasts used to set prices from 2025–26.[5]

In the absence of more recent forecasts, our analysis in this report relies on the forecasts provided by GAWB with its pricing proposal. These forecasts reflect GAWB's expectations of hydrogen demand and augmentation requirements at the time. We acknowledge these may change.

Nonethless, we have also provided illustrative prices for an alternative scenario in which expected new hydrogen demand and augmentation does not occur during the 2025–30 period. It is important to note that this pricing scenario is illustrative only; it does not constitute a QCA view on the likely trajectory of hydrogen industry development in Gladstone during the 2025–30 period.

To address the considerable uncertainties surrounding demand and capital expenditure outcomes, we are proposing a targeted revenue true-up mechanism to address revenue under- and over-recovery for our price monitoring task.

Increasing costs since our previous review

Compared to our 2020 price monitoring investigation, GAWB is seeking a substantial increase in all categories of allowable costs.[6] Figure 1 shows the allowable costs from our 2020–25 price monitoring review and compares this with GAWB's proposal and this report for the 2025–30 price

[4] This report uses the general terms 'hydrogen industry' and 'hydrogen customers' to describe all existing and prospective customers involved in manufacturing of hydrogen or electrolysers, and other downstream industrial processes that require hydrogen as an input; for example, hydrogen liquefication, and production of hydrogen derivatives including ammonia and methylcyclohexane.
[5] GAWB, sub 27, pp. 5, 31.
[6] GAWB recognises the drivers of its allowable costs as operating expenditure, rate of return (driven by increases in the risk-free rate) and forecast capital expenditure (GAWB, sub 1, p 113).

monitoring period. Figure 2 identifies the drivers that are increasing GAWB's allowable costs between monitoring periods by cost category.

Figure 1: Comparison between the 2020-25 review and 2025-30 allowable costs ($ million, nominal)

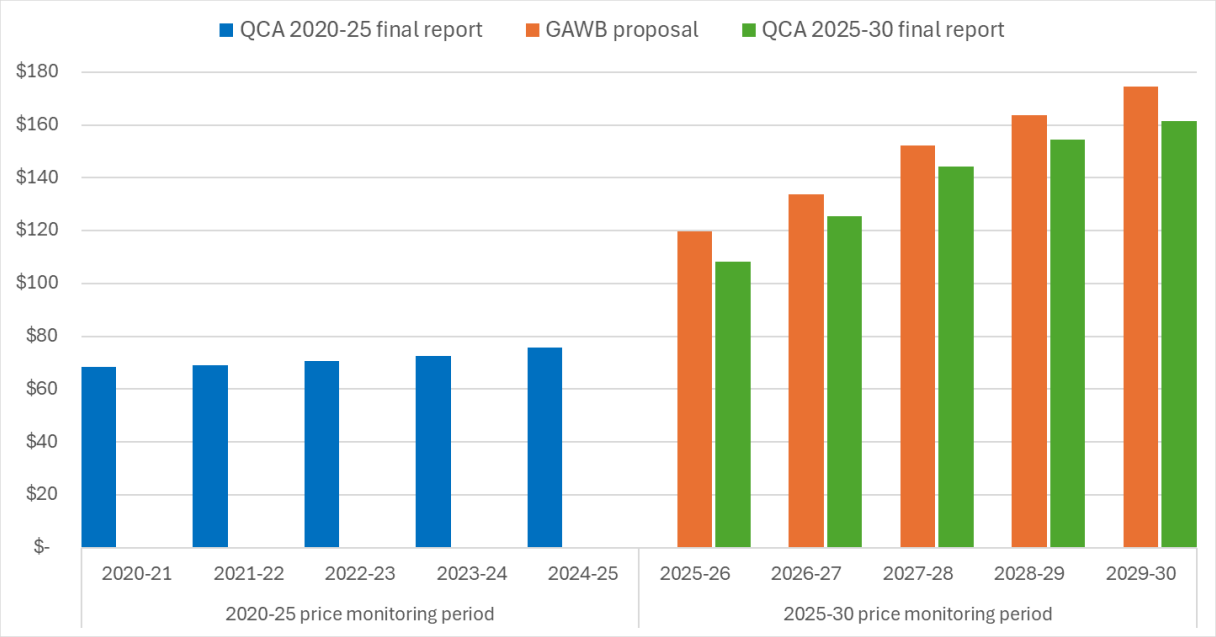
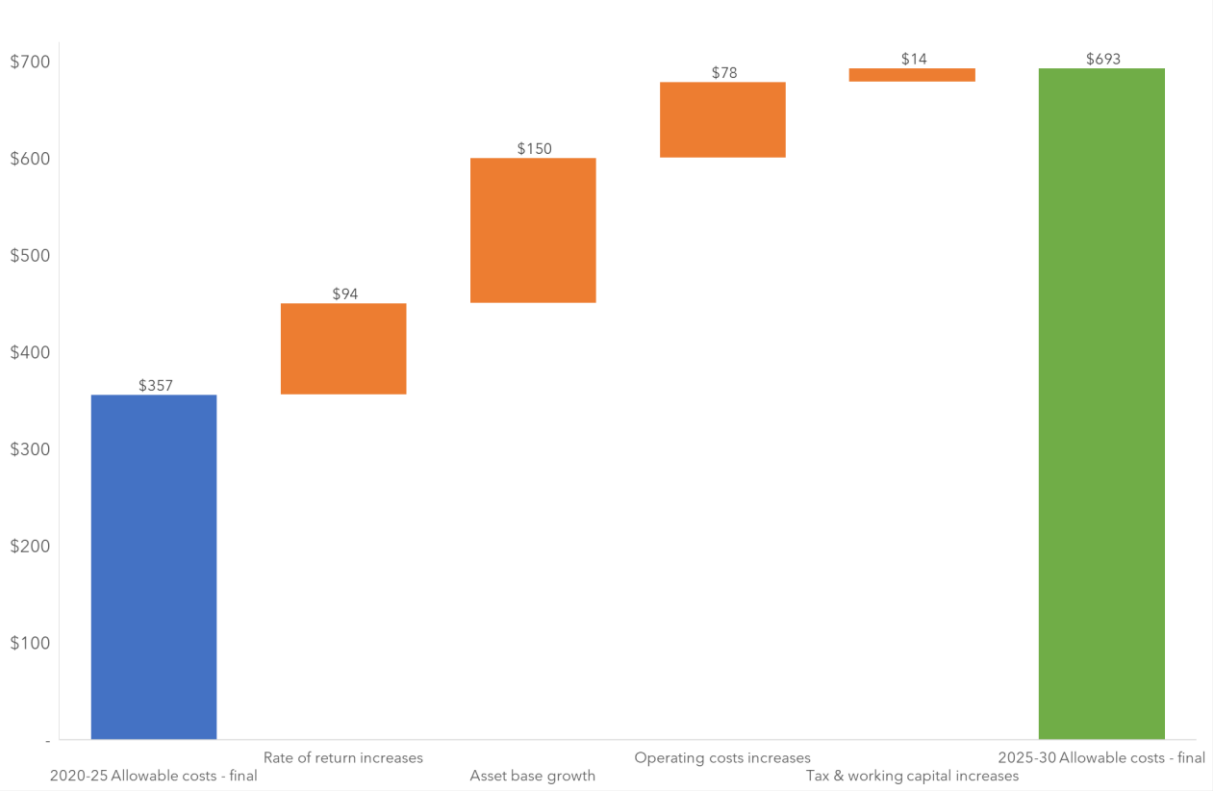


Figure 2: Comparison between the 2020-25 review and 2025-30 allowable costs, by driver ($ million, nominal)



Note: Comparison developed to highlight the drivers that are increasing allowable costs between monitoring periods. Numbers may not add due to rounding.

The primary drivers of GAWB's increase in total allowable costs for the 2025–30 period, compared to the 2020–25 period, are:

- rate of return – representing 28% of the increase (driven by increases in the risk-free rate)
- asset base growth – representing 45% of the increase (driven by capital costs associated with GAWB's $504.95m capital program, of which $309.88m is for network augmentations)
- operating expenditure – representing 23% of the increase (driven by labour, electricity and insurance cost categories)
- tax and working capital allowance increases – representing 4% of the increase (driven by larger taxable revenues and cashflow requirements).

These costs are increasing at a greater rate than forecast demand, which is further contributing to price increases.

Cost drivers impacting on GAWB's underlying costs categories

Changing operating environment

GAWB is experiencing unprecedented changes to its operating environment, driven by increases in input costs, rapid forecast demand growth from the emerging hydrogen industry, and a substantial capital program required to support that new demand.

To satisfy this forecast demand from customers, GAWB is experiencing significant increases in costs:

- Capital expenditure – GAWB's forecast capital program is the largest five-year program in its history and is 6 times the capex GAWB expects to add to the RAB during the 2020–25 period.
- Operating costs – these are driven by the forecast expansion in the scale and scope of GAWB's bulk water activities and increased cost pressures for resources in the Gladstone region.

We expect GAWB to face challenges in delivering its ambitious capital program during the 2025–30 monitoring period. As such, we recognise that a substantial capability and resourcing uplift is also required for GAWB to deliver to its existing and forecast customers over the period.

Deliverability challenges and increasing costs

There are significant deliverability risks for GAWB from its forecast capital program. GAWB acknowledges this, noting that while pressures on some costs may moderate in the medium term, higher costs, labour shortages and increased competition for resources across sectors are expected to continue into the 2025–30 period.[7]

GAWB is proposing substantial increases to its operating costs in order to ensure:

- its substantial forecast capital program can be successfully delivered, including investments necessary to accommodate increased forecast demand
- resourcing constraints and cost pressures do not adversely impact its ability to undertake its business-as-usual activities.

[7] GAWB, sub 1, p 28.

1 Overview

The prices that GAWB charges for providing bulk water services are determined through commercial negotiation. The government has periodically directed us, the Queensland Competition Authority (QCA), to undertake price monitoring investigations for GAWB.

This review is being conducting under referral notices issued by government.[8] We are required to undertake a price monitoring investigation for the period 1 July 2025 to 30 June 2030 (the price monitoring period).

1.1 GAWB's bulk water supply activities

GAWB supplies bulk water services to provide both raw and treated water to industries located in the Gladstone region and to the Gladstone Regional Council (GRC). It owns and operates the following assets to service its bulk water customers:

- Awoonga Dam and associated infrastructure
- 229 km of water pipelines comprising 95 km of raw water pipelines and 134 km of potable water pipelines
- 10 pump stations
- 16 water reservoirs comprising 11 treated water reservoirs and 5 raw water reservoirs
- 2 water treatment plants
- recreational facilities located around Lake Awoonga
- hatchery facility.

While GAWB is also in the process of constructing the Fitzroy to Gladstone pipeline project, this project is not within the scope of this investigation, and the costs and consequent impact on prices have not been considered.

1.2 Declaration and previous reviews

In September 2000, GAWB's bulk water activities were declared to be government monopoly business activities. This made these activities subject to the prices oversight regime under Part 3 of the *Queensland Competition Authority Act 1997* (QCA Act), enabling us to undertake this investigation as requested under the referral notice issued by government.

This is our third price monitoring investigation under section 23A of the QCA Act – and the second investigation that provides for a mid-term review. Before these, we had reviewed GAWB's pricing practices 3 times since 2000 under section 23 of the QCA Act.[9]

[8] The referral (see Appendix A) was issued under section 23A of the *Queensland Competition Authority Act 1997*.
[9] Section 23 contemplates an investigation into pricing practices, whereas section 23A contemplates a price monitoring investigation.

1.3 How GAWB's bulk water prices are determined

GAWB's bulk water prices are determined through a commercial negotiation between GAWB and its customers.[10]

We would expect GAWB and its customers to depart from our price monitoring findings and set different prices, subject to their commercial arrangements and changing market circumstances. This is because effective commercial negotiations between GAWB and its customers are the foundation of the light-handed price monitoring approach. An example of this could include GAWB smoothing revenue over time where new customer demand increases rapidly in the initial years.

We would expect this negotiation would not be based on a 'take it or leave it' approach from GAWB because this would be inconsistent with the primacy of commercial negotiations undertaken in good faith.

GRC is a water retailer to its residential and commercial water customers and is responsible for setting applicable service charges for water and sewerage services. While these may include costs of GAWB bulk water, they may also include the costs of transporting water from bulk supply points to customers' properties, removing and treating sewage, providing billing services and dealing with enquiries. GRC's service charges for water, including its structure and cost base, are outside the scope of our investigation.

1.4 Investigation considerations

We are conducting our investigation having regard to the government's direction and the matters we are required to consider in the QCA Act.[11] Where required, we have used judgement in determining those considerations that are most relevant to each matter in our investigation.

Terms of the referral notice

We have been asked to make findings on appropriate prices for GAWB and subsequently compare these with GAWB's actual prices in a mid-term review. Appropriate prices are to be consistent with allowable costs, reserved demand and are to be smoothed over the price monitoring period to allow GAWB sufficient allowable revenue to recover its allowable costs. Other key parameters in the referral notice are:

- price monitoring period – the five years from 1 July 2025 to 30 June 2030
- allowable operating costs – including the prudent and efficient costs of operational, maintenance, administrative activities, including those for catchment management and recreational facilities; this also includes allowances for working capital and tax
- allowable capital costs – including prudent and efficient capital expenditure, an appropriate rate of return and depreciation allowance
- allowable revenue – to be received from GAWB's monopoly business activities

[10] GAWB has bulk water supply agreements or commercial arrangements with its customers.
[11] We must have regard to the matters in s 26 of the QCA Act including, for example, the need for efficient resource allocation, the protection of consumers from abuses of monopoly power, and an appropriate rate of return on assets (see s 26(1) of the QCA Act).

- proposed network augmentation or expansion capital expenditure – should be sized, configured, priced and timed to service 2030 forecast reserved demand and any reasonably expected future demand
- reserved demand – to be determined based on the total quantity of water reserved by GAWB's customers (under contracts or water supply proposals), including conditional contracts
- approach to estimating certain cost components – we should use specific methods to determine some cost components, including estimating forecast inflation using the methods in our inflation forecasting position paper[12]; an appropriate rate of return using the approach in our rate of return review[13] and estimating the cost of debt component using a 10-year transition from an 'on the day' to a 'trailing average' approach
- exclusion of certain costs – associated with the Fitzroy to Gladstone pipeline (including related water allocations).

We highlight in this report where we have developed our positions with respect to the relevant referral notice parameter or requirement.

Consideration of section 26 matters

In conducting our review, we are required to consider the matters in section 26 of the QCA Act.[14] The list of matters is extensive, diverse and potentially conflicting[15] – for example, the need for efficient resource allocation, the effect of inflation, demand management considerations, the protection of consumers from abuses of monopoly power, and social welfare and equity considerations.

We explain how we have had regard to each of the section 26 matters in Appendix D.

1.5 Submissions

We provided stakeholders with an opportunity to comment on GAWB's proposal (and received 18 submissions) and our draft report (and received two submissions).

Appendix C provides a list of all the submissions we received and our consideration of matters raised. We have taken into account these submissions throughout our review, even though we may not have referred directly to every issue raised in this report.

Stakeholders raised concerns regarding GAWB's proposed price increases and their impact on households and businesses, the competitiveness of local industries, and future investment in the region.[16] This included the further uncertain increases within the price monitoring period due to the Fitzroy to Gladstone pipeline project.[17]

Stakeholders also stated we should consider:

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[12] QCA, *Inflation forecasting*, position paper, October 2021.
[13] QCA, *Rate of return review*, final report, version 4, September 2024.
[14] In accordance with ss 24(1)(b) and 26 of the QCA Act.
[15] Productivity Commission, *Australia's Urban Water Sector*, inquiry report no. 55, August 2011, pp 267–270.
[16] Northern Oil Refineries, sub 17, p 1; Rio Tinto, sub 18, p 2; Cement Australia, sub 20, p 3; Gladstone Regional Council, sub 21, p 2; C Bryce MP, sub 22, pp 2–3; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 1; Fortescue, sub 26, p 1.
[17] Rio Tinto, sub 18, p 4; Cement Australia, sub 20, p 4; Gladstone Regional Council, sub 21, p 2; C Bryce, sub 22, p 6; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 2.

- implications associated with the Fitzroy to Gladstone pipeline, including:
  - the possible double recovery of the pipeline costs if GAWB's proposal did not completely exclude costs associated with the pipeline [18]
  - whether the expected pipeline-associated costs and their allocation should be included in the current QCA investigation (and not a separate process) to provide transparency[19]
  - the concern that the Fitzroy to Gladstone pipeline would not actually address water security concerns where there was an increase in demand from new hydrogen customers[20]
- GAWB's proposed increase in operating expenditure, including:
  - the prudency and efficacy of expenditure given the effect of such increases[21]
  - substantial increases in labour costs[22], with GRC stating that significant increases to remuneration expenditure failed to consider the flow-on impact to customers[23]
- GAWB's forecast demand, including:
  - the possible variation in prices caused by the uncertain demand during the period[24]
  - the scope, standard, timing and allocation of forecast capital expenditure[25]
- GAWB's pricing practices, including:
  - recovery of the portion of capital projects in excess of the requirements of its customers[26]
  - whether the submitted prices and pricing zones were equitable, and concerns with the level of transparency provided[27]
  - whether it was appropriate for new customers to be charged significantly different prices compared to existing customers in a similar delivery location[28]
  - whether it is appropriate that GAWB's pricing model effectively penalises customers for reducing water consumption by increasing prices[29]
- any additional revenue GAWB received from ancillary charges (applied surcharges on short-term contracts) and whether that should be returned to customers.[30]

We have considered these matters throughout our review, where relevant.

[18] Rio Tinto, sub 18, p 4; Gladstone Regional Council, sub 21, pp 2–3.
[19] Rio Tinto, sub 18, p 4; C Bryce MP, sub 22, p 6.
[20] C Bryce, sub 22, pp 4–5.
[21] Gladstone Regional Council, sub 21, p 3.
[22] Northern Oil Refineries, sub 17, p 1; Gladstone Regional Council, sub 21, p 3.
[23] Gladstone Regional Council, sub 21, p 3.
[24] Rio Tinto, sub 18, pp 4–5; Cement Australia, sub 20, p 4; C Bryce MP, sub 22, p 6.
[25] Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 3; Rio Tinto, sub 18, pp 2–3; Gladstone Regional Council, sub 21, p 3; ConocoPhillips, sub 25, p 2.
[26] Rio Tinto, sub 18, p 5.
[27] Rio Tinto, sub 18, pp 2–4; Cement Australia, sub 20, p 3; Gladstone Regional Council, sub 21, pp 1, 3; C Bryce MP, sub 22, p 6; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 4; ConocoPhillips, sub 25, p 2; Fortescue, sub 26, pp 2–3.
[28] Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 3; Fortescue, sub 26, p 3.
[29] Cement Australia, sub 20, p 4.
[30] Gladstone Regional Council, sub 21, p 4.

2 Our approach

As part of our investigation, we develop appropriate prices in accordance with the requirements of the referral[31], and subsequently compare these to the actual prices GAWB charged in a mid-term review.

The indicative appropriate prices we present in this report are based on our assessment of GAWB's submission[32] and our consideration of issues raised by stakeholders.[33]

Where insufficient information was provided in GAWB's submission, we have sought further information.

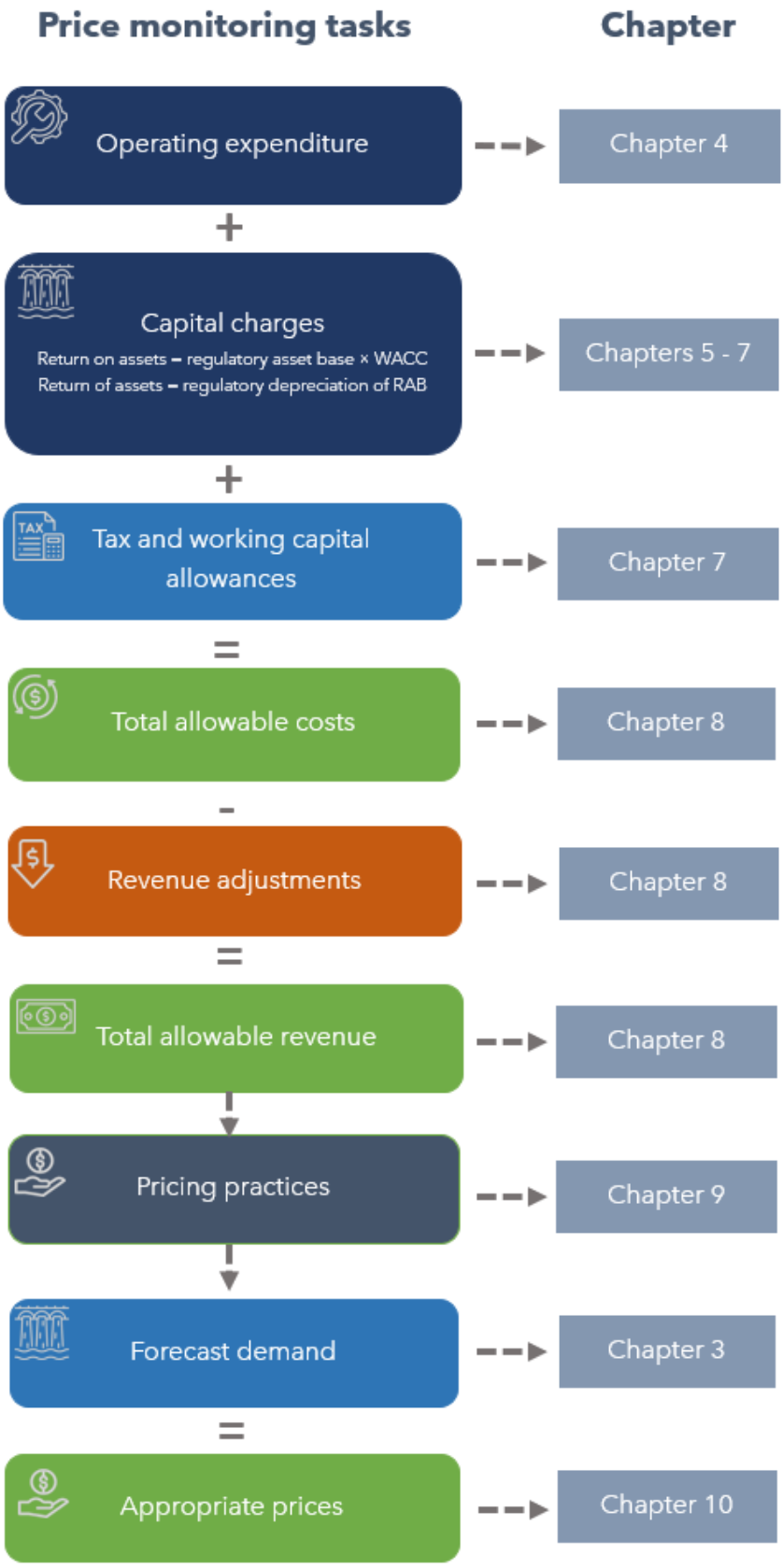
Our first task is to determine appropriate prices that allow GAWB sufficient revenue, based on forecast demand, to recover its allowable costs over the monitoring period.[34] These steps involve:

- assessing the allowable costs of supplying GAWB's customers, including
  - the prudency and efficiency of GAWB's operating costs (Chapter 4) and capital expenditure (Chapter 5), which was also informed by our assessment of GAWB's forecast demand (Chapter 3)
  - capital charges from GAWB's regulatory asset base (Chapter 6), including an appropriate rate of return (Chapter 7) and depreciation allowance. We also include an allowance for tax and working capital (Chapter 7)
- applying revenue adjustments (Chapter 8), which then provides for the allowable revenue (Chapter 8) to be recovered through prices
- using GAWB's pricing practices (Chapter 9) to establish forecast appropriate prices (Chapter 10). This involves allocating costs between various pricing zones and tariff components, using our assessment of GAWB's forecast demand (Chapter 3).

Figure 3 outlines where these steps are undertaken throughout our report.

[31] Referral notice in Appendix A.
[32] GAWB, sub 1. GAWB's submission presents its views on the forecast operating and economic environment, as well as forecast demand, allowable costs and capital requirements. GAWB also outlines its proposed pricing framework.
[33] Refer to Appendix C.
[34] Referral notice, section F, p 3 (Definitions and interpretations).

Figure 3: Our price monitoring tasks and report chapters



3 Forecast demand

Demand forecasts are used to derive GAWB's prices and to inform the prudent and efficient levels of investment and operating expenditure we use for our price monitoring activities.

We reviewed GAWB's proposed demand forecasts and found them reasonable for price monitoring during the 2025–30 period. We formed this view as GAWB's demand forecasts are based on the best information available, having regard to historical outcomes, actual contracted volumes, and expectations of future demand (as advised by its customers).

There is significant uncertainty surrounding the expected bulk water demands of new customers during the 2025–30 monitoring period and beyond. This expected new demand is largely attributable to hydrogen industry proponents positioning to construct facilities in the GAWB delivery network area.

Our forecast of demand is for the purpose of monitoring GAWB prices and does not necessarily reflect what GAWB will use in determining its actual prices. Consistent with previous price reviews, GAWB will update its demand forecasts using the latest available information, prior to setting prices from 1 July 2025.[35]

3.1 Overview

Demand is a key driver of infrastructure investment for network augmentation and expansion projects. It also has a direct impact on variable operating expenditures – for example, the quantity of water treatment chemicals required and the electricity needed to pump water – and on the ability of GAWB to recover its total costs. Demand forecasts are also used in our price monitoring to allocate GAWB's costs between customers in the setting of zonal prices.

GAWB's customer base comprises large industrial customers (accounting for around 80% of the water supplied by GAWB) and residential and smaller commercial customers, who are mostly supplied through the GRC distribution network.

Because of the composition of GAWB's customer base, material changes in water demand are driven by its large industrial customers. Residential and other commercial demand tends to be driven by population growth, climatic conditions, water conservation and efficiency policies, as well as changes in consumer behaviour over time.

3.2 Assessment framework

The intent of our framework is to assess forecast demand so we can estimate appropriate prices that are sufficient for GAWB to recover its prudent and efficient costs of providing bulk water services over the price monitoring period.[36]

[35] GAWB, sub 27, p 31.
[36] Referral notice, section C 1.1–1.2, section F, p 3.

The referral notice outlines the parameters we must consider when assessing GAWB's demand forecasts for the 2025–30 period. Under the referral notice, appropriate prices for GAWB should be consistent with its reserved demand.[37] Reserved demand is defined by the referral as:

> The total quantity of water reserved by GAWB's customers under their contractual arrangements (including any conditional contractual arrangements) and water that is the subject of a water supply proposal provided under GAWB's *Queuing Guideline (Source Capacity)*.[38]

Further, as discussed in Chapter 5, the referral notice also requires us to include any network augmentation required to '[s]ervice 2030 forecast Reserved Demand and any reasonably expected future demand that would make use of the network.'[39]

3.3 QCA analysis

GAWB's actual demand during the 2020–25 monitoring period has so far fallen well short of GAWB's previous forecast (Figure 4). This is predominantly due to the shutdown of the Callide C power station following a catastrophic failure in May 2021. The power station was partially recommissioned in April 2024 and returned to full capacity in August 2024.[40]

During the period 2019–20 to 2023–24 GAWB's annual average metered volume was 44,433 megalitres (ML).[41] GAWB's total annual forecast metered volume (raw and treated) at the start of the 2025–30 period reflects a return to levels that were observed before the failure of Callide C (52,734 ML in 2025–26) and is projected to increase by 5.8% to 55,803 in 2029–30.[42]

Between 2025–26 and 2029–30, reserved delivery volumes (contracted volumes) are forecast to increase in net terms by 6.3% from 63,840 ML to 67,832 ML in 2029–30. This growth is mostly driven by expected hydrogen customers.[43] Excluding these customers, forecast growth in reserved delivery volumes would be around 1% over the price monitoring period.

Modest forecast growth in demand for treated water supplied to GRC is also contributing to expected consumption.

GAWB's demand forecasts do not assume the exit of any significant industrial customers during 2025–30.[44]

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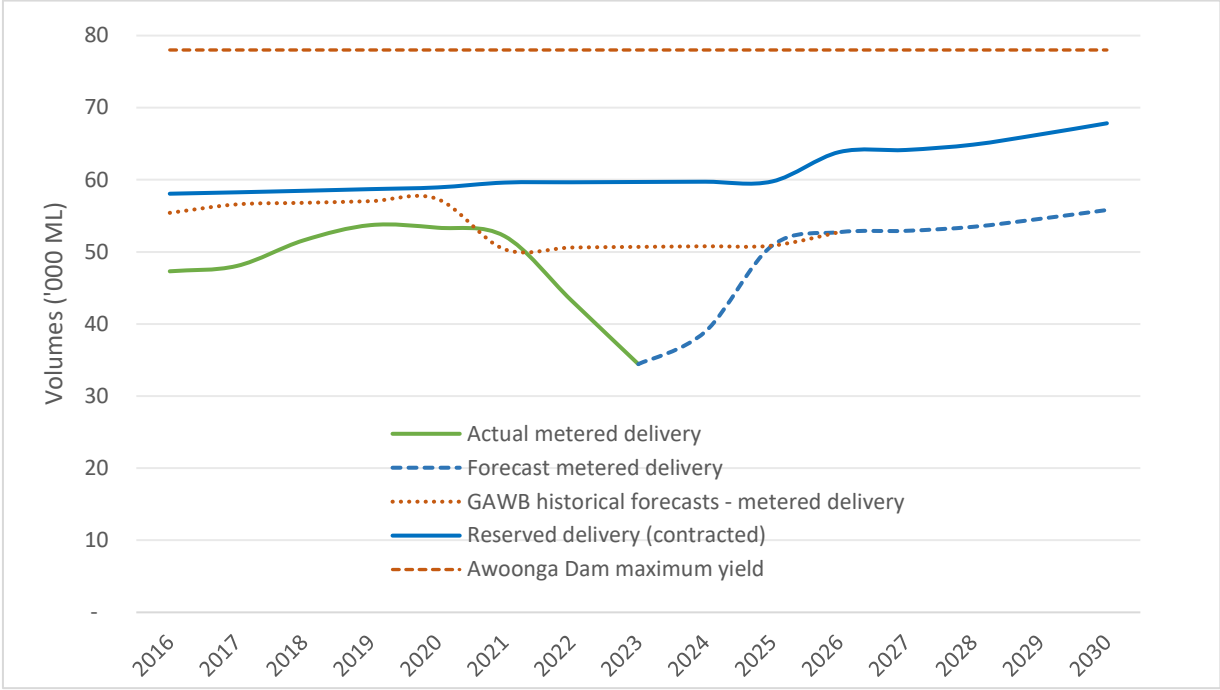
[37] Referral notice, section F, p 3.
[38] Referral notice, section F, p 5.
[39] Referral notice, section F, pp 3-4.
[40] CS Energy, '*Callide Unit C4 returns to service*', 2 September 2024, CS Energy website, 2024, accessed 4 November 2024.
[41] GAWB, response to RFI 101.
[42] GAWB, response to RFI 22.
[43] Water demand for the hydrogen industry is driven by; feed water for the demineralisation process (reverse osmosis membranes) to create demineralised water for the electrolysers; and cooling water. (GAWB, response to RFI 76, Hydrogen program execution plan, p 1.)
[44] We note there has been speculation surrounding the impending closure of CS Energy's Callide B power station, which is a substantial customer. On 8 April 2025, the Queensland Government announced its intention to upgrade the Callide B generator (See, Janetzki D, *Energy roadmap to deliver affordable, reliable and sustainable electricity*, media statement, 8 April 2025, Queensland Government, viewed 8 April 2025).

Figure 4: GAWB actual and forecast demand 2016–30



Source: GAWB, response to RFI 22; QCA analysis.

GAWB stated that since June 2023 it has sought to enter long-term (20–year) water supply agreements with prospective customers.[45] At the time of preparing its pricing proposal, GAWB advised that the full available capacity of Awoonga Dam had been allotted or contracted.[46] Any remaining water seekers are subject to GAWB's queuing policy. Queued customers cannot be allocated water until either new source capacity is secured, or existing allocations are released by customers and made available for reallocation. GAWB's demand forecasts did not include any queued demand that is beyond the available capacity of Awoonga Dam.[47]

Forecasting methods

GAWB uses a straightforward approach to demand forecasting. It is largely based on actual contracted volumes, historical actual data and the observed historical relationships between contracted and metered (actual) demand. Table 1 illustrates GAWB's underlying forecasting assumptions and information sources for each demand parameter.

Table 1: GAWB demand forecasting methods and assumptions

Demand parameter	Forecasting method
Reserved delivery point maximum daily quantity (ML/day)	Based on currently contracted volumes and maximum daily quantity (MDQ) for existing customers. GRC: based on GRC's 20-year forecasts.
Reserved delivery point volumes (ML/year)	

[45] GAWB, sub 1, p 29.
[46] GAWB, sub 1, p 128. Note that the full yield (water allocation) of Awoonga Dam is 78,000 ML, but it cannot be fully contracted due to storage and network losses and environmental discharge requirements, among other factors.
[47] GAWB, response to RFI 22.

Demand parameter	Forecasting method
	Domestic customers:[a] based on average historic usage.
Metered volumes (ML/year)	An averaging period of the most recent 5 years is used where it is representative of consumption under normal circumstances. Due to the failure of Callide C, GAWB has used alternative averaging periods for CSE and CPM, to better reflect typical usage for these customers. For domestic customers, the forecast metered volume is set to equal the reserved delivery point volumes (as this amount has been based on an average of actual usage from 2020–21 to 2023–24). For new customer delivery points that have no historical data, the forecast metered volume is based on the total average actual usage of all existing customers as a percentage of total 2025–26 reserved delivery point volumes for existing customers (82%).

a GAWB directly supplies a small number of residential customers in the Awoonga zone.
Source: GAWB, response to RFI 22 and RFI 101.

Overall, GAWB's demand forecasting is reasonable as it considers actual contracted volumes, customers' own usage expectations and actual historical demand. We note that GAWB's forecasting methods are broadly consistent with its approaches in previous reviews.

Reasonably expected future demand – new customers

The emerging hydrogen industry is expected to increase bulk water demand in GAWB's network area over the 2025–30 monitoring period and beyond. This expected demand is driving substantial network augmentation during the 2025–30 monitoring period.

As discussed in Chapter 5, GAWB's prices should include network augmentation required to:

> [s]ervice 2030 forecast Reserved Demand and any *reasonably expected* future demand that would make use of the network.[48] [emphasis added]

While the concept of 'reasonably expected future demand' is ambiguous, the definition of 'reserved demand' in the referral provides relevant context (defined above). The referral notice also states that 'reasonably expected' future demand is additional to 'reserved demand', not a component of it.

By extension, reasonably expected future demand could include demand that is supported by a relatively lower level of customer commitment – for instance, potential customers that have expressed interest in taking water but have not yet signed a water supply proposal. GAWB has interpreted the term in a similar way. GAWB identified three potential new customers in this category. These customers have either:

[48] Referral notice, section F, p 4.

- signed a water supply proposal
- signed a water supply proposal and are negotiating a conditional water supply contract, or
- been allotted water under GAWB's queuing guideline and have provided confirmation of intent to submit a water supply proposal.[49]

Clearly, these demand estimates are uncertain, particularly given that some prospective hydrogen customers have yet to finalise their investment decisions.

After we released our draft report, GAWB advised that the project status and intentions of two prospective hydrogen customers has changed, and their reserved water allocations have been released back to GAWB. As of early 2025, GAWB noted there is water available for allocation to queued customers. We understand there is sufficient queued demand from other prospective customers to absorb the relinquished water allocations; however, the timing and location of those demands are not yet certain.

At the time of preparing this report, GAWB was reviewing its customer queue, with a view to allocating any remaining available water. GAWB was also assessing the broader cost implications of the evolving demand outlook, including for augmentation capex forecasts.[50]

Further uncertainty has emerged surrounding the future of one of the largest proposed hydrogen facilities in the region, being the 'CQ-H2' project. This is a substantial hydrogen manufacturing and liquefaction facility which is in planning by a consortium led by Stanwell. In November 2024, one consortium partner stepped away from the project citing higher than expected costs.[51] Further, in February 2025, the Queensland Government announced it would not provide additional funding to the project.[52] Stanwell subsequently announced that it was considering the Government's announcement and was also reviewing its involvement in other hydrogen initiatives.[53]

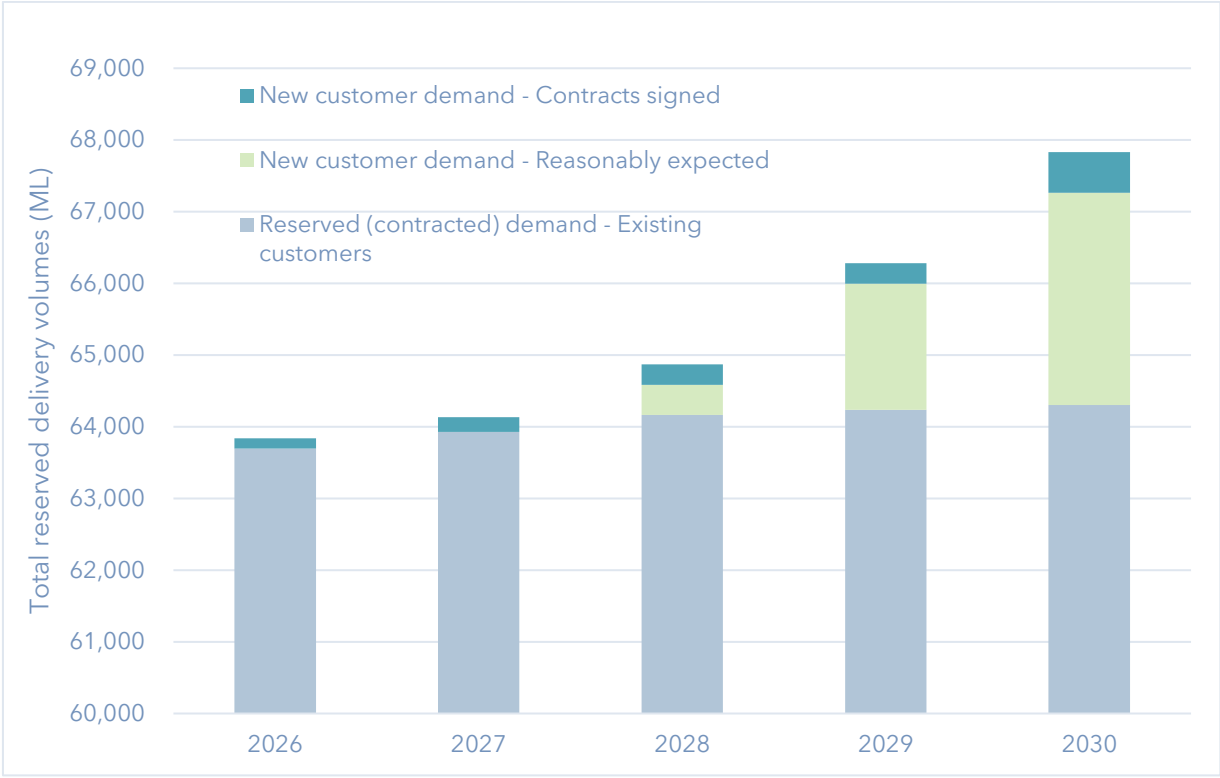
The expected demand of the CQ-H2 facility is substantial and a core driver of GAWB's proposed hydrogen augmentation capital program during 2025–30 (See Chapter 5). It is also a foundational element of the broader planned hydrogen industry in Gladstone, producing hydrogen feedstock for ancillary and derivative industrial processes planned for the area. At the time of preparing this report, [redacted].

These recent developments underscore the uncertainty of forecast hydrogen demand. Nonetheless, GAWB has used a sound approach to estimating reasonably expected demand in the circumstances. It is consistent with the parameters of the referral notice and is appropriate for our monitoring exercise – noting that the forecast is likely to change ahead of GAWB setting its prices.

[49] GAWB, response to RFI 22.
[50] GAWB was not in a position to provide a revised pricing model for our consideration in this final report. As such, our assessment relies on demand forecasts provided by GAWB in May 2024.
[51] Hydrogen Insight, *Japanese utility exits gigawatt-scale green hydrogen project in Australia*, 20 November 2024, Hydrogen Insight website, accessed 7 March 2025.
[52] PV Magazine, *Queensland ends support for 3 GW green hydrogen project*, 4 February 2025, PV Magazine website, accessed 7 March 2025.
[53] Stanwell, *Statement regarding the Central Queensland Hydrogen Project (CQ-H2)*, 3 February 2025, Stanwell website, accessed 7 March 2025.

Figure 5 illustrates the amount of reasonably expected future demand included in GAWB's demand forecast. It also illustrates the incremental demand of a small number of hydrogen customers that have commenced taking water and are ramping-up production during the 2025–30 price monitoring period.

Figure 5: Contribution of new hydrogen industry to forecast demand 2026–30



Source: GAWB, response to RFI 22; QCA analysis.

3.4 QCA findings

GAWB's demand forecasts are reasonable for the purposes of our price monitoring exercise, including its estimate of reasonably expected demand associated with the emerging hydrogen industry.

We note GAWB will continue to refine these forecasts in consultation with customers ahead of setting final prices for 2025–26.

Given the uncertainty surrounding new hydrogen-related demand, GAWB foreshadowed the potential for material changes to the demand forecast that is ultimately used to set prices.[54] This could in turn lead to a material difference in final prices when compared with the indicative prices presented in GAWB's pricing proposal and in this report.

In recognition of this uncertainty, we have also estimated illustrative prices under a scenario in which none of the forecast new hydrogen demand materialises during the 2025–30 period (Appendix F).

[54] GAWB, sub 27, p 31.

This pricing scenario is illustrative only; It does not constitute a QCA view on the likely trajectory of hydrogen industry development in Gladstone during the 2025–30 period.

4 Operating costs

GAWB's operating costs are the ongoing costs of providing water supply services and include costs associated with the operation and maintenance of water storage, treatment and transport, as well as water treatment chemicals and electricity. Operating costs that we assess to be prudent and efficient are a key input to determine GAWB's allowable costs that we use for our subsequent price monitoring activities.

The referral notice requires us to assess GAWB's operating costs for the period 1 July 2025 to 30 June 2030, using a base-step-trend approach and focusing on the necessary step changes. Base-year operating expenditures are to be calculated using forecast inflation. Issues of materiality are considered if there are any differences in aggregate between GAWB's proposal and our forecast.[55]

GAWB is proposing substantial increases to its operating costs in order to ensure:

- its substantial forecast capital program can be successfully delivered, including investments necessary to accommodate increases in its forecast demand
- resourcing constraints and cost pressures do not adversely impact on its ability to undertake its business-as-usual activities.

4.1 Overview of findings

As outlined in Chapter 5, there is substantial uncertainty about GAWB's ability to deliver its proposed capital program over the monitoring period. We also recognise that a substantial capability uplift is required for GAWB to deliver bulk water services to its existing and forecast customer demand over the period, with expected demand increasing over the period (Chapter 3). Taking this into account, we find that $235.88 million (Table 2) represents the prudent and efficient level of operating costs over the period. This is $8.84 million less than proposed by GAWB.

Table 2: QCA findings on GAWB's operating costs ($ million, nominal)

	QCA final					Total	GAWB proposal – difference
	2025-26	2026-27	2027-28	2028-29	2029-30		
Base-year	30.76	30.76	30.76	30.76	30.76	153.82	–
Step changes	8.93	7.62	8.99	10.15	12.57	48.24	(7.63)
Trend	4.50	5.67	7.18	8.56	10.33	36.24	(1.31)
Efficiency	(0.26)	(0.35)	(0.47)	(0.59)	(0.75)	(2.42)	0.09
Total	**43.93**	**43.69**	**46.46**	**48.88**	**52.91**	**235.88**	**(8.84)**

Note: Totals may not add due to rounding.
Source: GAWB, sub 1; QCA analysis.

[55] Referral notice, section F, p 3, Allowable Costs (a) and (b).

The primary reasons for differences between GAWB's proposal and our assessment relate to step changes, along with some minor differences in forecast escalation and the consequential application of GAWB's proposed 0.2% efficiency factor to a lower overall operating cost forecast.

Table 3: GAWB's proposed operating costs ($ million, nominal)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Base-year	30.76	30.76	30.76	30.76	30.76	153.82
Step changes	9.14	9.73	11.09	11.94	13.96	55.87
Trend	4.59	5.97	7.48	8.91	10.60	37.55
Efficiency	(0.27)	(0.37)	(0.49)	(0.62)	(0.77)	(2.51)
Total	**44.23**	**46.09**	**48.85**	**50.99**	**54.56**	**244.72**

Note: Totals may not add due to rounding.
Source: GAWB, sub 1, p 81; GAWB financial model; QCA analysis.

We consider that our forecast of operating costs reflects a reasonable overall estimate with which GAWB can prudently and efficiently manage its assets and undertake its operations in order to deliver its bulk water services and substantial capital program over the period.

GAWB submitted a base-step-trend approach for its operating costs for the first time. The base-step-trend approach serves as a robust and transparent approach for forecasting GAWB's prudent and efficient operating expenditure. We assessed GAWB's proposed operating costs and found:

- GAWB's prudent and efficient operating costs amounted to $235.88 million (Table 2). This is $8.84 million less than GAWB's proposed $244.72 million (Table 3). Given this difference is material, we have used our alternative estimate to determine GAWB's allowable costs.[56]
- GAWB's proposed base year level of operating costs of $30.76 was justified as being efficient (section 4.4), but we did not accept $7.63 million of GAWB's proposed step changes which still provides an additional $48.24 million over the monitoring period (section 4.5).
- GAWB's proposed escalators and how they are applied to operating cost categories over the monitoring period are generally acceptable, with the exception of the proposed premium above the Wage Price Index (WPI) to apply to GAWB's employee costs and contract labour costs. GAWB has provided insufficient evidence of materially different underlying cost drivers to support applying a premium over forecast WPI. As such, we do not consider it reasonable to apply a premium over WPI, as this would not be consistent with our 2021 inflation forecasting position paper (section 4.6.1).
- GAWB's proposed efficiency factor of 0.2% per annum (cumulative) applied to its forecast operating costs is acceptable to estimate efficiencies over the monitoring period (section 4.6.2).
- GAWB's proposal excludes operating costs that will be capitalised to avoid double counting. We have also confirmed that costs associated with the Fitzroy to Gladstone pipeline (FGP) have not been included, as these are currently capitalised to that project.

Our forecast of operating costs does not represent the amounts that GAWB must include in its actual prices. These are commercial matters that GAWB and its customers address during the

[56] See our assessment of allowable costs and allowable revenues (Chapter 8), which are converted to appropriate prices (Chapter 10) using forecast demand (Chapter 3) and GAWB's pricing practices (Chapter 9).

negotiation of their water supply agreements or pricing arrangements. Ultimately, GAWB is accountable for allocating and prioritising resources to specific operational, maintenance and administrative activities. This includes funding new initiatives or mitigating unexpected cost increases.

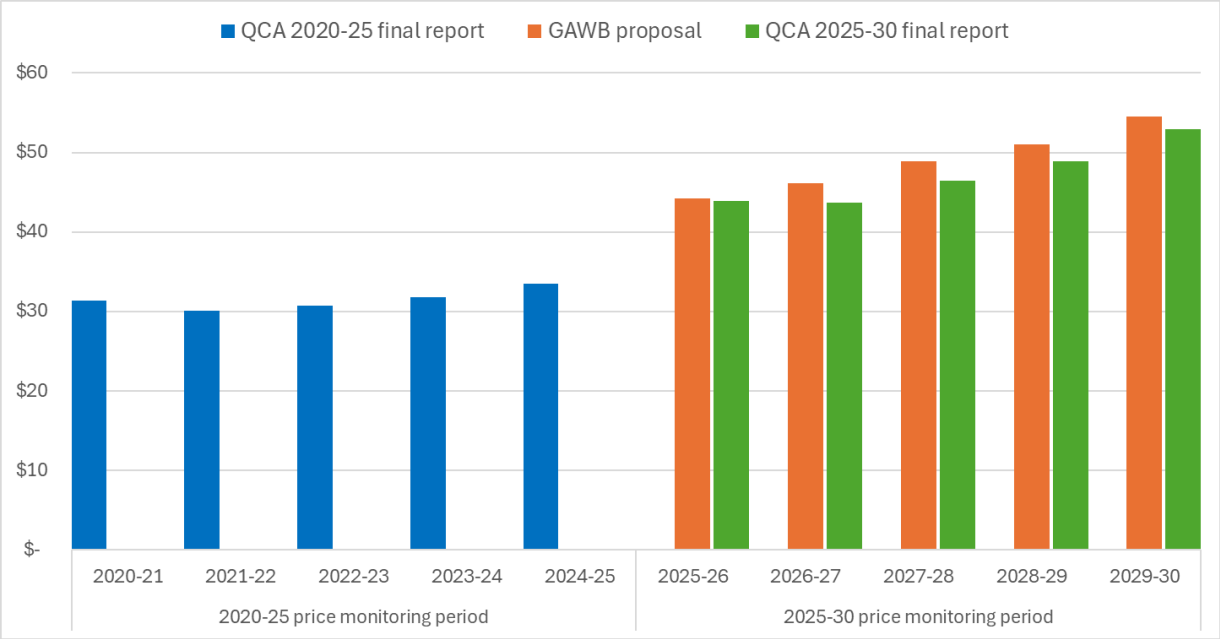
We also note the priority for GAWB is to deliver a substantial forecast capital program over the monitoring period without adversely impacting its ability to undertake its business-as-usual activities for existing customers. While there is uncertainty on how the forecast capital program will ultimately be scoped, timed and costed, it is prudent to resource for GAWB to implement operational changes to accommodate that. Similarly, we would expect GAWB to take actions to reduce its operating costs where the changing business and operating environment warranted such action.

Our forecast operating costs represent our assessment of the prudent and efficient costs based on the information available to us at this time. We were unable to verify the efficiency of the fish hatchery step change costs, as GAWB did not provide sufficient justification that its costs were efficient. While we have incorporated an increase for these costs, we are concerned that non-core business operation may not be providing a least cost compliance outcome for GAWB's customers.

We would welcome GAWB developing an efficiency plan during the monitoring period, in consultation with its customers, to set out a pathway to continue to reveal efficient costs over the price monitoring period, including an ongoing process to identify and implement spend to save initiatives (section 4.6.2). This should include a review of whether the hatchery is delivering a least-cost solution to satisfying GAWB's environmental obligations.

Figure 6 sets out our findings on GAWB's operating expenditure allowance for the 2025–30 period, compared with GAWB's proposal and allowances accepted in our 2020–25 review.

Figure 6: Comparison between 2020-25 review and 2025–30 allowable operating costs ($ million, nominal)



4.2 Assessment framework

The intent of our assessment framework is to include operating costs (within allowable costs and revenues) that are sufficient for GAWB to recover its prudent and efficient costs of providing bulk water services. The referral requires us to subsequently undertake price monitoring against GAWB's actual prices over the period 1 July 2025 to 30 June 2028.

In assessing the prudency and efficiency of operating costs from 1 July 2025 to 30 June 2030, we applied the relevant referral parameters. For example, we used our inflation forecasting methodology to escalate base year operating expenditures (section 4.6).[57]

Consistent with the referral, we have considered materiality after looking at aggregate operating cost forecasts.[58] We have used our judgement to form a view on prudency and efficiency based on the overall proposal before us.

We engaged Aither to provide independent technical advice to support our review.

4.3 Base-step-trend approach

As required by the referral[59], GAWB's forecast operating costs over the price monitoring period are estimated by using the base-step-trend approach. Our overall operating cost monitoring framework is illustrated in Figure 7.

[57] QCA, *Inflation forecasting*, final position paper, October 2021.
[58] Referral notice, section F, Allowable Costs, p 3.
[59] Referral notice, section F, Allowable Costs p 3.

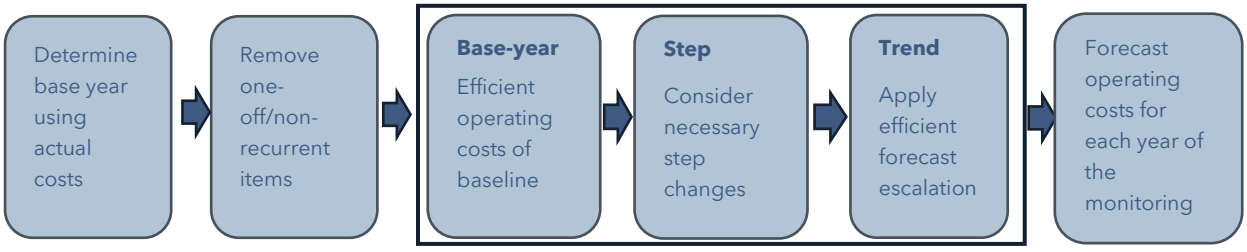
Figure 7: Overview of QCA operating cost monitoring framework

We consider that the forecast operating costs should be set at a broad level, allowing GAWB to manage its assets, meet its obligations, prioritise expenditures and deliver bulk and distribution services in aggregate. This provides flexibility for the business to redirect cost savings to new initiatives or to mitigate unexpected cost increases.

Figure 8 outlines the process of our assessment, which involves:

- determining an appropriate base year level of prudent and efficient recurrent expenditure
- focusing on the necessary step changes of expenditure expected to occur during the period
- escalating base year expenditures using forecast inflation.

Figure 8: The base-step-trend approach



Base-year operating costs

The base year should represent a typical year for the forecast period.[60] Where the most recent financial year's actual operating costs are consistent with previous price monitoring forecasts, we accept this as the prudent and efficient revealed costs for the financial year, removing any non-recurrent expenditure items.

Relevantly, we have not undertaken a detailed interrogation of GAWB's base year, as we are ultimately guided by the overall level of expenditure.[61]

Step changes

After establishing a typical base year, we focus on the necessary step changes expected to occur during the period.[62] In our assessment, we do not seek to reopen base-year outcomes in the absence of a compelling case being presented.[63]

We consider that proposed step changes should be material enough that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints, through prudent prioritisation of expenditures, or be otherwise mitigated. Necessary step changes should satisfy any of the following:

- The change is necessary to fulfil new (or changed) binding statutory or regulatory obligations and constitutes a reasonable estimate of the efficient incremental costs of fulfilling the new (or changed) binding statutory or regulatory obligation.
- The change is reasonably required to achieve an outcome that is explicitly endorsed by customers (for example, specific reliability outcomes) or broadly accepted changes in community expectations in relation to corporate responsibility.
- The change represents cyclical activities that are not within annual business-as-usual budgets.

The above requirements have been developed to promote a light-handed approach which avoids the need for intrusive investigations and provide the business with the onus of providing sufficient supporting information to justify including the step change within allowable costs.

Trend

After establishing the base-year and necessary step changes, we apply efficient forecast escalation expected to occur over the price monitoring period. This trend is applied to annual expenditure to provide a nominal forecast based on forecast escalation rates and efficiency factors, where appropriate.

We have been requested to escalate base year operating expenditure using forecast inflation based on the methodology outlined in our inflation forecasting position paper.[64]

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[60] That is, there are no fundamental changes to the business operating environment.
[61] We have not developed detailed bottom-up estimates of prudent and efficient operating cost by individual categories.
[62] Referral notice, section F, Allowable Costs, p 3.
[63] GAWB has made compelling cases to increase base-year labour costs insurance costs and electricity costs. These are considered as step changes (section 4.5).
[64] Referral notice, section F, Forecast Inflation, p 4.

4.4 Baseline operating expenditure

For price monitoring purposes, it is important to ensure that the operating expenditure for the baseline year reflects a 'typical' year and does not include any non-recurrent expenditure that would not otherwise be incurred during the period. All figures referred to in this section are in 2022–23 dollars unless specified otherwise.

GAWB proposal

GAWB nominated its most recently completed financial year (2022–23) as its base year, with adjustments, so it reflects a typical year of operations over the monitoring period. GAWB removed non-recurrent items (one-off items of expenditure) and included expenditure due to changes in accounting treatment and consideration of maintenance activities that would usually occur in a typical year for operations (deferred maintenance activities).[65]

QCA analysis and assessment

Our assessment of the adjustments necessary to GAWB's base year to reflect a typical year for operations over the monitoring period are outlined in Table 4. This provides a base year of $30.76 million (2022–23 dollars).

We note GAWB's actual operating expenditure of $30.85 million (2022–23 dollars) and its adjusted base year expenditure of $30.64 million are below our previous QCA price monitoring review forecast of $31.04 million (2022–23 dollars).

We accept GAWB's exclusion of identified one-off abnormal items from the base year, including costs associated with:

- updates to improve its capital project governance frameworks
- implementation of risk and compliance software
- an external review of critical infrastructure security
- 50th birthday celebrations.

We accept GAWB's inclusion of deferred maintenance expenditure and estimated and amortised motor vehicle lease costs into the base year. GAWB has demonstrated that these items are necessary over the period to establish a typical year because:

- amortisation of motor vehicle lease costs is not recovered elsewhere (for example, within capital charges from its regulatory asset base)
- a small number of preventative maintenance activities were deferred due to the limited availability of suitably qualified technical staff/external contractors. We note that GAWB has subsequently implemented a range of reforms to address such issues (see labour step change discussion in section 4.5).

GAWB has made a genuine attempt to isolate abnormal items from the base year. We are encouraged by GAWB's improved financial monitoring processes and performance implemented during the current monitoring period, which demonstrates GAWB is operating within its forecast

[65] GAWB, sub 1, p 52.

budgets and is accountable for its financial performance.[66] These processes have made establishing GAWB's base year a straightforward and uncontroversial process.

During our review, we requested confirmation if there were any termination payments in GAWB's base-year. GAWB confirmed that there were, and that these were a recurrent cost to its business as they are an ongoing part of managing its workforce. GAWB noted that it did not seek to include several other costs within step changes. For example, GAWB said it is no longer eligible for the regional payroll tax discount; however, it did not claim a step change for this cost increase.[67] Given this, we are not proposing any further adjustments to GAWB's base-year.

Table 4: QCA findings – baseline opex ($ million, 2022–23 dollars)

Baseline operating expenditure	$ million 2022–23
Operating costs – actuals	30.85
***less* one-off costs – updating governance frameworks[b]**	0.12
***less* one-off costs – implementation of risk and compliance software[b]**	0.14
***less* one-off costs – 50th birthday celebration costs**	0.20
***less* one-off costs – consultant review of critical infrastructure[b]**	0.11
***add* maintenance deferred due to resource constraints**	0.17
***add* amortised motor vehicle lease costs (excluded from operating costs)**	0.32
Total base year opex[a]	**30.76**

a Totals may not add due to rounding. b Estimates exclude incremental costs associated with forecast operating costs to be recovered through step changes.
Source: GAWB, sub 1; QCA analysis.

To avoid the inclusion of costs outside the scope of our investigation, GAWB provided detailed transaction lists of actual operating expenditure for its proposed base year 2022–23, which provided evidence that costs associated with the FGP were not included in its adjusted base year.

We have confirmed that non-recurrent operating expenditure has been removed from GAWB's proposed base year and it reflects a typical baseline level of operating expenditure for GAWB's operations (excluding the FGP costs). We also confirmed that there is no double-counting by reviewing GAWB's financial information, which shows it has excluded costs forecast to be capitalised from its base year.[68]

Aither assisted us by undertaking a review of GAWB's base year general ledger 2022–23, which confirmed the adjustments to the base year were reasonable to determine a typical level of operating expenditure and excluded costs associated with the FGP.[69]

[66] GAWB has implemented processes to monitor its actual performance in the areas of capital and operating expenditure, against QCA forecasts and those used to set its customers prices (Aither report, pp 28-29).
[67] GAWB, follow-up to RFI 38 and 39, email, 23 October 2024.
[68] This could arise where operating costs that are capitalised to projects (such as labour and contractors and professional services costs) are also included in forecast operating costs.
[69] Aither report, pp 32–33.

4.5 Step changes

Once base year costs have been adjusted to reflect an efficient level of recurrent expenditure, consideration should be given to factors that may change that base level of expenditure during the monitoring period, other than real cost escalation (considered in section 4.6). These adjustments are described as step changes and represent incremental increases or decreases in expenditure from the above determined efficient base year costs.[70] The referral notice requires us to consider those step changes that are necessary during the period. We then form a view on the prudency and efficiency of the step change costs.

GAWB proposal

GAWB submitted 9 step changes, amounting to an additional $56.24 million (2022–23 dollars) in operating costs expected to be incurred during the monitoring period.[71] A summary of GAWB's proposed annual operating expenditure for each step change is provided at Table 5.

Table 5: GAWB proposed step changes to operating costs by year ($ million, 2022–23 dollars)

Opex steps	2025–26	2026–27	2027–28	2028–29	2029–30	Total
Labour costs	5.94	6.66	6.66	6.66	6.66	**32.59**
Electricity	0.41	0.42	0.93	1.42	2.24	**5.41**
ICT	0.81	0.81	0.81	0.81	0.81	**4.04**
Maintenance	0.80	0.27	0.85	0.45	(0.03)[a]	**2.34**
Hatchery	0.28	0.28	0.28	0.28	0.28	**1.38**
Insurance	0.44	0.69	0.97	1.30	1.66	**5.06**
Chemicals	0.28	0.28	0.28	0.28	0.28	**1.39**
QCA review	0.10	0.00	0.00	0.75	2.45	**3.30**
Tariff review	0.09	0.33	0.33	0.00	0.00	**0.75**
Total steps	**9.14**	**9.73**	**11.09**	**11.94**	**14.34**	**56.24**

a GAWB's submission refers to $403,228, which was due to a reporting error. GAWB addressed this issue and provided the revised value in its responses to RFI 38 and 39.

QCA analysis and assessment

We have assessed GAWB's proposed step changes to forecast operating costs. These proposed adjustments were predicated on using 2022–23 actual costs as the efficient cost base. Our findings are summarised in Table 6, with further detail provided below.

[70] Step change costs in this section are described in 2022–23 dollars, unless otherwise stated, consistent with GAWB's submission.
[71] GAWB, sub 1, pp 55–76.

Table 6: QCA findings – step changes to GAWB's operating costs ($ million, 2022–23 dollars)

Step change	GAWB proposal	QCA alternative forecast	Comment
Labour Costs associated with implementation of a remuneration and benefits strategy and for additional staff	32.59	27.70	We accept that GAWB's labour cost base is required to increase over the monitoring period. The approach taken by GAWB is in direct response to the challenging labour market and operating environment. While we have concerns about approving individual additional roles that are not directly supported by our step change criteria, we have taken a pragmatic approach given the challenges for GAWB over the monitoring period. Rather than determining the merits of individual roles or specific responsibilities proposed by GAWB, we have estimated the step change for additional roles based on the positions GAWB has actually filled as at 30 June 2024. This results in a reduction of $3.7m over the period. In March 2025, GAWB identified errors in its calculation of forecast expected actual cost for long service leave (overestimating by $1.67m) and identified omissions for leave provisions (underestimating by $0.85m). We have incorporated these amounts into the labour step change.
Electricity Costs to accommodate forecast increases in cost inputs and increases in total electricity usage	5.41	5.41	We accept increases in electricity consumption will be required to meet forecast demand over the period. We also recognise that GAWB could have reasonably requested aspects of this claim as increased escalation, in light of recent volatility and uncertainty in wholesale energy markets. Therefore, considering it as a step change is not controversial in the circumstances. GAWB has demonstrated efficiency in its cost procurement methodology (strategy) for contestable sites and tariff settings where notified prices are incurred.
ICT Costs of implementing GAWB's 2024–2029 ICT Strategy	4.04	3.16	We accept GAWB's estimate of costs that relate to unavoidable replacement of major systems, cyber security, communication robustness and costs associated with additional employees. This accounts for $3.16m. We have not included costs that relate to business-as usual-activities, the escalation of

Step change	GAWB proposal	QCA alternative forecast	Comment
			specific software and hosting costs and other balancing items. GAWB has not demonstrated that these items satisfy the criteria to be assessed as a step change.
Maintenance [a] Costs for major cyclical preventative maintenance and the implementation of specific project initiatives that will enable better planning and decision-making	2.34	2.11	We have accepted GAWB's forecast costs for major cyclical preventative maintenance and one-off project initiatives planned to be undertaken during the period that are proposed to reduce future costs and improve maintenance and easement planning. We have excluded project-based expenditure where the initiative is effectively a carry-over item because the project was not completed as planned in the 2020–25 monitoring period ($0.23m). This does not satisfy our step change criteria and should be included within business-as-usual expenditure.
Hatchery Costs to increase production up to the maximum permissible restocking rate	1.38	0.63	We are unable to confirm the additional costs are required to satisfy environmental obligations because the yet-to-be-finalised 'put and take monitoring framework' needs to be completed to satisfy a step change. However, GAWB has provided correspondence from Fisheries Queensland that states GAWB is expected to 'plan for and try to stock' at maximum restocking levels. We maintain our concerns about the level efficiency of GAWB's forecast costs. GAWB has not provided any additional supporting information regarding the efficiency of its hatchery costs, as requested in our draft report. Nonetheless, we have incorporated an increase of $0.63m to account for GAWB planning to target restocking rates.
Insurance Costs to accommodate forecast increases in insurance costs, including for a substantial increase in the size of GAWB's asset base	5.06	5.06	We accept GAWB's proposed insurance step change. GAWB has provided a reasonable forecast to account for the substantial increase in its asset base over the period. Moreover, GAWB has made a compelling case for these costs to be assessed within a step change, in light of significant increases in insurance costs that has occurred over a sustained period of time.
Chemicals	1.39	0.88	We accept costs associated with increases in chemical usage to meet production volumes

Step change	GAWB proposal	QCA alternative forecast	Comment
Costs for increased quantities of chemicals to satisfy increased forecast demand, and increases in consumables; and costs for price increases for specific chemical items			relative to the base year (and updated cost forecasts for this) and for GAWB's increase in consumables. These are required to satisfy increased production to meet forecast demand, while also maintaining its existing operations. We have not accepted GAWB's proposal to incorporate price increases for specific chemical items. We do not re-open operating expense items selectively as a step change unless a compelling case has been made (such as GAWB has made for insurance and electricity costs).
QCA review Costs for future QCA reviews, QCA fees and external consultants	3.30	3.30	We have accepted GAWB's forecast costs for future price monitoring activities. These costs represent cyclical activities that are not within annual business-as-usual budgets.
Tariff review Costs to undertake a comprehensive review of GAWB's tariff structure	0.75	0	We are unable to confirm the additional costs required to undertake a tariff structure review because the need for the review has not been demonstrated. This is not a new requirement for GAWB.
Step changes	**56.24**	**48.24**	

a GAWB's proposal outlined a step change of $1.97 million but it has been amended based on information subsequently provided by GAWB in RFI 38 and 39.

Providing the right price monitoring incentives for step changes

We rely on the business to make a convincing case in support of its step changes. In recognition of this, we have placed greater emphasis on whether the drivers of proposed step changes satisfy our criteria to establish if the step change is necessary. Our assessment of GAWB's step changes against our criteria is undertaken before assessing the prudency and efficiency of costs for each proposed step change.

Forecasting expenditures using the base-step-trend approach should not be an exercise in identification and recovery of all anticipated business-as-usual costs or savings, or act as a supplementary cost pass-through mechanism.

Our step change criteria have been developed to avoid assessing step changes in a way that is more akin to stepping into the role of making individual business decisions or dictating whether specific functions should, or should not, be undertaken, unless there is a clear driver.

The objectives of incentive-based price monitoring can be achieved where an efficient operating allowance for a bundle of costs is established, and the regulator then steps away from the process and monitors the outcomes achieved by the business. If additional costs are actually incurred in providing the services, the expectation is that these are borne by the business, but similarly, if the business can achieve productivity improvements and reduce costs, it should retain the benefit.

During the course of a monitoring period, costs in some categories will be higher than the corresponding base year allowance, and others will be lower. This natural annual variation, along with prudent prioritisation of expenditure, underpins the incentives within the base-step-trend approach. Importantly, this approach should ideally apply symmetrically. That is, decreases in some expenditure items are expected to be offset by increases in others.

Aligning GAWB's budgeting processes with the base-step-trend approach

Although this is GAWB's first monitoring investigation using the base-step-trend process, GAWB has made a genuine attempt to justify its proposals and willingly provided supporting information, where it is available.

However, transitioning to the base-step-trend approach at the current time has some challenges for GAWB — in particular, GAWB's recent transformation of its workforce capability to ensure the deliverability of its ambitious forecast capital program and avoid its existing customers being exposed to performance and reliability issues.

Moreover, GAWB's budgeting processes are developed on a zero-base budget for each of its business units. Aligning GAWB's budgeting approach with the base-step-trend has resulted in a number of challenges for us where there is not a clear cost driver (new statutory obligation or newly forecast operations) that addresses the step change, in part or completely. In combination, these factors have required us to form views in several instances where there is not a unifying cost driver (new statutory obligation or newly forecast operations), or where aspects of the step change are not material. In these circumstances, we are placed in the position of making de facto resource allocation decisions for the business — rather than determining the prudency and efficiency of necessary step changes.

In the absence of a convincing case, we do not consider specific expenditure items should be selectively re-opened simply for cost increases above forecast escalation. Such an approach would introduce a level of unnecessary complexity and promote unnecessary regulatory intrusion, where we seek to identify cost items where costs are lower than inflation. The costs of this approach would clearly outweigh the benefits.

We note that for the majority of GAWB's proposed step changes (in value and number), GAWB has provided sufficient justification of step changes so that it avoids an overly intrusive approach by us. We also recognise that integrating the base-step-trend approach within GAWB's internal business processes will take some time.

The following sections outline our findings with respect to GAWB's proposed step changes.

Labour step change

GAWB proposed a step change to uplift its employment costs, reflecting changes in GAWB's remuneration policy and the size and composition of its workforce. This step change was not included in GAWB's previous forecasts submitted to the us for the 2020–25 monitoring period as it could not be reasonably estimated at the time.[72]

The value of the step change is for additional costs of $32.59 million over the monitoring period for:

[72] GAWB, response to RFI 16, *Labour Costs Step Change Summary*, p 2.

- the implementation of a new remuneration strategy ($2.11m per annum) and benefits strategy ($1.55m per annum), in response to challenges in recruiting and retaining staff
- additional staff required to respond to the demands of GAWB's changing operating environment ($2.86m per annum). [73]

We generally consider that this step change is necessary for GAWB to fulfil new obligations that arise to meet forecast expected demand while also maintaining its operational performance obligations for existing customers. We recognise that GAWB could have reasonably requested this increase within its proposed base year (to determine typical recurrent costs expected over the period), and the proposed step change is of sufficient materiality that it should be assessed for inclusion within allowable costs.

GAWB has provided evidence of a tightening and highly competitive employment market in Gladstone that impacts on its ability to attract and retain a quality workforce. For example:

- GAWB's staff turnover more than doubled from 16.3% in 2018–19 to 32.8% in 2022–23. Surveys indicated that over 87% of GAWB staff believed the employee benefits offered were not competitive with other companies in the region.[74]
- The average time to fill roles had been over 69 days in 2021–22 and 2022–23.
- The average employee age is 47.4, with 16 employees (over 13% of its workforce) currently at or reaching retirement age by 2026.

GAWB has noted a significant decrease in employee turnover and improvements in attracting quality candidates during 2023–24[75] (the staff retention rate in 2023–24 was 90.8%[76], and the annualised turnover rate was 13.8%[77]). By way of comparison in 2021–22, rates were 77.6% and 24.2% respectively.[78]

We recognise that without this proposed expenditure, the majority of which GAWB is already investing in its workforce, deliverability of its forecast capital project would be at risk and existing customers could be exposed to performance and reliability issues.

While we have concerns about approving individual additional roles that are not directly supported by our step change criteria, we have taken a pragmatic approach given the challenges for GAWB over the monitoring period, as discussed below.

Remuneration and benefits strategy

We accept this aspect of GAWB's labour cost base, as it is necessary to be incurred during the monitoring period. The approach taken by GAWB is in direct response to challenging labour market and operating environment.

During 2022, GAWB commenced a whole-of-business review of the remuneration and benefits made available to its workforce. GAWB engaged Mercer to assist with this review. Mercer conducted a benchmarking of GAWB's remuneration and benefits against market trends and

[73] Costs associated with the labour step change are $5.94 million in 2025–26, before increasing to $6.66 million per annum for the remainder of the price monitoring period.
[74] GAWB, Response to RFI 16, *Remuneration and benefits review presentation*, p 18.
[75] GAWB, *Annual Report 2023–24*, pp 14, 27.
[76] GAWB, *Annual Report 2023–24*, p 27.
[77] GAWB, *Annual Report 2023–24*, p 26.
[78] GAWB, *Annual Report 2021–22*, p 19.

industry standards. This informed comparator market assessment resulted in percentage uplifts for employees, ranging from [redacted].

A key component of the salary revisions involved GAWB benchmarking its staff according to the:

- general market, for roles where the labour competes in the open market and are not considered 'hard to fill'
- resource, construction and engineering (RCE) market, where roles are:
  - 'hard to fill' and require competitive remuneration to and/or retain; or
  - subject to direct competition from other employment within the RCE market.

The implementation of a new remuneration strategy is forecast to increase annual costs by $2.11 million (2022–23 dollars). GAWB has provided detailed justification for this aspect of its proposed labour step change, though provision of supporting information concurrently with its submission would have been best practice.

Aither noted that the overall approach taken by GAWB is understandable and reflects a business responding to the labour market it operates in.[79] Aither also noted that the supporting information would have been better if a more detailed justification on the value for GAWB's customers and the potential benefits that would be generated through the implementation of the new approach were considered in greater detail.[80]

Concurrent to its renumeration review, GAWB adopted a range of employee-related benefits including increased medical and health-related benefits, access to long service leave after 5 years of service, as well as an increase in fringe benefit tax (FBT) associated with the additional benefits. The implementation of a new benefits strategy is forecast to increase annual costs by ($1.55m).

Relevantly, GAWB's decision to implement these measures during 2023–24 highlights the importance of acting to secure and attract the skilled workforce it requires to address the operating challenges.

In response to our draft report, GAWB identified errors in its calculation of its forecast for long service leave costs (overestimating by $1.67m).[81] In March 2025, GAWB also provided information regarding a range of leave liabilities to which it said increases were required because of its renumeration and benefit review.[82] These are related to accruals of new entitlements and benefits, including:

- entitlement to accrued sick leave on cessation of employment based on 'length of employment
- increases for accruals for annual leave, time off in lieu and accrued days off. GAWB considered these needed to be increased to account for increases in employment costs.

We have incorporated these omissions into the labour step change which account for an increase of $0.85 million.

We intend to monitor how the new remuneration and benefits strategy assists in improving staff retention and how GAWB demonstrates the benefits of this initiative to its customers.

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[79] Aither report p 37.
[80] Aither report p 38.
[81] GAWB, response to RFI 90, *Provision for Leave*.
[82] GAWB, response to RFI 90, *Provision for Leave*.

Additional roles

We have taken a pragmatic approach when considering the proposed step change for additional roles.

In a number of instances, the position descriptions and reasons for the additional roles are not clearly linked to our step change criteria. Nonetheless, it is clear that GAWB is focused on meeting forecast expected demand through its ambitious capital program while also maintaining its existing operational performance obligations for existing customers. We have considered this step change from this perspective.

Rather than determining the merits of individual roles or specific responsibilities as undertaken by GAWB, we have used the positions filled in 2023–24 that are recovered through operating costs to estimate the necessary step change. Establishing a new baseline by benchmarking GAWB to the new roles up to 2023–24 provides a reasonable estimate for the new roles needed over the monitoring period. While this approach results in a slight reduction of $3.7 million over the period, for roles not filled in 2023–24, it still provides GAWB with a substantial increase to allocate towards its operational priorities.

Given the majority of the roles included in this step change have already been filled, and the costs therefore reflect actual remuneration being paid, GAWB is already incurring costs that are not reflected in the allowance used to set bulk water prices in the current 2020–25 monitoring period.[83]

Importantly, we do not intend to contemplate proposed step changes associated with incremental staff and resourcing needs in the future, except where there is strong justification for doing so (such as outlined in our step change criteria). In the absence of a clear justification, it should not be our role to form a view on the prudency and efficiency of individual resourcing decisions, or to dictate whether specific business management functions should, or should not, be undertaken by GAWB. In our view, continuing to assess step changes at this level of detail will not advance the objectives of the incentive-based approach to price monitoring. Furthermore, considering relatively modest incremental increases in resourcing for specific functions does not necessarily take account of year-to-year variations in costs, or offsetting cost reductions that may be realised in other areas during the monitoring period.

We will monitor GAWB's progress with implementing its new operating model that requires additional roles to be filled.

Electricity step change

GAWB proposed a step change in electricity costs of $5.41 million over the monitoring period, driven by forecast increases in cost inputs and increases in total electricity usage as a result of forecast expected demand.

We consider this step change is necessary for GAWB to fulfil new obligations that arise to meet forecast expected demand while also maintaining its existing operational performance obligations for existing customers.

We recognise that GAWB could have reasonably requested aspects of this claim as increased escalation given the recent volatility and uncertainty in wholesale energy markets. We accept that

[83] Aither report, p 57.

increases in electricity consumption will be required to meet increasing forecast demand over the period. The proposed increase is of sufficient materiality that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints, through prudent prioritisation of expenditures, or be otherwise mitigated.

GAWB developed a whole-of-business electricity cost forecasting model that is used to monitor, reconcile and forecast its electricity costs by site. It is used to inform wholesale market contracting decisions and takes into account forecast electricity costs beyond the contracted periods. Moreover, GAWB has also used advice from ACIL Allen on the wholesale electricity market outlook until 2030.

A thorough review of GAWB's forecasting approach has been undertaken by ourselves and Aither.[84] Compared to 2022–23, we note:

- wholesale electricity prices have increased significantly which has been demonstrated by GAWB for both contestable and regulated sites
- network tariff costs continue to increase for both contestable and regulated sites
- increasing water demand is increasing the electricity operational costs for existing sites, particularly at the Awoonga Dam pump station
- forecast expected demand for the new customers necessitates GAWB augmenting and expanding its delivery network, especially adding new pumping capacity, which is a key driver for forecast electricity consumption from 2027 to 2028.

A major driver of the increase is driven by the timing of commissioning augmentation projects. Aither confirmed this was reasonable and aligned with GAWB's forecast capital expenditure program.[85] GAWB also provided detailed supporting information that it used in its decision-making in relation to tariff optimisation processes and forecast modelling.

GAWB has demonstrated efficiency in its cost procurement methodology (strategy) for contestable sites and tariff settings where notified pries are incurred.

We note that GAWB has committed to updating its electricity forecasts with its demand forecast ahead of its negotiated price-setting processes for the monitoring period.[86]

ICT step change

GAWB proposed to include an ICT step change for costs associated with the implementation of its 2024–2029 ICT Strategy.

The value of the step change is for additional annual costs of $0.81 million (totalling $4.04m over the monitoring period) for:

- unavoidable replacement of major systems ($0.47m per annum)
- increased cyber security costs ($0.05m per annum)
- communication integration and robustness costs required to integrate GAWB's expanding network and costs associated with additional employees ($0.11m per annum)
- business analytics / information management dashboard development for energy, billing, processes, connecting SaaS systems and investigating machine learning data ($0.05m per annum)

[84] Aither report, pp 40–44.
[85] Aither report, p 43.
[86] GAWB, sub 27, p 32.

- software engineering for two applications and software support ($0.03m per annum)
- cost escalation for services above inflation ($0.08m per annum)
- other balancing items to align with the corporate plan budget to implement ICT strategy ($0.01m per annum).[87]

We accept costs that relate to the unavoidable replacement of major systems, cyber security, communication robustness and costs associated with additional employees. These aspects of the proposed step change are necessary for GAWB to fulfil new obligations – they are either cyclical activities that are not within annual business-as-usual budgets or are necessary to support additional employees (see labour step change section 4.5).

These items account for $3.16 million of the proposed expenditure. We consider this is of sufficient materiality that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints, through prudent prioritisation of expenditures, or be otherwise mitigated.

GAWB stated that one of its ICT providers had indicated price rises for applications totalling 10% between 2024–25 and 2025–26.[88]

Aither noted that GAWB provided detailed supporting justification on the strategic and business drivers behind the key step change items, namely the implementation of the TechnologyOne employee system, database upgrades and cyber-security-related costs.[89] Aither considered that while limited supporting information was provided for employee communication costs, it was a reasonable estimate.[90] As GAWB has made a genuine effort in estimating these costs, we have included them in our assessment.

However, we have concerns with a number of individual annual items within this step change, where GAWB has not demonstrated that these items satisfy the criteria to be assessed as a step change. Accordingly, we have not included annual costs that relate to:

- business-as-usual activities, such as engineering software ($0.03m) and business analytics / information management ($0.05m)
- escalation of specific software and hosting costs above inflation ($0.08m per annum)
- other balancing items to align with the corporate plan budget to implement its ICT strategy ($0.01m).

In the absence of sufficient justification, our intention would be for these costs to be absorbed within business-as-usual constraints or overall escalation forecasts. Moreover, these amounts are immaterial.

Aither similarly noted concerns with ambiguity as to the rationale for some elements of GAWB's ICT plan and considered certain items could likely be business-as-usual activities or better incorporated as cost escalation. However, it did not make adjustments to the step change for this.[91] Aither recommended that GAWB improves the documentation that demonstrates the drivers of ICT expenditure going forward.[92]

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[87] Totals do not add up due to rounding.
[88] GAWB, sub 27, p 12.
[89] Aither report, p 45.
[90] Aither report, p 45.
[91] Aither only recommended a minor adjustment for discrepancies between the costs set out in GAWB's submission and the supporting spreadsheet GAWB provided (Aither report, pp 45–46).
[92] Aither report, pp 45-46.

Maintenance step change

GAWB proposed to include a step change for maintenance activities, equal to $2.34 million[93] over the monitoring period:

- costs for major cyclical preventative maintenance at the Awoonga Dam spillway ($0.58m) and intake valve and actuator refurbishment
- implementation of specific project initiatives that will enable better planning and decision-making and condition assessments:
  - easement maintenance and operation ($0.37m per annum)
  - condition assessments ($0.11m per annum)
  - documentation of network reform work from the previous period that has not been completed in 2024–25 as scheduled ($0.23m in 2025–26).

We have accepted GAWB's forecast costs for major cyclical preventative maintenance and one-off project initiatives planned to be undertaken during the period that are proposed to reduce future costs and improve maintenance and easement planning. These aspects of the step change are necessary for GAWB to fulfil new obligations that arise to meet forecast expected demand while also maintaining its existing operations. The increase is of sufficient materiality that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints, through prudent prioritisation of expenditures, or be otherwise mitigated.

The preventative maintenance tasks are material, cyclical activities that would not be included in the baseline operating expenditure. Aither noted that the cost estimates were reasonable and the planned timing of the Awoonga Dam preventative maintenance reflects the recommendations of GAWB's external technical consultants.[94]

GAWB's one-off project initiatives planned to be undertaken during the period, which are proposed to reduce future costs and improve maintenance and easement planning, are based on:

- condition assessments to improve the data integrity of GAWB's lifecycle maintenance plans
- asset criticality reviews to better understand how maintenance strategies can be used to manage procurement risks
- pipeline and easement management programs being developed to avoid unnecessary delays to its capital program (noting that cultural or heritage assessments can impact on project timeframes).[95]

We have excluded project-based expenditure where the initiative is effectively a carry-over item because the project was not completed as planned during the 2020–25 monitoring period ($0.23m). In this instance, the deferral of this project does not satisfy a step change for the monitoring period and should be included within business-as-usual expenditure. We note that GAWB had proceeded with the project on the basis that all the expenditure would be absorbed within business-as-usual reprioritisations.[96]

Aither noted that it would have been beneficial for GAWB to estimate the expected monetary benefits of the program in detail, even with the inherent uncertainty of forecasting them. Rather than

[93] GAWB's submission refers to $1.97 million that was due to a reporting error in 2029–30. GAWB addressed this issue and provided the revised value in its responses to RFI 38 and 39.
[94] Aither report, p 47.
[95] Aither report, p 48.
[96] Aither report, p 48.

recommending adjustments to GAWB's proposed increase in maintenance expenditure, it considered this within its recommended efficiency factor.[97] Aither recommended that GAWB improve internal documentation to justify this expenditure in the future, to ensure the expected benefits and costs are better reflected in its decision-making.[98]

As part of our monitoring task, we encourage GAWB's to track its progress as it improves its planning and decision-making processes to see how this benefits GAWB's customers.

Hatchery step change

GAWB operates a fish hatchery for barramundi, mangrove jack, sea mullet and other species, which are restocked into Awoonga Dam. Environmental consent conditions require GAWB to restock these fish to mitigate the impact of Awoonga Dam on migratory fish species in the Boyne River.[99] These conditions recognise that certain fish species cannot close the life cycle due within the original waterbody and need to be continually restocked.[100]

GAWB proposed to include $1.38 million over the monitoring period to account for increased costs resulting from increases in production up to the maximum permissible restocking rates, following the commissioning of its new hatchery facility.[101] GAWB said that until its new hatchery was commissioned and capable of operating at full capacity,[102] its restocking rate was always less than the maximum set under its general fisheries permit.[103]

While it was prudent for GAWB to invest in the hatchery facility to accommodate production up to the maximum restocking rate, the optimal restocking rate may be something less than both the production capacity of the facility and the maximum restocking rates outlined in its general fisheries permit.

Moreover, GAWB has indicated that the maximum restocking rate is a limit, in recognition of barramundi being an apex predator.[104] We understand this to mean that the maximum restocking rate is therefore intended to avoid potential ecological impacts of overstocking barramundi – it does not necessarily reflect the optimal 'put-and-take' restocking rate.

GAWB also said that:

> there are no mandated minimum re-stocking quantities. However, there is an expectation that GAWB will manage its production target with the objective of achieving its maximum target each year. It is important to note that these maximum targets have been set by the Queensland Government based on maintaining fish levels within Awoonga Dam. It is therefore assumed that targeting restocking levels below the maximum restocking target would not achieve the levels necessary to maintain long-term fish levels in the dam.[105]

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[97] Aither report, p 48, 65.
[98] Aither report, pp 48–49.
[99] GAWB is required to restock fish at Lake Awoonga as a condition of its environmental impact statement (EIS) for the raising of Awoonga Dam in 2001.
[100] Queensland Government, *Policy for fish stocking in Queensland*, December 2020, p 13.
[101] Capital expenditure associated with the relocation, design and construction of the new hatchery was reviewed by us as part of our 2020 price monitoring investigation. In that investigation, we found GAWB's proposed capex to build the new hatchery facility was prudent and efficient.
[102] GAWB advised that it had been unable to meet its maximum restocking target out of GAWB's previous hatchery facility, which averaged only 243,000 annually between 2013–14 and 2018–19. Moreover, there had been a ramp-up period following commissioning before it is capable of achieving its targeted capacity.
[103] GAWB, response to RFI 34, p 3.
[104] GAWB staff interviews (17 July 2024).
[105] GAWB, response to RFI 33 and 68, p 3.

At the time of us finalising this report, GAWB has not demonstrated that this step change is necessary for it to fulfill a new or existing obligation. We understand that GAWB's fisheries permit and the Management and Stocking Plan for Awoonga Dam (2022–2025) contains maximum stocking quantities; however, we have not seen evidence that GAWB's production forecasts consider optimal restocking rates from an ecological or economic standpoint, or that GAWB has undertaken studies to determine optimal restocking levels. We understand that the monitoring framework that would inform the optimal 'put and take' restocking rates has not been developed.

GAWB has provided correspondence from Fisheries Queensland that states GAWB should 'plan for and try to stock' at the maximum levels. Moreover, Fisheries Queensland stated that its 'guidelines for monitoring are currently under development'.[106]

While GAWB has not been able to provide sufficient justification that increasing its hatchery production above its 2022–23 level is a requirement of its fisheries licence and associated fisheries management plan, we appreciate that GAWB is operating in an environment without an agreed monitoring plan framework. On this basis we accept there should be some flexibility in terms of the 'prudency' as a necessary step change.

Nonetheless, we have concerns around the level of supporting information justifying the amount of the proposed costs.[107] GAWB has not provided further supporting detail on the efficiency of these costs, in response to our draft report.

In the absence of GAWB providing additional supporting information, we have incorporated a step change of $0.13 million per annum, which is an estimate of costs to satisfy increases in hatchery output relative to the 2022–23 base year. This represents an increase in base year costs by 90% for an increase of maximum production (which may or may not be required) of 56%.

While we have included an increase to the operating cost allowance, we have a number of concerns with the cost efficiency of this non-core business operation. We would expect GAWB to undertake a review of whether the hatchery is delivering a least-cost solution to satisfying GAWB's environmental obligations.

Insurance step change

GAWB proposed a step change for insurance costs, equal to $5.06 million over the monitoring period. The proposed increase in insurance costs is based on:

- incremental premiums to account for substantial increases in the size of GAWB's asset base over the monitoring period, which is covered through industrial special risk (ISR) insurance[108]
- accommodating forecast insurance cost increases to insure GAWB's current operations, which include ISR and other insurance (covering existing assets and insured risks).

We accept this step change is necessary for GAWB to fulfil new obligations that arise, including to address the significant increase to its asset base over the period. Moreover, GAWB has made a compelling case for these costs to be assessed within a step change, in light of the significant

[106] GAWB, response to RFI 91, 92 and 93, attachment 1.
[107] Aither noted that, from 2022–23 to 2024–25, GAWB is seeking to increase production by 56% at a forecast cost increase of 197% in operating expenditure for the hatchery (Aither report, pp 51–52).
[108] ISR insurance provides cover for a range of loss scenarios or damage done to high-value physical assets including property, buildings and machinery.

increases in insurance costs that have occurred over a sustained period of time. GAWB's insurance costs have exhibited sustained annual growth between 2019–20 and 2023–24.[109]

GAWB's insurance costs are subject to a detailed review process as part of each annual renewal, which includes:

- a review of GAWB's coverage requirements
- a review of market conditions and how this is impacting the availability and cost of cover, as well as policy terms and conditions; and insurance premiums.[110]

We consider that this provides a reliable forecast for the purposes of GAWB's operations. Aither's assessment was that GAWB's process for estimating insurance expenditure forecasts is robust and the forecast appears reasonable.[111] Aither said GAWB's approach prudently reflects the changing nature of the insurance market and the increasing size of GAWB's asset base.[112]

We consider the increase is of sufficient materiality such that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints.

We note that GAWB has committed to updating its insurance forecasts with its forecast capital program ahead of its negotiated price setting processes for the monitoring period.[113]

Chemicals step change

GAWB proposed a step change in chemical costs of $1.39 million over the monitoring period for:

- increased quantities of chemicals to satisfy increases in forecast demand and the recommissioning of GAWB's powder-activated carbon plant that did not operate during 2022–23
- a corresponding increase for consumables such as cleaning equipment and chemical delivery costs
- contracted chemical price increases from external suppliers.

GAWB noted that the step change represented a 19% increase compared to its base year expenditure.[114]

We accept costs associated with increases in chemical usage to meet production volumes relative to the base year (and updated cost forecasts for this) and for an increase in consumables. This accounts for $0.88 million over the monitoring period. These aspects of the step change are necessary for GAWB to fulfil new obligations that arise to meet increases in forecast expected demand, while also maintaining its existing operations.

However, it is not clear that GAWB's observed base year performance and expenditures should be selectively re-opened for specific chemical price increases. We do not re-open other items selectively within a base year unless a compelling case has been made (such as for insurance and electricity costs). Such an approach would introduce a level of unnecessary complexity and promote regulatory intrusion, where the costs would outweigh the benefits. Accordingly, we have excluded

[109] Aither report, pp 52–53.
[110] Aither report, p 54.
[111] Aither report, p 54.
[112] Aither report, p 54.
[113] GAWB, sub 27, p 32.
[114] GAWB, sub 27, p 11.

$0.50 million from the step change – these costs should be absorbed within business-as-usual constraints or overall escalation forecasts.

Aither accepted that contracted chemical prices may have increased but noted that GAWB's proposal would have benefitted from better documentation to justify the increase for chemical costs from external providers. It also noted that the extended timeframe between the base year (2022–23) and the start of the monitoring period (2025–26) created problems for GAWB in identifying and quantifying step changes; ideally these changes would be considered through the trend component of the base-step-trend analysis.[115] Overall, Aither recommended that the efficiency of GAWB's procurement processes be demonstrated in greater detail in future reviews, but accepted the overarching necessity of the chemicals step change expenditure for this review.[116]

QCA review step change

GAWB proposed to include $3.30 million over the monitoring period for future QCA reviews, QCA fees and GAWB's use of external consultants.

We accept this step change is necessary for GAWB to undertake cyclical activities that are not within annual business-as-usual budgets.

We consider that the proposed step change is material enough that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints.

Aither noted that cost estimates were reasonable.

Tariff review step change

GAWB proposed to include $0.75 million over the monitoring period to undertake a review of its tariff structures, requiring additional external consultants.

GAWB said that a tariff review process would be complex and uncertain, arguing that a range of specialist activities would need to be undertaken (including economic analysis, stakeholder engagement, options assessment, price modelling, legal reviews, and the development of an implementation plan).[117]

GAWB has not demonstrated that this step change is necessary. The need for the review has not been demonstrated, and it is unclear how this is a new requirement for GAWB.

Aither noted that GAWB had significant expenditure for external consultants already within its base year to allocate to such a review ($5.7m over the period) and that where Melbourne Water and Greater Western Water undertook tariff reviews in a base-step-trend framework, they were funded as business-as-usual budgets, not as a step change.[118] GAWB considered that Melbourne Water and Greater Western Water were not reasonable comparisons because they had larger operating budgets.[119]

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[115] Aither report, pp 55–56.
[116] Aither report, p 55.
[117] GAWB, sub 1, pp 72–73; Aither report, p 57.
[118] Aither report, p 57.
[119] GAWB, sub 27, p 16.

In the absence of a direction to GAWB from government, or broad customer support for the review, we consider that this is a business-as-usual matter for GAWB and its customers, and not necessary for this price monitoring period.

We note that simplification of tariffs will not itself reduce allowable costs, but rather simply result in a reallocation of costs in a different manner. Moreover, GAWB's commercial tariff structure is already cost reflective and has been found to be appropriate.[120]

4.6 Trend

To forecast GAWB's operating expenditure for the price monitoring period, a trend is applied to annual expenditure that provides a nominal forecast for the monitoring period. This includes forecast escalation rates and forecast efficiency factors, where appropriate.

4.6.1 Escalators

The referral directs us to escalate base year operating expenditure using forecast inflation based on the methodology outlined in our inflation forecasting position paper.[121]

Our position is to use expected CPI inflation to escalate opex input costs where the underlying cost drivers are not materially different from CPI inflation; but to use input-specific or sector-specific cost escalators where underlying cost drivers are materially different from CPI inflation.[122]

We recognise that GAWB's forecast escalators will need to be recalculated as data sources are updated prior to our final decision, for RBA and Queensland Treasury updates that occur after GAWB's submission.

GAWB proposal

GAWB proposed to determine the trend for operating costs using a weighted average escalation rate being applied over the monitoring period. This involves forecasting four primary escalators of forecast CPI, forecast WPI and a forecast council rates escalator. The approach, data sources and escalator forecasts are summarised in Table 7.

Table 7: GAWB's proposed escalators

Proposed escalator	Approach
Forecast CPI	The RBA CPI inflation forecasts for 2025–26 and 2026–27 and a linear glide path from the 2026–27 forecast to a rules-based anchor-point forecast of 2.5% in 2029–30.
Forecast WPI	Queensland Treasury WPI forecasts for 2025–26 and 2026–27 and a linear glide path from the 2026–27 forecast to the 10-year historical average of the Australian Bureau of Statistics (ABS) WPI for Queensland for the remaining years.

[120] QCA, *Gladstone Area Water Board price monitoring 2020–25 Part A: Overview*, final report, May 2020, pp 118–123.
[121] Referral notice, section F, Forecast Inflation, p 4.
[122] QCA, *Inflation forecasting*, position paper, October 2021.

Proposed escalator	Approach
Gladstone premium above forecast WPI	An escalation premium based on the difference between construction sector WPI growth and general WPI growth. This was calculated as 0.15%, declining linearly to 0% over the price monitoring period.
Council rates escalator	A bespoke composite escalator based on weighting items identified in the Gladstone Regional Council 2022–23 Annual Report. This is forecast using: • WPI (75%) CPI (25%) – weighted by the share of 'materials and services' (calculated as 44%) • WPI forecast plus premium of 0.15% – weighted by the share of 'employee costs' (calculated as 31%) • CPI – weighted for 'depreciation and amortisation' (calculated as 24%) • CPI – weighted for 'finance costs' (calculated as 1%)

Source: GAWB, sub1, pp 74–76; QCA analysis.

These escalators are then applied to various GAWB cost categories to develop a weighted average escalation factor to apply to operating costs over the monitoring period. Table 8 outlines the categories and how each primary escalator applies.

Table 8: Application of GAWB's proposed escalators

Cost category	Proposed escalator
Insurance	Forecast CPI
Chemicals	Forecast CPI
Council rates	Council rates escalator
Labour – employee expenses	Forecast WPI plus Gladstone premium
Professional services (engineering)	Forecast WPI
Contract labour	Forecast WPI plus Gladstone premium
Contractors (service delivery)	Forecast WPI
Other materials and services	75% forecast WPI and 25% forecast CPI
Maintenance	70% forecast WPI and 30% forecast CPI
Electricity	Forecast CPI
Operations	Forecast CPI
Information systems and administration	Forecast CPI

Note: We accepted step changes that incorporate some escalation for insurance and electricity costs (see step changes section 4.5).
Source: GAWB, sub 1, pp 76–77.

QCA analysis and assessment

We have assessed GAWB's proposed escalators and how they are applied to operating cost categories over the monitoring period.

Our findings on the approach, data sources and escalator forecasts are summarised in Table 9.

Table 9: QCA findings – escalation

GAWB's escalation proposal	QCA finding
Forecast CPI	We endorse GAWB's forecast CPI approach because it reflects our 2021 Inflation Forecasting position paper methodology, consistent with the referral notice.
Forecast WPI	We have not used GAWB's forecast WPI approach because it is inconsistent with our 2021 Inflation Forecasting position paper methodology as required by the referral notice. Our preferred approach is to use the Queensland Treasury WPI forecasts for 2025-26 and 2026-27, and the 10-year historical average of the Australian Bureau of Statistics (ABS) WPI for Queensland for the remaining years – without a glide path.
Gladstone premium above forecast WPI	GAWB has provided insufficient evidence of materially different underlying cost drivers to support applying a premium over forecast WPI. As such, we do not consider it reasonable to apply a premium over WPI, as this would not be consistent with our 2021 Inflation Forecasting position paper.
Council rates escalator	We endorse GAWB's forecast Council rates escalator because it reflects our 2021 Inflation Forecasting position paper methodology, consistent with the referral notice, in that it is an appropriate input specific escalator. However, we do not apply the use of the Gladstone premium above forecast WPI within the council rates escalator.
Application to operating cost categories	We endorse GAWB's proposed application of the above forecast escalators to various operating cost categories.

The reasons for our findings are outlined in further detail below.

Forecast CPI

GAWB proposed to forecast CPI using the same approach as outlined in our 2021 inflation forecasting paper. We have updated GAWB's forecast CPI using the latest RBA Statement on Monetary Policy data.

Table 10: QCA findings – forecast CPI (%)

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
GAWB	3.80[a]	3.20	2.60	2.57	2.53	2.50	2.50
QCA position	3.42[b]	2.40	3.20	2.70	2.63	2.57	2.50

a Forecast; b Actual.
Note: The 2023–24 actual figures have been updated using ABS Brisbane All Groups CPI.
Source: GAWB, sub 1, p 78; RBA, *Statement on Monetary Policy*, February 2025, p 61.

Forecast WPI

Due to the timing of GAWB's submission, GAWB has provided placeholder values and proposed a methodology for forecasting WPI applicable at a time closer to the start of the 2025–30 price monitoring period.

GAWB's approach is not consistent with the methodology in our 2021 inflation forecasting position paper, whereas the referral notice requires such consistency.[123] Our preferred approach is to use the Queensland Treasury WPI forecasts where available, and the 10-year historical average of the Australian Bureau of Statistics (ABS) WPI for Queensland for the remaining years – without a glide path. This approach is consistent with our recent investigations into the irrigation pricing practices of Seqwater and Sunwater.[124]

Since GAWB's submission, the ABS has released the actual 2023–24 Queensland WPI, which we have included in our report. Table 11 provides GAWB's proposed WPI forecasts, GAWB's WPI forecasts based on its proposed method and updated data, and our position.

Table 11: QCA findings– forecast WPI (%)

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
GAWB proposal	4.75[a]	3.50	3.26	3.01	2.77	2.52	2.28
GAWB proposal updated	4.66[b]	3.75	3.50	3.25	2.95	2.66	2.36
QCA findings	4.66[b]	3.75	3.50	3.25	3.00	2.36	2.36

a Forecast; b Actual.
Note: 2023-24 and 2024-25 are required, as the base year expenditure is in 2022-23 dollars.
Source: GAWB, sub 1; Queensland Government, *Budget Strategy and Outlook, Budget Paper No. 2*, Queensland Budget 2024–25, p 4.

Gladstone premium above forecast WPI

GAWB has proposed to apply a premium above WPI to its employee costs and contract labour costs[125], citing a relatively tighter regional labour market. GAWB proposed a premium of 0.15%, declining linearly to 0% over the price monitoring period. GAWB's proposed premium is based on the difference between construction sector WPI growth and general WPI growth since 2021, in the absence of any reliable publicly available information to estimate the forecast growth in labour costs in the Gladstone region above the WPI.[126]

As considered in the labour step change, we have accepted GAWB's proposed increases for renumeration and benefits over the price monitoring period. Among other things, the purpose of this step change was to improve GAWB's competitiveness in the labour market – acting as a 'catch-up' to current market conditions.[127]

GAWB considered that it needed a premium above forecast WPI to continue to offer attractive salaries, even after it has implemented a new remuneration and benefits scheme.[128]

While wage levels may differ in regional areas, we have not been presented with evidence to suggest that the growth trend in regional wage levels is expected to outpace the general WPI growth in the coming years. GAWB has provided insufficient evidence of materially different

[123] GAWB submitted that the use of a linear glide path in forecasting WPI was consistent with the QCA's preferred approach to forecasting CPI (sub 27, p 17).
[124] Refer to our website for further information on our irrigation price investigation 2025–29.
[125] Employee and contract labour costs account for approximately 52% of GAWB's base year operating expenditure and therefore, the total weighted escalation factor. These costs include salaries, wages, superannuation, leave, penalty, overtime payments and other benefits.
[126] GAWB, sub 1, p 75.
[127] GAWB, sub 1, p 57.
[128] GAWB, sub 27, 17.

underlying cost drivers to support applying a premium over forecast WPI for the monitoring period. As such, we do not consider it reasonable to apply a premium over WPI, as this would not be consistent with our 2021 inflation forecasting position paper.

This differs from our previous investigation for 2020–25, where we considered a premium over WPI was reasonable to reflect the higher growth rate of public sector wages compared to private sector wages. The premium declined linearly to zero over the price monitoring period as the premium between private and public sector WPI was not assumed to be sustained indefinitely.[129]

Council rates escalator

We endorse GAWB's forecast council rates escalator because it is an appropriate input specific escalator.[130]

We have confirmed the calculations using weighting items identified in the Gladstone Regional Council 2022–23 Annual Report and using our updated forecasts for CPI and WPI. This results in the escalation rates outlined in Table 12.

Table 12: QCA findings – council rates escalator (%)

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
GAWB proposal	4.41	3.39	3.02	2.85	2.68	2.52	2.36
QCA findings	4.21	3.26	3.39	3.05	2.87	2.43	2.41

Source: GAWB, sub 1; QCA analysis.

Application to operating cost categories

We have adopted GAWB's proposed application of the above forecast escalators to operating cost categories.

We have taken a pragmatic approach to the price monitoring task before us and assessed these as step changes, rather than escalation, insurance and electricity costs. This effectively establishes a new baseline for these items. This is because GAWB made a compelling case to consider these items as step changes.

In our base-step-trend approach, we will not simply adopt cost increases above inflation for specific items as a basis to include them. The selective identification of specific items within a base year being above inflation would encourage us to identify areas within a base year that were below inflation. Such an approach would introduce a level of unnecessary complexity and regulatory intrusion were the costs would outweigh the benefits. However, we will consider inclusion of items selectively within a base year if there is compelling case (such as the case GAWB has made for insurance and electricity costs).

This approach seeks to place the onus on the business to justify step changes and avoids us considering the impact of price changes relative to that forecast within the base year.

[129] QCA, *Gladstone Area Water Board Price Monitoring 2020–25, Part A: Overview*, final report, 2020, p 33.
[130] Input specific escalators are consistent the methodology outlined in our 2021 inflation forecasting position paper.

4.6.2 Efficiency factor

GAWB's proposed efficiency factor

GAWB has proposed an efficiency factor of 0.2% per annum (cumulative) be applied to all operating costs retrospectively from 2023–24 until the end of the monitoring period in 2029–30.

GAWB considered that it was important to distinguish between catch-up and continuing efficiencies in the base-step-trend context where the:

- catch-up element is considered when determining the efficient level of base year operating expenditure
- continuing efficiency element (or 'frontier shift') is reflected in the trend factor.

GAWB considered that only continuing efficiency should be considered, since GAWB's actual 2022–23 base year expenditure was below the level identified during our 2020–25 price monitoring investigation, and that no additional adjustments are needed for catch-up efficiencies.

GAWB commissioned advice from Frontier, which supported that an annual efficiency factor of 0.2% be used to reflect ongoing efficiencies. GAWB noted that this was consistent with the values applied in our previous reviews for Seqwater and Sunwater rural irrigation services for the 2021–24 period.[131]

Due to the changes in GAWB's business and operating environment, GAWB submitted that applying an efficiency factor of zero, accompanied by a credible efficiency plan, would not be an appropriate strategy for GAWB at the current time.

QCA analysis and assessment

Our assessment of the efficiency factor to apply during the monitoring period is to incorporate GAWB's proposed efficiency factor of 0.2% per annum (cumulative) to its forecast operating costs. The effect of this is outlined in Table 13.

We consider that GAWB is best placed to identify and implement actions to achieve efficiency. Moreover, we consider the businesses commencing a credible efficiency program that sets out a pathway to reveal efficient costs over the monitoring period, including an ongoing process to identify and implement spend to save initiatives, superior to imposing an ongoing efficiency target to operating expenditure. Nonetheless, we appreciate that GAWB is predominantly focused on delivering its forecast capital program and responding to underlying changes in its operating environment at this time.

Our position reflects a lower overall efficiency saving than that proposed by GAWB as GAWB's efficiency factor has been applied to our alternative (lower) forecast of operating costs. This results in a smaller reduction for forecast efficiency savings operating costs to $2.42 million (nominal) over the period compared to GAWB's proposed $2.51 million.

[131] Frontier relied on two main sources of information – first, productivity growth rates derived from the National Performance Review dataset, although data limitations were recognised; and second, productivity growth rates applied in a range of regulatory decisions for water businesses between 2017 and 2023, although a number of these decisions combine catch-up and continuing efficiencies. See GAWB, sub 1, p 80.

Table 13: QCA findings – efficiency savings ($ million, nominal)

Efficiency factor	2025–26	2026–27	2027–28	2028–29	2029–30	Total
GAWB's proposal	0.27	0.37	0.49	0.62	0.77	2.51
QCA findings	0.26	0.35	0.47	0.59	0.75	2.42
Difference	(0.00)	(0.02)	(0.02)	(0.03)	(0.02)	(0.09)

Source: GAWB, sub, 1, QCA analysis.

We note that GAWB has applied a cumulative efficiency factor of 0.2% per annum for forecast operating expenditure during the 2025–30 monitoring period for both controllable and uncontrollable expenditure. This differs from the previous monitoring period where GAWB limited the efficiency factor to controllable expenditure only and at a lower overall rate of 0.1% per year. As such, GAWB is forecasting increasing its efficiency over the monitoring period.

Aither advised that an efficiency factor of 0.7% was more appropriate for GAWB – slightly lower than the average efficiency factor applied across regulatory decisions it considered relevant.[132] When making its recommendation, Aither took into consideration its views on specific step changes, namely:

- labour step change – Aither noted that it saw some merit in GAWB adopting a new operating model that required additional employees. However, based on the information provided, it was challenging to determine if the new operating model was the most efficient for GAWB. Due to these difficulties and the uncertainty of the benefits, Aither factored this into its efficiency factor recommendation instead of making specific adjustments to GAWB's proposed step change for additional employees[133]
- maintenance step change – Aither noted that there was limited documentation that justified why the level of the proposed change in maintenance expenditure was efficient and how customers would benefit from the change in approach. Aither did not make any adjustments for this to the proposed maintenance step change but incorporated this uncertainty of the benefits within its recommended efficiency factor.[134]

Moreover, Aither noted that certain step changes could likely be considered to be captured within business-as-usual activities, namely GAWB's ICT step change.[135]

Our findings exclude step changes that do not satisfy our criteria, rather than incorporate these within any proposed efficiency factor.

[132] Aither report, p 66.
[133] Aither report, p 39.
[134] Aither report, p 49.
[135] Aither report, p 45.

5 Capital expenditure

Capital expenditure (capex) includes expenditure to upgrade or replace existing assets or build new assets. For the purposes of our price monitoring framework, prudent and efficient capex may be included in GAWB's asset base. This capex then earns a return on, and return of, investment as part of the allowable revenues that we subsequently monitor prices against.

We assessed GAWB's capital governance frameworks, policies and procedures, along with a sample of GAWB's actual capex for 2020–25 and its proposed forecast capex for 2025–30. In summary, we found GAWB's forecast capex of $504.9 million is reasonable – although highly uncertain due to likely changes in the timing and scope of its $310 million hydrogen augmentation program. We also have some concerns regarding GAWB's capacity to deliver the overall capital program given its scale and the proposed delivery timeframes.

In recognition of this uncertainty, we have adopted GAWB's proposed capex forecast as an indicative capital budget, subject to an end of period revenue true-up for some allowable revenue items, for the purposes of our price monitoring exercise.[136] We consider this an appropriate framework for our price monitoring task given the circumstances.

Ultimately, it is for GAWB and its customers to decide whether a revenue true-up is used in its commercial pricing framework. Should GAWB seek to implement it, this approach would go some way to ensuring customers do not bear the cost of investments that do not proceed, while ensuring it is adequately funded to deliver important investments if they are required.

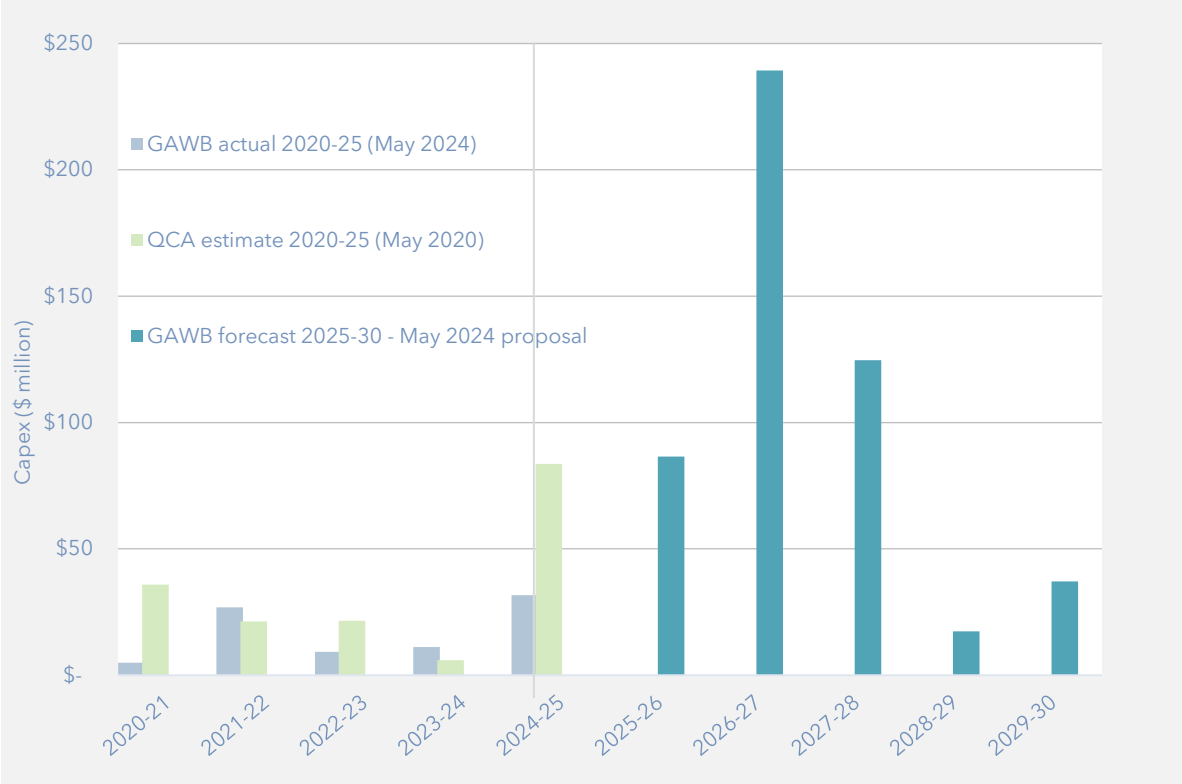
5.1 GAWB's proposal

GAWB expects to add $84.2 million to the RAB during the 2020–25 pricing period. This is around 50% less than our estimate of prudent and efficient capex determined during the 2020 investigation of $168.5 million. This underspend is largely attributable to the deferral of the Awoonga Dam safety upgrade project ($60m including interest during construction), which was expected to be added to the RAB in 2024–25.[137]

GAWB has proposed a substantial capex program for the 2025–30 period of $504.9 million. This is around 3 times the value of the QCA's estimate of GAWB's capex for 2020–25, and nearly 6 times the value of GAWB's expected actual capex during the 2020–25 period (Figure 9). The substantial increase in capex is driven by network augmentation to support the emerging hydrogen industry in the Gladstone region.

[136] This is in addition to the existing RAB roll-forward approach which adds actual prudent and efficient capex to the opening RAB for a subsequent pricing period.
[137] GAWB, sub 1, p 87.

Figure 9: GAWB's 2020–25 capex and forecast 2025–30 capex



Note: Capex includes interest during construction (IDC). Values for 2024–25 are estimates and will be updated by GAWB prior to setting prices for 2025–26.
Sources: GAWB response to RFI 7; QCA analysis.

Stakeholders raised several concerns regarding GAWB's capital expenditure, including:

- price impacts of the substantial capex program, impacts on incentives for investment and project feasibility
- transparency and equity around how capex is allocated to pricing zones, including the sharing of augmentation costs
- uncertain demand associated with the network augmentation program
- the role of government in the network augmentation program.

We have considered these issues in our investigation and refer to them where relevant to our price monitoring task.

5.2 Assessment framework

The intent of our assessment framework is to allow prudent and efficient capex to be included in GAWB's asset base. This will earn a return on, and return of, investment as part of the allowable revenues that we subsequently monitor prices against.

When assessing GAWB's capital expenditure, the referral notice directs us to consider:

- the prudency and efficiency of capital expenditure from 1 July 2020 to 30 June 2025, based on an appropriate sample of capital projects

- an appropriate allowance for prudent and efficient forecast capital expenditure from 1 July 2025 to 30 June 2030, based on an appropriate sample of capital projects, focusing on the projects with a material impact on GAWB's asset base in aggregate.[138]

We began by reviewing GAWB's capital planning and delivery, asset management and governance frameworks. We then reviewed a sample of forecast and historical capital projects and programs, focusing on material investments. This allowed us to test:

- how GAWB applies its capital planning and governance frameworks in practice
- whether those governance frameworks are supporting prudent and efficient expenditure and investment decisions.

The referral notice also asks us to consider GAWB's strategic and operational plans approved by the responsible Minister under the *Water Act 2000* and the *Water Supply (Safety and Reliability Act) 2008*. We are also asked to consider the Queensland Government's renewable energy targets detailed in the *Renewable Energy and Jobs Plan,*[139] and the *Common User Infrastructure Principles*.[140] We have considered these matters where relevant.

For this investigation, we have been requested to specifically consider GAWB's proposed forecast augmentation expenditure. The referral notice states that GAWB's prices should include:

> any proposed Network augmentation or expansion capital expenditure forecast to occur during the Price Monitoring Period, where that Network augmentation or expansion is sized, configured, priced, and timed to:
>
> - service 2030 forecast reserved demand and any reasonably expected future demand that would make use of the Network; and
> - not be inconsistent with the Queensland Government's Common User Infrastructure Assessment Principles.[141]

We engaged Aither to provide independent technical and engineering advice to support our review. While we have had regard to that advice, we have formed different views to Aither on several matters.

Prudency and efficiency

We consider capex is prudent in our assessment framework if it:

- can be justified by reference to an identified need or cost driver – for example, investment required as a result of a legal or regulatory obligation (compliance), growth, replacement or renewal of existing infrastructure; or
- achieves an outcome that is explicitly endorsed or desired by customers, external agencies, or the participating council – for example, improved reliability or quality of supply of services.

We consider capex is efficient in our assessment framework if:

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[138] Referral notice, section F, p 5.
[139] Queensland Government, *Queensland Energy and Jobs Plan,* September 2022.
[140] Queensland Government, *Common user infrastructure assessment principles*, Queensland Treasury website, 2023, accessed 7 November 2024. These principles set out a general framework for guiding the Queensland Government in determining its role in supporting investment in significant shared infrastructure. Levels of government involvement in supporting common user infrastructure can include facilitation, regulation and/or direct financial support or ownership.
[141] Referral notice, section F, pp 3–4.

- the scope of the works represents the best means of achieving the desired outcomes after having regard to the options available, including substitution possibilities between operating expenditure (opex) and capex
- the standard of the works conforms to technical, design and construction requirements in legislation, industry and other standards, codes and manuals
- the cost of the defined scope and standard of works is consistent with conditions prevailing in the relevant markets.

Establishing prudent and efficient capex

We have not developed detailed bottom-up estimates of prudent and efficient forecast capex at the project or cost driver level. While we have undertaken a detailed review of some elements of GAWB's capex proposal to test for efficiency and prudency, we are ultimately guided by whether the overall level of expenditure is appropriate and sufficient for GAWB to recover prudent and efficient costs of providing bulk water services over the price monitoring period.

Our approach takes the following steps:

1. Review GAWB's proposed expenditure based on a sample of projects, considering governance processes, capital planning and asset management frameworks, forecasting methods and cost estimates, underlying assumptions, investment drivers, deliverability and other relevant factors.
2. Develop an alternative estimate of an appropriate capex allowance, based on the findings of the review. When developing an alternative estimate, we only consider making adjustments to capex when there is a clear case that the proposed capex is not prudent and/or efficient or simply has not been justified.
3. Assess GAWB's proposed capex against our alternative estimate, in aggregate, and:
    a. if the difference is not material, adopt the proposed allowance (subject to any modelling adjustments, error correction and other updates that are reasonably required)
    b. if the difference is material, do not adopt the proposed allowance and substitute it with our alternative estimate.

Materiality

The referral notice asks us to make our findings based on reviewing an appropriate sample of capital projects, focusing on the projects with a material impact on GAWB's asset base in aggregate. The projects selected for review were selected in consultation with GAWB and are considered to represent 'material' projects for this review.

We have not defined materiality in a prescriptive way for this investigation. Rather, we use judgement to form a view on prudency and efficiency based on the overall proposal before us.

We are not inclined to make adjustments to capex where:

- the adjustment is small and/or has only a small impact on customers
- the adjustment largely reflects a difference of opinion, rather than an identified error or objectively invalid reasoning
- the proposal represents a genuine attempt at estimating efficient costs
- the regulated entity has been forthcoming with supporting justification and information
- there is evidence of proper consultation and agreement with customers

- inefficient outcomes were materially beyond the control of the business, or isolated cases from which the business has demonstrated lessons learned have been applied to future projects
- a robust and defensible adjustment or alternative forecast cannot be reasonably estimated.

When considering the basis for potential adjustments to GAWB's proposed expenditures, we take the view that the capex forecast is an estimate only. While we expect GAWB to put forward a genuine and well-reasoned attempt to estimate prudent and efficient investment, actual costs and activities undertaken will vary from forecasts. Lumpy, multi-year capital spends mean changes in scope and delivery timing can result in significant departures from those forecasts.

It is also normal for some costs to be higher or lower than expected, and for investment priorities to change during the forecast price monitoring period. This is not necessarily a cause for concern, provided that the drivers of change are explainable and the business's response to the circumstances is prudent, and customer service quality and reliability are not compromised.

GAWB is best placed to define its capital program and manage its delivery. We would expect the business to prudently reallocate resources within its funding envelope as required to deliver on its priorities and obligations at any given time.

5.3 Governance, capital planning and asset management frameworks

When applied appropriately and consistently, sound corporate governance frameworks, along with best practice processes for procurement, capital planning, delivery and asset management, provide some confidence in the prudency and efficiency of expenditure decisions.

During the 2020 investigation, we assessed GAWB's asset planning and governance frameworks and found them to be generally sound and consistent with good industry practice. We saw no compelling evidence to suggest systemic flaws or deficiencies that would introduce bias to GAWB's forecasting. In the 2020 investigation, we noted that GAWB:[142]

- maintained a detailed and robust procurement process and a robust approach to capital planning
- demonstrated a commitment to continuous improvement of its asset management systems and alignment with leading practice frameworks.

Our consultant at the time noted some specific potential improvements to GAWB's capital planning and governance frameworks, for GAWB's consideration. These included:

- improving the level of detail and transparency in supporting documentation.
- ensuring a clearer alignment of GAWB's strategic and asset management objectives with its investment decision-making criteria.
- developing clearly documented processes for the prioritisation process to improve decision-making transparency
- giving greater consideration to asset condition and additional options (including refurbishment instead of replacement), where appropriate.[143]

[142] QCA, *Gladstone Area Water Board price monitoring 2020-25 Part A: Overview*, final report, pp 50–52.
[143] KPMG, *Gladstone Area Water Board expenditure review*, May 2020, pp 11–16, 119.

QCA analysis

We revisited GAWB's capital frameworks in this investigation, with a focus on substantive changes and improvements implemented since our last review. GAWB submitted that it has made several improvements since the 2020 investigation, including a review of its capital project governance frameworks. This has culminated in a revised Project Management Framework (PMF) and supporting process documentation, to be fully deployed by late 2024.[144] The revised PMF incorporates:

- more robust requirements for initiating projects including greater importance placed on asset condition assessments.[145]
- a more rigorous approach to project classification based on complexity and risk (minor, medium, major)
- additional levels of approvals and oversight through committees such as the Program and Project Working Group and Project Control Group
- improved mapping of stakeholder requirements and ongoing review and revision of stakeholder considerations at every gate
- less duplication of activities and simpler processes where necessary.[146]

GAWB submitted that it has also:

- commenced a suite of projects under its 'Network Reform Program' to improve its understanding of asset failure modes and criticality
- extended its program of asset condition assessments [147]
- undertaken a review and reform of its contract and procurement processes.[148]

Aither found that GAWB's capital forecasts are based on generally sound foundations of project management, governance and risk management including:

- sound procurement policies
- a mature risk framework and demonstrated application in practice
- a risk-based prioritisation framework and policy
- a clear customer engagement process and regular schedule
- a thorough approach to estimating time and cost of project tasks.[149]

Aither made the following observations that reveal potential opportunities for GAWB to improve the robustness and transparency of its capex processes.

- Capital and project management process may not be applied consistently, based on the documentation received. In some cases, detailed project schedules and checklists were not provided, or were not up to date.
- The application of project prioritisation processes and outcomes were not transparent, including the role of internal governance bodies and documentation of decision-making.[150]
- Options analysis was not transparently documented in all cases, and consideration of lifetime costs (including opex) was not routinely included in multi-criteria analysis sighted. Criteria

[144] GAWB, sub 1, p 84.
[145] GAWB, response to RFI 31, p 4
[146] GAWB, response to RFI 31, p 4.
[147] GAWB, sub 1, pp 63–64.
[148] GAWB, response to RFI 31, p 4.
[149] Aither report, pp 13, 22.
[150] GAWB provided further information on capital prioritisation outcomes in February 2025, which the QCA has considered.

weightings used in multi-criteria analysis are not applied consistently; rather, they are determined on a case-by-case basis.
- There was limited record of GAWB's customer engagement on its capital program development.
- Some issues of quality control and currency of documented policies and procedures were observed, as well as a lack of adherence to stated timeframes for review and update of documentation.[151]

We note that GAWB provided additional information after Aither finalised its analysis, which we have taken into consideration where relevant.

QCA findings

Overall, GAWB's capital governance framework is robust and is likely to support prudent and efficient investment when appropriately and consistently applied. GAWB appears to foster an approach of continuous improvement in its capital processes, which is evidenced by improvements made since the 2020 investigation. Relevantly, GAWB continues to maintain an ISO 55001 certification for its asset management framework, which is an internationally accepted benchmark of best practice.

While our review revealed some apparent inconsistencies in the application of GAWB's documented processes, these issues were reasonably explained by the evolution of GAWB's project management processes over time. This is because some projects commenced under previous documentation processes and continue to be delivered in accordance with those processes.[152] This is understandable during a transition to new processes and does not always suggest a lack of adherence to process. We do not consider this is evidence of systemic weaknesses in capital planning and governance, or failure to observe documented processes.

Ideally, GAWB's options analysis should be supported by more fulsome and earlier consideration of total cost (including operating expenditure) and net present value of options. In our view, this is the most substantive potential weakness identified in GAWB's capital planning. This issue was also noted by our consultants during the 2020 investigation, and it is not clear that this has been resolved, based on our sample review.

However, GAWB's capital framework is generally sound and fit for purpose, with some potential opportunities to further improve its robustness and transparency, as noted by Aither. It is ultimately for GAWB to determine the appropriate suite of processes and systems to optimise its capital frameworks.

An effective capital planning, delivery and governance framework will be fundamental to GAWB's ability to successfully and efficiently deliver the largest five-year capital program in its history, with substantial additional investment also expected beyond 2030.

5.4 Actual capex 2019–20 to 2024–25

GAWB proposed to add $84.16 million in capex to the RAB during the 2020–25 price monitoring period, which is around $88.95 million (50%) less than GAWB's forecast for the 2020 investigation.

[151] Aither report, pp 13, 19, 22–23, 78–86.
[152] GAWB, response to RFI 6, p 4.

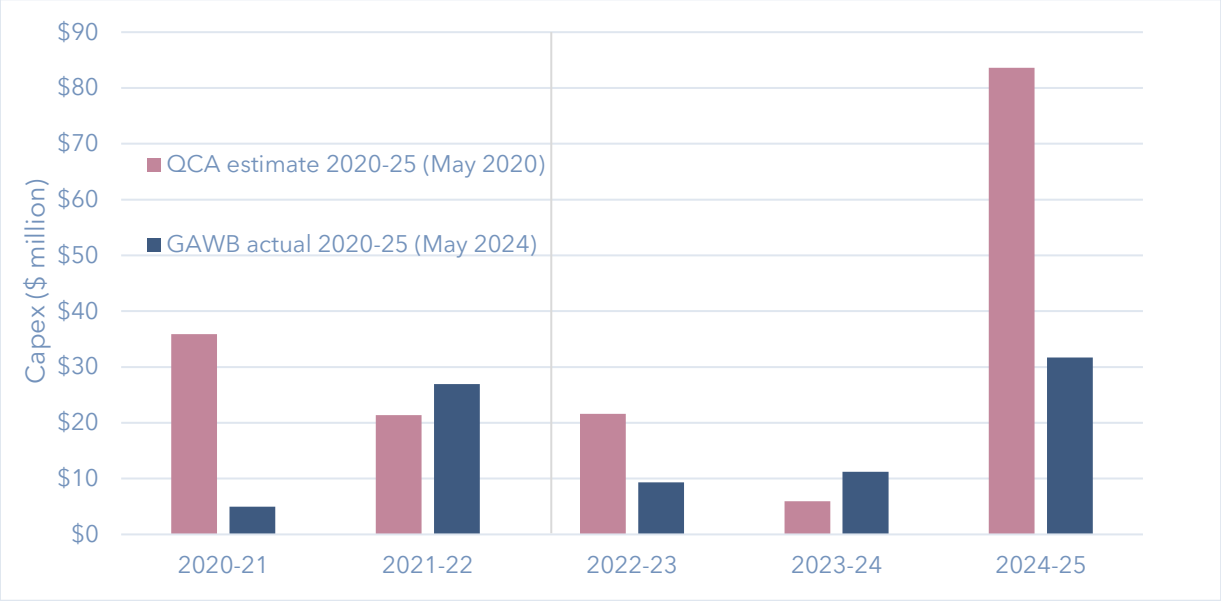
(Table 14 and Figure 10). This difference is mostly attributable to the deferral of the Awoonga Dam safety project, which was expected to enter the RAB in 2024–25 at a value of $60 million. Other contributors to the underspend are discussed below.

Table 14: GAWB actual capex outcomes – 2020-21 to 2024-25 ($ million, nominal)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
QCA estimate – May 2020	35.89	21.36	21.61	5.98	83.64	168.47
GAWB updated forecast – March 2020	39.79	21.34	21.59	5.97	84.42	173.11
GAWB actual – May 2024	5.00	26.94	9.32	11.21	31.70	84.16
Variance from GAWB forecast	(34.79)	5.60	(12.27)	5.24	(52.72)	(88.95)

Note: 1) The value for 2024–25 is an estimate and will be updated by GAWB prior to setting prices. 2) GAWB's revised proposal of March 2020 largely accepted the QCA's draft report findings. 3) GAWB's submission indicates a total forecast capex for the period of $173.11 million. We understand this difference reflects several input updates that GAWB made after the QCA finalised its 2020 investigation, including revised forecast CPI and escalation, WACC and reinstatement of some forecast expenditure removed by the QCA in its findings. 4) Totals may not add due to rounding.
Sources: QCA, *Gladstone Area Water Board price monitoring 2020–25 Part A: Overview*, final report, p 72; GAWB, sub 1, p 86; QCA analysis.

Figure 10: GAWB actual capex outcomes, 2020-21 to 2024-25



Sources: QCA, *Gladstone Area Water Board price monitoring 2020-25 Part A: Overview*, final report, p 72; GAWB, sub 1, p 86; QCA analysis.

QCA analysis

We selected three projects that were (or are expected to be) commissioned during the current price monitoring period for detailed review (Table 15). These projects were selected to ensure the level of documentation available was sufficient for GAWB to demonstrate the application of its capital frameworks, and for the QCA to form a view on prudency and efficiency.

Table 15: Sample projects reviewed: capex, 2020–21 to 2024–25

Project and driver	Description	Total capitalised cost including IDC ($m nominal)
Awoonga Dam conduit inspections (regulatory)	GAWB has an obligation under the dam safety regulations to conduct inspections of Awoonga Dam conduit infrastructure that may be at risk of structural failure. This work was completed in December 2021.	$1.35
Gladstone Water Treatment Plant filter media and filters (replacement and risk)	Condition assessments in 2018 indicated deteriorated filters that had reached end of life and were affecting plant efficiency and water quality. GAWB refurbished 12 filters, with work completed between July 2022 and April 2023.	$4.29
Golegumma pipeline (replacement)	GAWB owns and operates a 16.7 km treated water pipeline network between Toolooa Junction and Golegumma. The pipeline was installed in 1942 and is the oldest in GAWB's network. The pipeline is at the end of its design life and requires replacement. GAWB anticipates project completion in 2024–25.	$5.75

Note: Documentation provided on the Golegumma pipeline indicates conflicting capitalisation dates between GAWB's model and its response to RFI 10C. It is unclear whether the project will be completed in 2024–25 or 2025–26. For simplicity we have considered it as an ex post project.
Source: GAWB, responses to RFIs 10A, 10B ,10C and 11.

Aither reviewed the sample projects and considered that prudency and efficiency was not fully demonstrated in all projects, but it did not recommend any adjustment to the proposed expenditure. Aither's detailed findings are set out in its report. Table 16 summarises Aither's key findings.

Table 16: Aither's findings on ex post capex projects

Project	Key findings and observations	
	Prudency	**Efficiency**
Awoonga Dam conduit inspections	Not fully demonstrated – a genuine need for the project exists, but options analysis was limited.	Not demonstrated – cost overruns could have been avoided by better project planning. Project management plan and detailed scheduling documentation were not sighted.
GWTP filter media replacement and filters	Demonstrated – evidenced by condition assessments.	Not demonstrated – cost overruns and delays could have been avoided by better project planning. Documents lacked detail about scheduling and planning.
Golegumma pipeline replacement	Demonstrated – however, there is no evidence that total lifecycle cost was considered during options analysis.	Not fully demonstrated – justification for cost increases is unclear and documentation provided was not up to date.

Source: Aither, *Prudency and efficiency review – Review of Gladstone Area Water Board's forecast capital and operating expenditure for 2025–30,* October 2024, pp 17–18.

Prudency and efficiency

Based on our review, we consider these projects are prudent when applying our definition. In all three cases, the project need was adequately demonstrated and linked to a clear investment driver.[153]

Our review revealed several issues regarding the potential efficiency of the sampled projects. For example, GAWB's options analysis was opaque in some instances, and limited in the number of options identified, based on the information reviewed.

That said, the documentation regarding the Golegumma pipeline replacement did reveal genuine options analysis supported by sound multi-criteria analysis. As such, we do not consider this a systemic weakness in GAWB's capital planning processes. Aither also acknowledged that the limited options analysis behind the GWTP filter replacement project could be because there were no other reasonable options available.[154] Nonetheless, it would be good practice for GAWB to transparently and consistently document its justification for undertaking a truncated analysis of options. Options analysis would also be improved with more explicit and consistent consideration of total lifecycle cost (opex and capex) of options considered.

Several complications emerged while delivering these projects. For example, during a July 2020 site safety inspection prior to commencing the Awoonga Dam conduit inspection, it was determined that a risk-based assessment of safe isolation to the conduit sections was required to demonstrate compliance with the Queensland Confined Space Entry Code of Practice 2011.[155] This issue was identified after the contractor was engaged to complete the work. GAWB subsequently stopped the project, cancelled existing contracts and commissioned an independent safety review. This review

[153] We note that Aither considers options analysis under the scope of 'prudency'. The QCA's long-standing definitions for prudency and efficiency include options analysis as an element of efficiency. This has led to Aither and the QCA reaching differing conclusions on prudency in some areas.
[154] Aither report, p 78.
[155] GAWB, *Project closure report, Awoonga Dam conduit inspection*, 16 February 2022, p 3; GAWB response to RFI 10B.

was completed in March 2021 and confirmed that GAWB's safe isolation procedure did comply with the relevant standards.[156] The work then went back to tender, contractors were reappointed and the project was completed in November 2021. In Aither's view, GAWB could have identified the potential issue with safe isolation earlier and avoided additional costs, if more robust planning been undertaken.[157]

The GWTP filter replacement project also experienced delays and cost overruns due to site access problems and latent conditions.

The complications in delivering these projects might have been reduced with more thorough planning and therefore might have been delivered more efficiently, with the benefit of hindsight. Moreover, the costs associated with these items are immaterial. On this basis, we have not made any adjustment to the capitalised value of these projects because:

- the impact of these complications on overall final project cost was relatively small, and any adjustment would be immaterial to the overall actual capex proposed
- GAWB's response to address these issues appear reasonable and prudent
- we have seen evidence that GAWB acknowledged these problems and has documented lessons learned to improve project planning and management practices in future.

Underspend and deferred projects

GAWB expects to spend around 50% ($89 million) less capex than forecast over the 2020–25 period (Table 14).

Persistent and substantial underspending against forecasts can indicate weaknesses in capital planning and/or delivery processes. Conversely, underspending can also be an outcome of prudent and efficient decision making as the business responds to new information, circumstances and changing priorities. In other cases, it may be driven by factors beyond the reasonable control of the business, such as materials and contractor availability, environmental and weather factors, or unforeseen latent conditions.

The majority of GAWB's capital underspend is attributable to the deferral of the Awoonga Dam spillway upgrades (Stages 2 and 3)[158], which were previously projected to enter the RAB in 2024–25. GAWB submitted that this work has been postponed due to a 2021 change in dam safety standards[159] which now emphasises a risk-based approach over the previous standards-based approach to assessing dam safety.[160] GAWB noted that it had engaged with the Queensland Dam Safety Regulator and decided to apply a risk-based method to address all elements of the dam safety requirements. GAWB then undertook risk assessments which indicated that the scope, complexity and cost of works required to achieve compliance would increase significantly under the new assessment approach.[161] This required the design and delivery of the project to be reassessed, including its timing.

The dam improvement project is not included in GAWB's 2025–30 capex forecast; however, we understand GAWB will be undertaking substantial work on the project during the 2025–30 pricing

[156] GAWB, *Project closure report, Awoonga Dam conduit inspection*, 16 February 2022, p 3; GAWB response to RFI 10B.
[157] Aither report, pp 18, 80.
[158] GAWB now refers to this project as the Awoonga Dam Improvement Program.
[159] Department of Regional Development, Manufacturing and Water, *Guidelines on Safety Assessments for Referable Dams*, version 8, Queensland Government, November 2023.
[160] GAWB, sub 1, pp 29–30.
[161] GAWB, sub 1, pp 29–30.

period.[162] It is our expectation that the delivery of critical dam safety compliance upgrades would be highly prioritised by GAWB within its broader capital program.

The Awoonga Dam upgrade is the only substantial project to be deferred beyond the 2025–30 period. Excluding this deferral, GAWB's actual capex is around $24 million (14%) less than its forecast capex for the period.

We reviewed GAWB's progress toward delivering its most significant projects that were previously forecast to be delivered during the 2020–25 period (for projects greater than $0.5 million).[163] We observed that, by number of projects:

- 50% have been completed[164] and a further 20% are expected to be completed by 2025[165]
- 12% of projects were cancelled as they were no longer required
- 14% are underway and are forecast to be completed during the 2025–30 period.[166]

GAWB identified several exogenous factors that had contributed to the capital delivery, including:

- covid 19 – supply chain disruptions, labour shortages and border restrictions affecting the mobilisation of labour, contractors and materials
- resourcing challenges – strong competition for labour from resources sector in the Gladstone region, hindering the attraction and retention of skilled personnel[167]
- land tenure issues and planning approvals delays[168]
- government policy and legislative changes (predominantly affecting the Awoonga Dam upgrades).

The effect of these factors on the overall capex spend is partially offset by input cost pressures that have emerged during the period.

We have not examined the drivers for deferrals on a case-by-case basis. That said, we have not seen any conclusive evidence that this is due to systemic weaknesses in forecasting, planning, delivery or project oversight. Our view is that the deferrals are reasonably attributed to exogenous factors in many cases. For example, GAWB's substantial underspend during 2020–21 (Table 14) supports the impact of covid-19 on resource mobilisation and supply chain disruptions in the early stages of the pandemic.

The deferral of the Awoonga Dam safety upgrades brings further pricing uncertainty for the future. Nonetheless, this project is not in the 2025–30 capital forecast and it is not subject to detailed review in this investigation. This project will likely be a candidate for ex post review during future price monitoring activities.

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[162] GAWB, sub 1, p 30; GAWB, response to RFI 31, p 5.
[163] 51 projects (71 line items) forecast at $130.4 million excluding interest during construction (2020 dollars).
[164] At a capitalised cost that is around 43% higher than forecast in 2020 (excluding interest during construction).
[165] Including 4 projects that have been reallocated to the Fitzroy to Gladstone pipeline project and will be capitalised to that project in due course.
[166] This analysis considers only those projects that were forecast for completion during 2020–25, at the time of the 2020 price monitoring investigation. It does not include any additional projects or capitalised expenditures that GAWB may have brought forward that were not included in the forecast. It is not unusual for projects to be reprioritised, or for unexpected projects/capitalised expenditures to be incurred that were not known at the time of the initial forecast.
[167] GAWB, sub 1, pp 86–87.
[168] Noted by GAWB staff during interviews.

QCA findings

We find that GAWB's estimated actual capex of $84.16 million for the 2020–25 period is a reasonable estimate of prudent and efficient capex (Table 17). We have added this value into the closing asset base at 30 June 2025, subject to minor modelling adjustments, including updating it for expected CPI inflation for 2023–24 to take account of more recent data (Chapter 6). We also note GAWB's proposal to update the actual capex values for 2023–24 and 2024–25 based on the latest available information, prior to setting its prices from 1 July 2025.[169]

Table 17: QCA findings – actual capex for 1 July 2020 to 30 June 2025

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
GAWB proposal	$5.00	$26.94	$9.32	$11.21	$31.70	$84.16
QCA findings	$5.00	$26.94	$9.32	$11.21	$31.70	$84.16

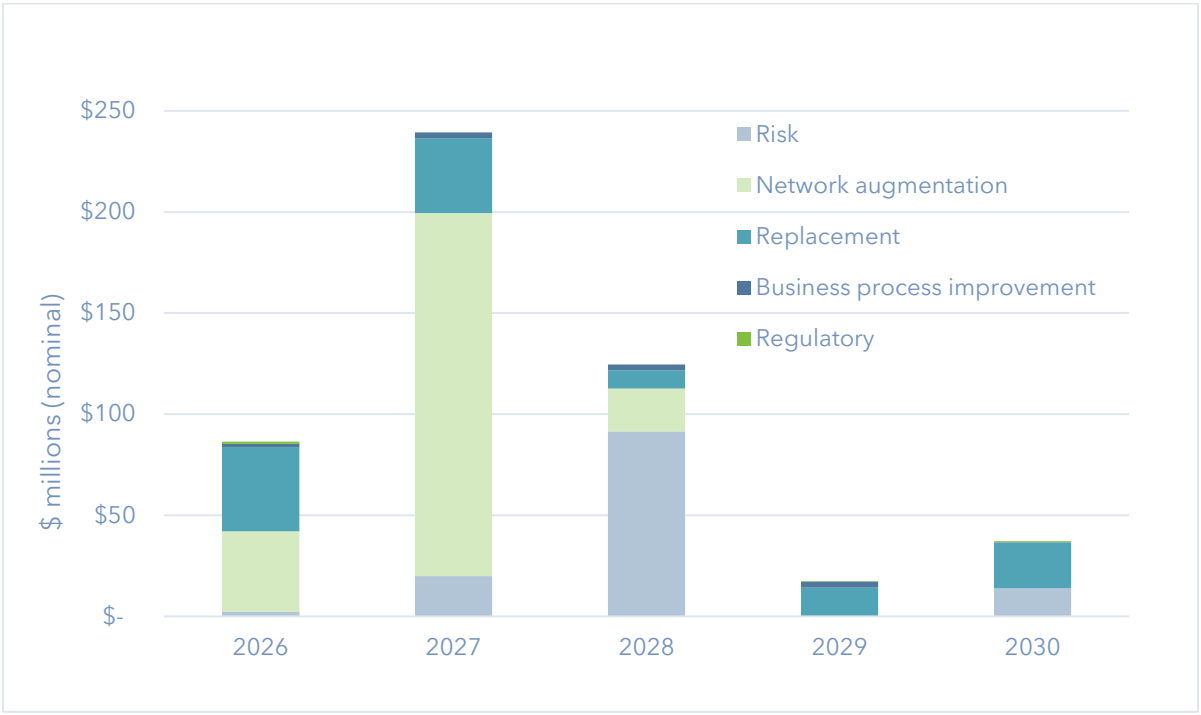
Note: 2023–24 is a part-year estimate, and 2024–25 is a forecast.
Source: GAWB, sub 1, p. 86; QCA analysis.

5.5 Forecast capex 2024–25 to 2029–30

Nearly 50% of GAWB's $505 million forecast capex program is attributable to network augmentation investments (Figure 11). The remaining expenditure is driven by asset replacement (25%) and risk-related investments (25%). The emerging hydrogen industry is the largest single driver of these investments, representing 85% of the risk investments and 83% of the augmentation. Overall, hydrogen capital expenditure represents around 60% of the total forecast capex program.[170]

[169] GAWB, sub 27, p 32.
[170] Around 70%, if the East End pipeline raw water augmentation is considered as a 'hydrogen' project.

Figure 11: GAWB's forecast capex by driver and year of capitalisation



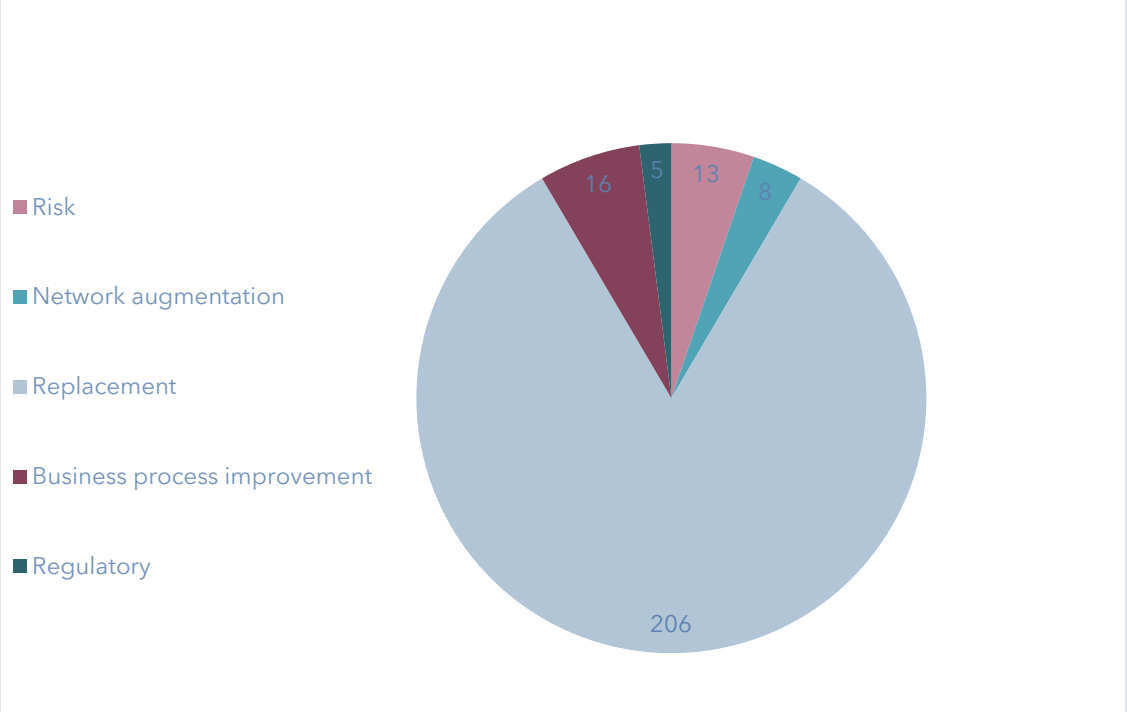
Source: GAWB, response to RFI 7; QCA analysis.

By volume of projects, the forward capital program is dominated by replacement projects (206), followed by business process improvements[171] (16) and risk-driven projects (13). Network augmentation represents a small component of the forecast by number (8) but is the largest contributor by value.

It is important to note that every line item in GAWB's capex forecast is characterised as a 'project'. This includes a significant number of relatively low-value purchases and capitalised expenditures.[172] It also includes programs of work where multiple related components are bundled and delivered as a single project.

[171] GAWB defines business process improvements as 'projects that are justified by reference to the efficiencies that it will bring to GAWB's operations or is in response to an explicit request from the Community Consultative Forum, customers or key stakeholders' (GAWB, sub 1, p 84).
[172] For example, plant and equipment purchases and routine replacement of parts for existing assets.

Figure 12: Forecast capex for 2025–30 by driver and number



Source: GAWB, response to RFI 7; QCA analysis.

QCA analysis

We selected two projects and one program of works for detailed review (Table 18).[173] These projects were selected to ensure GAWB had a reasonable opportunity to demonstrate how it applies its capital frameworks, and for the QCA to form a view of prudency and efficiency.

The referral notice specifically asks us to consider GAWB's forecast network augmentation expenditure. The hydrogen-related capex program represents 83% of GAWB's forecast network augmentation expenditure[174] and was therefore included in the review sample.

In aggregate, the sampled projects comprise the majority of the forecast capital program by value. Further detail on these projects is set out in Appendix E.

Table 18: Forecast capex sample, 2025–30

Project	Estimated capex ($m)	Driver	Capitalisation year
East End pipeline replacement and augmentation	[redacted]	Replacement and augmentation	2025–26
South Gladstone reservoir replacement	13.69	Risk	2029–30

[173] We initially intended to also review the proposed replacement of the Fitzsimmons Street reservoir; however, documentation provided by GAWB indicates this is yet to be scoped and has not yet entered the planning phase. We considered there was insufficient documentation to permit a fair assessment of prudency and efficiency of this project.
[174] Not including the East End raw water pipeline as a 'hydrogen' project.

Project	Estimated capex ($m)	Driver	Capitalisation year
Hydrogen augmentation program	309.88	Augmentation and risk	2026–27 and 2027–28

Source: GAWB, response to RFI 7; QCA analysis.

Aither reviewed the sample projects and considered that prudency and efficiency was not fully demonstrated in all instances. This finding on prudency is largely based on the lack of customer engagement records sighted, meaning Aither could not determine whether, or how, the proposed capital works meet the requirements of GAWB's customers.[175]

Regarding efficiency, Aither considered the projects reviewed do not demonstrate that they will minimise the long-term costs of the investments. Aither observed that the projects reviewed either had a range of stated costs across the relevant documentation that was not explained, or failed to fully consider trade-offs between capital and operating expenditure in the assessment of options.[176] Aither's detailed findings are set out in its report.[177] In some instances, Aither noted missing process documents that made it difficult to verify the application of GAWB's capital frameworks.

Aither did not propose any adjustment to GAWB's capex forecasts, but recommended that GAWB:

- provide greater transparency over the implementation of its project prioritisation processes, including the role of governance bodies and documentation of decision-making
- complete a substantive review of the project team capacity to deliver capital expenditure.[178]

We also note that the cost forecasts for several projects carried over from the 2020–25 period have increased materially from previous forecasts. These projects were not assessed within our sample of projects for detailed review.

Nonetheless, we sought further information from GAWB regarding the drivers of the cost increases, compared to previous forecasts. GAWB said the higher than forecast cost estimates were primarily due to the revision of early-stage cost estimates as projects advanced through the planning process. Overall, GAWB identified several plausible drivers of increases above previous forecasts, including:

- significant changes to project design and scope and therefore costs, as project planning matures
- substantially higher input costs (labour, materials and resources) than previously forecast and the flow-on effects of supply chain disruptions (i.e. covid-19)
- higher pricing emerging in contractor tendering, again driven by resource constraints and input cost pressures, which were not forecast to occur when project estimates were previously provided to the QCA 2020–25 review.[179]

[175] Aither report, p 19.
[176] Aither report, p 19.
[177] GAWB continued to provide responses to RFIs after Aither finalised its report, including information on project scheduling, checklists and options analysis. We consider this material sufficiently addresses some of these issues.
[178] Aither report, p 13.
[179] Meeting between GAWB, Aither and QCA staff regarding historical capex, 25 July 2024.

Prudency and efficiency

In our view, GAWB has demonstrated that the projects we reviewed are prudent. In most cases, the project need was adequately justified and linked to a clear investment driver.

We consider the level of documentation provided is sufficient for our price monitoring investigation. In our view, the instances of inconsistent documentation noted by Aither do not clearly indicate systemic weaknesses in planning and project management. As observed in the review of ex post projects, some inconsistencies are likely also explained by GAWB's transition to a new project management framework. Relevantly, the capex documentation provided by GAWB during this review is, in most cases, more comprehensive and detailed than that provided during the 2020 investigation.

After releasing our draft report, GAWB provided further information demonstrating it has undertaken a sound consultation process with its customers regarding the development of its capex program. In particular, GAWB has liaised closely with prospective new hydrogen customers, to determine their requirements and develop appropriate augmentation plans.[180]

Efficiency of GAWB's forecast capital projects cannot be conclusively determined on a forward-looking basis. Several of the projects reviewed are at relatively early stages of development. As such, we expect that cost estimates, scope and design, will be further refined. Nonetheless, GAWB's planning and processes undertaken to date – and its improved project management framework – generally support the likely efficiency of the projects.

Importantly, we consider that GAWB's capital forecasts represent a genuine attempt at estimating efficient costs, particularly given the substantial uncertainty. GAWB has also been forthcoming with supporting justification and information, where available. Overall, GAWB's planning for the projects reviewed appears largely sound. We have seen evidence that capital planning and governance frameworks have been refined and improved since our last review.

As noted in Appendix E, we have identified several risks regarding the planning and delivery of the hydrogen augmentation program. We understand the project status and timing intentions of some prospective hydrogen customers has recently changed. Given the complexities of the STNA program, and interdependencies between projects, it is not yet clear how these changes will affect the scope and cost of the hydrogen augmentations required during the 2025–30 period. At the time of preparing this final report, GAWB was considering the impact of these developments on the capital program in consultation with prospective customers. As such, GAWB was not in a position to provide a revised capex forecast and pricing model for our consideration in this final report.

Importantly, GAWB has proposed to make any required adjustments to the 2025–30 capex forecast for hydrogen-related augmentation, prior to setting prices for the period.[181] We consider this a reasonable approach given the potential for material changes to the capex forecast, and prices.

Given the degree of uncertainty and early status of the cost estimates, the hydrogen augmentation program would be a clear candidate for detailed ex post prudency and efficiency review during a subsequent price monitoring investigation.

[180] GAWB, Response to RFI 88 and 95.
[181] GAWB, sub 27, pp 20-21.

Deliverability

GAWB submitted that, excluding the hydrogen augmentation program and East End pipeline projects, its remaining forecast capex for 2025–30 is in line with what it has been able to historically achieve. GAWB noted this capex will be delivered under its business-as-usual delivery model.[182]

Nonetheless, we have some concerns about GAWB's ability to deliver its ambitious forward capital program in its entirety. Aither expressed similar concerns and considered GAWB's ability to deliver the overall capital program was 'in doubt'.[183] Aither recommended that GAWB undertake a substantive review of its capacity to deliver its capital expenditure.[184]

We acknowledge that GAWB is implementing several structural changes and strategies aimed at improving capital delivery, including:

- revising its employee remuneration and benefits strategy in response to challenging labour market conditions[185]
- creating new roles to reduce reliance on external resources that could be difficult to procure, including network planning specialist, asset planning manager, additional engineers, construction supervisor and project controller[186]
- implementing a revised project management framework featuring additional capital governance and oversight, and a risk-based project prioritisation approach
- establishing a separate business unit, supported by external contractors, to deliver the hydrogen capital program and allocating responsibility for delivery of the East End pipeline replacement project to GAWB's existing Fitzroy to Gladstone pipeline project team
- reviewing and refining procurement processes and strategies to improve GAWB's purchasing power in relevant markets.[187]

Despite these positive changes, it is unclear whether GAWB will be able to fully deliver this ambitious capital program during the 2025–30 period because of the substantial scope of the program and limited timeframe, particularly for delivery of the time-sensitive hydrogen-related augmentations. Overall, GAWB's capital program is the largest five-year program in its history and is six times the expected 2020–25 capex outcome.

Supply constraints in relevant contractor and labour markets are expected to remain for the near future. This presents a material deliverability risk as GAWB largely relies on external contractors for significant design and construction work.[188] In a report prepared for GAWB, Deloitte considered that competition for contractors and skilled labour, particularly with large mining and construction projects, will likely further tighten the labour supply within the construction industry in coming years.[189] GAWB acknowledged these challenges, noting that higher costs, labour shortages and increased competition for resources across sectors are expected to continue into the pricing period.[190]

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[182] GAWB, response to RFI 31, pp 2–3.
[183] Aither report, p 19.
[184] Aither report, p 13.
[185] See Chapter 4.
[186] See Chapter 4.
[187] GAWB, response to RFI 31, p 3; GAWB, sub 1, pp 84–85.
[188] GAWB, response to RFI 31, p 2.
[189] GAWB, response to RFI 16; Deloitte, *Price investigation: Regional Cost Pressures Report*, May 2024, pp 2, 7.
[190] GAWB, sub 1, p 28.

GAWB has further substantial investments to deliver that are not included in the 2025–30 period forecast, most notably the Fitzroy to Gladstone pipeline (due for completion in 2026) and the Awoonga Dam improvement program (post–2030).[191] GAWB notes that while the Awoonga Dam improvement project is not being delivered in the 2025–30 period, it is 'relevant to GAWB's management of its capital program for the FY2026–30 period, as it is anticipated that significant capital expenditure and resourcing will likely be required over this period for the initial stages of this project'.[192] GAWB is also involved in investigating other potential sources of water supply.[193]

Given the deliverability risks, we have taken this into account when assessing GAWB's proposed substantial increases to its operating costs (Chapter 4) in order to ensure:

- the delivery of its substantial forecast capital program, including investments necessary to accommodate increases in its forecast demand
- resourcing constraints and cost pressures do not adversely impact on its ability to undertake its business-as-usual activities.

Capex escalation

GAWB proposed to apply a composite weighted escalator to forecast capex. This comprises a 70% weighting to WPI and 30% weighting to CPI. The weightings are intended to broadly reflect the composition of GAWB's capital spend on average over the next pricing period. GAWB argued that the underlying cost drivers are materially different from CPI inflation as there is a substantial labour component.[194]

GAWB's proposed escalation approach is consistent with its approach in previous reviews and is considered reasonable for the purposes of establishing an indicative capital budget for our price monitoring exercise. We have adopted GAWB's forecast capex in aggregate, including the proposed escalation.

It is our expectation that actual prudent and efficient capex will be rolled into the asset base at actual cost during subsequent price monitoring reviews. We consider adopting an ex post true-up for revenues from forecast capex (capital charges), as outlined in Chapter 9, will ensure our price monitoring activities are aligned with actual expenditure. As such, it is not necessary to pursue precision in the forecasting of capex escalation rates.

Interest during construction

Consistent with previous reviews, GAWB included an amount for interest during construction (IDC) on capital projects of greater than $1 million. This allowance provides recognition of the opportunity cost of committing funds to projects that are yet to be commissioned and earn a return.

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[191] We understand the Awoonga Dam Improvement Project is expected to capitalise in 2031. GAWB, response to RFI 51, (Customer briefing – 9 July 2024, p 12).
[192] GAWB, response to RFI 31, p 5.
[193] GAWB, *Annual Report 2022–23*, p 14. We note the Department of Regional Development, Manufacturing and Water commenced a detailed business case for the preferred long-term bulk water supply source to meet forecast water requirements of the hydrogen industry in Gladstone post-2023 (GAWB, *Annual Report 2022–23*, p 10).

GAWB's method calculates IDC based on the average monthly capital spend for each project, from commencement through to commissioning, then applies its weighted average cost of capital (WACC) as the discount rate.

This approach is simple and reasonable for our price monitoring exercise. It is our expectation that GAWB will update its IDC amounts prior to setting prices to reflect its final WACC.[195]

5.6 QCA findings

For the purposes of our price monitoring exercise, we have taken the following approach to forecast capex.

- In the absence of a revised capex forecast that reflects the impact of recent changes in the status of some hydrogen proponents, we have established an indicative capital budget for the 2025–30 period of $505 million, consistent with GAWB's May 2024 proposal.[196] We acknowledge that GAWB proposes to revise this forecast ahead of setting its prices, once the capex impacts of recent demand developments have been determined.[197] We note this could result in a material change to the capex forecast.
- Assuming the current regulatory framework continues, at the subsequent price monitoring review, apply an ex post recalculation of actual revenues for any material windfall gain (or loss) in revenues attributable to capital charges derived from capex not delivered (or delayed) during the 2025–30 period. Any resulting revenue loss or gain would be carried forward to adjust revenues and prices in the first year of the subsequent pricing period, or otherwise smoothed over the period as appropriate. This approach compliments the existing roll-forward of the asset base, which includes a backward-looking adjustment that ensures only actual outturn capex is added to the asset base.

This approach is pragmatic, given the uncertainty surrounding the scope, efficient cost and timing of the hydrogen augmentation program. It also addresses our broader concerns surrounding GAWB's ability to deliver its 2025–30 capital program more generally. GAWB endorsed this approach.[198]

Ultimately, it is for GAWB and its customers to decide whether such an approach should be used in its commercial pricing framework. From our price monitoring perspective, this approach provides greater transparency to customers that they are not bearing the short-term costs of investments that do not proceed.

When taken with the proposed revenue true-up, we consider the indicative capital budget is sufficient for GAWB to recover prudent and efficient costs of providing bulk water services and is appropriate for our price monitoring exercise.

In recognition of the increased uncertainty, we have also estimated illustrative prices under a scenario in which none of the proposed new hydrogen demand materialises during the 2025–30 period (Appendix F). This scenario removes all prospective hydrogen customer demand and all elements of the hydrogen augmentation program from the capex forecast. This scenario is illustrative only and does not represent a QCA view on the likely trajectory of hydrogen industry development during the 2025–30 period.

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[195] GAWB, sub 27, p 33.
[196] Excluding the capitalisation of the FGP, expected in 2026.
[197] GAWB, sub 27, p 32.
[198] GAWB, sub 27, p 20.

6 Asset base

GAWB's regulated asset base is the value of investments, including both depreciating and non-depreciating assets. It is dependent on GAWB's capital expenditure, and asset inflation, depreciation and disposals.

The referral notice requires us to determine an opening asset value for the monitoring period, incorporating prudent and efficient capital expenditure, and rolling it forward to account for deprecation and inflation in accordance with a roll forward methodology.[199] This is then used to determine GAWB's allowable costs[200] for a return on assets (Chapter 7) and forecast depreciation (section 6.2.3).

We note that the forecast capital expenditure excludes the Fitzroy to Gladstone pipeline, as required under the referral notice,[201] which is expected to be commissioned during the price monitoring period.

6.1 Opening value as at 1 July 2025

The referral notice requests that we establish the opening regulated asset base as of 1 July 2025 by rolling forward the opening regulated asset base as at 1 July 2020, after inclusion of prudent and efficient capital expenditure, adjusting for depreciation and inflation. GAWB's proposal is outlined in Table 19.

All numbers presented in this chapter exclude assets associated with Curtis Island. In future investigations we intend to incorporate this zone in our reported regulatory asset base.

Table 19: GAWB's proposed RAB roll forward to 1 July 2025 ($ million)

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB[a]	559.48	580.42	626.89	665.96	682.07
***plus* Accumulated revenue under recovery[b]**	23.08	–	–	–	–
***plus* Capex**	4.99	26.94	9.21	10.60	31.55
***less* Disposals**	2.14	–	–	–	–
***plus* Inflationary gain**	10.03	35.22	46.71	22.94	22.33
***less* Depreciation**	15.02	15.68	16.86	17.43	19.98
Closing RAB	580.42	626.89	665.96	682.07	716.97

a Excludes Curtis Island; b This is the capitalised component associated with the raising of the Awoonga Dam wall.
Source: GAWB Roll Forward Model, submission, May 2024.

[199] Referral notice, section F, RAB, p 5.
[200] Referral notice, section F, Allowable Costs, p 3.
[201] Amending referral.

The referral notice requires that we start with the opening RAB as at 1 July 2020. In our previous investigation, we calculated a closing RAB of $566.28 million as at 30 June 2020. This figure included forecasts of capital expenditure, disposals, inflation, and depreciation for 2019–20. GAWB has updated these forecasts with actuals in its proposed opening regulated asset base as at 1 July 2020 of $559.48 million. Table 20 shows the adjustments GAWB has made, which we have assessed and accepted.

Table 20: GAWB's updated opening RAB at 1 July 2020 ($ million)

	GAWB's proposal
Opening RAB as at 1 July 2019	**557.28**
***plus* Capex**	6.63
***less* Disposals**	0.17
***plus* Inflationary gain**	10.32
***less* Depreciation**	14.59
Closing RAB as at 30 June 2020	**559.48**

Source: GAWB RAB Model, submission, May 2024.

Table 21 provides our RAB roll-forward calculations for the period 2020–21 to 2024–25. The opening value of $559.48 million on 1 July 2020 is adjusted for the capitalised component associated with the raising of the Awoonga Dam wall, inflation, capital expenditure and depreciation over the period. This produces a closing value of $711.53 million on 30 June 2025, which will become the opening value as at 1 July 2025.

Our approach to determine inflation, capital expenditure and depreciation over the period is explained below.

Table 21: QCA findings– RAB roll-forward to 1 July 2025 ($ million)

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB	559.48	580.42	626.89	665.96	682.07
***plus* Accumulated revenue under recovery**	23.08				
***plus* Capex**	4.99	26.94	9.21	10.60	31.55
***less* Disposals**	2.14	–	–	–	–
***plus* Inflationary gain**	10.03	35.22	46.71	22.94	16.75
***less* Depreciation**	15.02	15.68	16.86	17.43	18.84
Closing RAB	580.42	626.89	665.96	682.07	711.53

Source: QCA analysis.

GAWB has applied an approach consistent with previous investigations, and we consider this approach consistent with the requirements of the referral notice. We have updated the forecast CPI inflation to calculate our forecast closing RAB as at 30 June 2025 of $711.53 million.

6.1.1 Inflationary gain

The opening value of the RAB is indexed each year by the inflation rate. We have indexed the RAB by applying actual inflation for the period 2020–21 to 2023–24 (see Table 34). Actual inflation is based on the Brisbane All Groups CPI index published by the Australian Bureau of Statistics (ABS). This is consistent with our past approach and the approach proposed by GAWB in its submission.[202]

Where actual inflation is not available, we have applied an indicative forecast rate of inflation (see Table 22). Consistent with the referral notice, we have used our preferred methodology to forecast inflation.[203] The indicative forecast inflation rate has been determined as at 18 February 2025. GAWB has committed to updating the 2024-25 inflation rate ahead of its negotiated price setting processes for the monitoring period.[204]

Table 22: Inflation rate (%)

	2020-21	2021-22	2022-23	2023-24	2024-25
GAWB	1.72	6.01	7.42	3.80[a]	3.20[a]
QCA findings	1.72	6.01	7.42	3.42[b]	2.40[a]

a Forecast; b Actual.
Note: The 2023–24 'actual' figure has been updated using ABS Brisbane All Groups CPI.
Source: GAWB, sub 1; RBA, Statement on Monetary Policy, February 2025, p 61.

We have deducted from allowable costs an amount equivalent to the inflationary gain in the RAB, as we apply a nominal rate of return on assets. This avoids the double counting of inflation that would otherwise occur from indexing the RAB by inflation and applying a nominal rate of return on assets that embodies the inflation rate.

6.1.2 Capital expenditure

Capital expenditure is added to the RAB. We have conducted an ex post prudency and efficiency assessment of a sample of GAWB's actual capital expenditure for the period 2020–21 to 2024–25[205] (Chapter 5), consistent with the referral notice. The roll-forward of the RAB reflects our findings from this assessment. For 2024–25, where actual capital expenditure is not available, we have rolled forward the RAB to reflect forecast capital expenditure.[206]

6.1.3 Depreciation

Depreciation is deducted from the RAB. Consistent with the referral notice, we have calculated depreciation by applying the straight-line method and adopting the remaining useful lives of the assets as applied in our 2020–25 review of GAWB's bulk water prices.[207] We have accepted GAWB's

[202] GAWB, sub 1, p 45.
[203] QCA, *Inflation forecasting*, final position paper, October 2021.
[204] GAWB, sub 27, p 32.
[205] Expenditure for the 2024–25 year is based on estimated expenditure.
[206] It is expected that actual expenditures incurred during 2024–25 will be considered at the subsequent price monitoring investigation, should the referral notice prescribe an ex post prudency and efficiency assessment. As such, we have not assessed the prudency or efficiency of these costs.
[207] Referral notice, section F, Allowable Costs, (g), p 3.

proposed asset lives for assets entering the RAB from 2020–21 to 2024–25, which are based on capital expenditure as commissioned (or forecast, in the case of 2024–25).

Separately, an allowance for depreciation is provided as part of the allowable costs that are used to calculate the value of the RAB.[208] This allowance means GAWB can recover the cost of prudent and efficient capital investments over the useful life of the assets.

6.2 RAB roll-forward to 30 June 2030

Using the required methodology, GAWB submitted a proposed RAB roll-forward with a closing RAB as at 30 June 2030 of $1,201.80 million. GAWB's roll-forward is based on its proposed forecast capex, inflation and depreciation amounts during the 2025–30 price monitoring period.

Table 23: GAWB's proposed RAB for 2025–30 ($ million)

	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**716.97**	**800.38**	**1,037.63**	**1,158.38**	**1,170.46**
***plus* Capex**	86.45	239.00	124.14	17.32	37.12
***less* Disposals**	1.76	–	–	–	–
***plus* Inflation**	19.71	23.59	27.85	29.17	29.72
***less* Depreciation**	20.99	25.34	31.23	34.41	35.50
Closing RAB	**800.38**	**1,037.63**	**1,158.38**	**1,170.46**	**1,201.80**

Source: GAWB Roll Forward Model, submission, May 2024.

Table 24 provides our RAB roll-forward calculations from 1 July 2025. Our approach to determine forecast capital expenditure, inflation and depreciation over the period is explained below.

Table 24: QCA's estimated RAB for 2025–30 ($ million)

	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**711.53**	**799.35**	**1,037.79**	**1,159.62**	**1,172.45**
***plus* Capex**	86.45	239.00	124.14	17.32	37.12
***less* Disposals**	1.75	–	–	–	–
***plus* Inflation**	24.09	24.79	28.95	29.98	29.77
***less* Depreciation**	20.96	25.35	31.27	34.48	35.57
Closing RAB	**799.35**	**1,037.79**	**1,159.62**	**1,172.45**	**1,203.77**

Source: QCA calculations.

Table 25 compares GAWB's proposed opening RAB as at 1 July 2025 and closing RAB as at 30 June 2030 to our estimated RAB as at the same dates. Note that differences are due to updated forecast CPI inflation.

[208] Similar to inflationary gain, the depreciation allowance included in building block costs is reduced by a mid-year cash flow adjustment.

Table 25: GAWB's proposal compared to QCA's calculations ($ million)

	GAWB's proposal	QCA calculation	Difference
Opening RAB – 1 July 2025	**716.97**	**711.53**	**(5.44)**
***plus* Capex**	504.03	504.03	–
***less* Disposals**	1.76	1.75	(0.01)
***plus* Inflation**	130.05	137.58	7.53
***less* Depreciation**	147.49	147.63	0.14
Closing RAB – 30 June 2030	**1,201.80**	**1,203.77**	**1.97**

Source: GAWB Roll Forward Model, submission, May 2024; QCA calculations.

6.2.1 Forecast inflationary gain

The referral notice sets out the approach we are to apply to forecast inflation, which we have outlined in Chapter 4 operating costs. Table 26 provides our indicative forecast inflation rates at 15 February 2025.

Table 26: QCA findings – forecast CPI (%)

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
GAWB	3.80[a]	3.20	2.60	2.57	2.53	2.50	2.50
QCA finding	3.42[b]	2.40	3.20	2.70	2.63	2.57	2.50

a Forecast; b Actual.
Note: The 2023–24 figure has been updated using the ABS Brisbane All Groups CPI.
Source: GAWB, sub 1, p 78; RBA, *Statement on Monetary Policy*, February 2025, p 61.

6.2.2 Forecast capital expenditure

We have assessed forecast capital expenditure for the period 2025–26 to 2029–30, consistent with the referral notice.[209] This forecast capital expenditure (Chapter 5) is added to the RAB in the year the project is commissioned.

6.2.3 Depreciation

We have applied the straight-line method to forecast depreciation for the period 2025–26 to 2029–30. We have also accepted GAWB's proposed asset lives for its forecast value of assets entering the RAB during this period, as they are consistent with our 2020–25 final report.

[209] Referral notice, section F, RAB, p 5.

7 Rate of return, working capital and tax allowance

7.1 Rate of return

To determine appropriate prices for the monitoring period 2025–30, we have been directed to determine a rate of return on GAWB's regulated asset base.[210] This is a key component of a regulated firm's allowable costs and represents the return expected by investors to compensate them for the risks involved in investing in the benchmark firm.

In determining an appropriate rate of return, the referral notice instructs us to apply a weighted average cost of capital (WACC)[211] based on the methodologies outlined in our rate of return review, with one caveat[212] – in estimating the cost of debt we are to apply a 10-year transition from the 'on-the-day' approach to the 'trailing average' approach in accordance with the Australian Energy Regulator's transition arrangement.[213]

Consistent with the methodology outlined in our rate of return review and the referral notice, we have:

- estimated a bottom-up WACC (section 7.1.1) – which is based on our preferred methodology for calculating the WACC and each of the relevant individual parameters; and
- undertaken a top-down assessment to consider the overall reasonableness of GAWB's rate of return (section 7.1.2).

We consider that an indicative WACC of 7.39% is an appropriate rate of return for GAWB for the 2025–30 price monitoring period.[214]

By comparison, GAWB calculated its proposed prices for the 2025–30 price monitoring period based on an indicative post-tax nominal (vanilla) WACC of 7.88%. We do not consider that GAWB has calculated the WACC in accordance with the referral notice.[215]

We consider that a rate of return of 7.39% will provide for a rate of return that is commensurate with the regulatory and commercial risks faced by GAWB in delivering its bulk water services. In making this decision, we have considered GAWB's exposure to risks. We have also had regard to GAWB's flexibility with respect to its commercial arrangements that mitigate risk or efficiently allocate risk to its customers, the regulatory framework, and GAWB's pricing practices.

We consider that an appropriate rate of return for the 2025–30 price monitoring period will be based on our indicative WACC estimate, updated for the risk-free rate and cost of debt to reflect GAWB's nominated averaging period.

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[210] Referral notice, section F, Appropriate Rate of Return, p 4.
[211] The WACC is the weighted average of the expected costs of equity and debt, with the respective weights representing the proportion of equity and debt in the capital structure of the firm.
[212] QCA, *Rate of return review*, final report, version 4, September 2024.
[213] Referral notice, section F, Appropriate Rate of Return, p 4.
[214] The rate of return is indicative as GAWB has committed to updating this ahead of its negotiated price setting processes for the monitoring period.
[215] GAWB proposed applying an asset beta of 0.45, using only 5 years of returns data in its regression instead of 10 years as outlined in our rate of return review. This results in a relatively higher beta estimates, as confirmed by our own analysis.

7.1.1 Bottom-up WACC assessment

We have undertaken a bottom-up WACC analysis to evaluate an appropriate rate of return for GAWB.

To calculate an indicative bottom-up WACC for GAWB, we have used a nominal, post-tax WACC[216] based on our estimates of individual WACC parameters. Our assessment of the individual parameters used to generate our bottom-up estimate is outlined below.

We have calculated an indicative bottom-up WACC of 7.39% for GAWB for the 2025–30 price monitoring period (see Table 27).

Table 27: Indicative bottom-up WACC estimates for the 2025–30 price monitoring period

Parameter	GAWB proposal[217]	QCA findings
Risk-free rate (%)	4.31	4.31
Capital structure (% debt)	50	50
Market-risk premium (%)	6.5	6.3
Asset beta	0.45	0.39
Equity beta	0.78	0.66
Cost of equity (%)	**9.38**	**8.47**
Credit rating	BBB	BBB
Debt risk premium (%)	1.96	1.91
Debt issuing costs (%)	0.10	0.10
Cost of debt (%)	**6.37**	**6.32**
Gamma	0.484	0.484
Bottom up, nominal post tax WACC (%)	**7.88**	**7.39**

Note: The indicative bottom-up WACC estimates have been calculated with reference to a placeholder 20-day averaging period ending 30 April 2024.
Source: GAWB, sub 1, p 101; QCA analysis.

Capital structure

We consider it reasonable to apply GAWB's proposed 50% gearing benchmark capital structure to determine our bottom-up WACC estimate for the 2025–30 price monitoring period, which is consistent with the gearing applied in the previous reviews.[218]

The capital structure of a firm represents the relative proportion of debt and equity that together finance the firm's activities. Gearing refers to the proportion of debt comprising the total value of the firm's assets (that is, debt and equity).

[216] Our approach uses the Officer WACC3 model and estimates the WACC for a benchmark firm.
[217] GAWB engaged Synergies to complete a WACC estimate for the 2025–30 price monitoring period.

[218] GAWB, sub 1, pp 94–95.

Risk-free rate

We consider it reasonable to adopt GAWB's proposed risk-free rate of 4.31% as a placeholder to determine our bottom-up WACC estimate for the 2025-30 price monitoring period.

The risk-free rate is the rate of return expected from investment in a theoretical riskless asset. As such, it compensates the investor for the time value of money. Our method for calculating the risk-free rate involves:

- using 10-year Australian Government nominal bond yields
- averaging the yields over a period nominated by the regulated entity that is between 20 and 60 business days long, ending as close as reasonably possible to the commencement of the price monitoring period.

The methodology employed by GAWB in estimating an indicative risk-free rate is consistent with the approach described in our rate of return review. GAWB estimated an indicative risk-free rate with reference to a 20-day average of the 10-year Commonwealth Government bond yield ending 30 April 2024.[219]

We consider it appropriate for the risk-free rate to be updated using this methodology before the start of the 2025–30 monitoring period, using an averaging period nominated by GAWB. Consistent with our rate of return review, GAWB has proposed the timing and length of its nominated averaging period in advance of the averaging period commencement date. GAWB has confidentially notified us of their nominated averaging period, which we have accepted.[220]

Market risk premium

We consider it reasonable to apply a market risk premium of 6.3% to determine our bottom-up WACC estimate for the 2025–30 price monitoring period.

The market risk premium is the additional return that an investor expects to receive above the risk-free rate from a completely diversified portfolio of risky assets. In accordance with our rate of return review, we have estimated the market risk premium using the Ibbotson method.

We consider that the Ibbotson method provides a plausible indication of the average market risk premium investors can expect to receive in normal conditions, where investors use historical excess returns data to inform their expectations of achievable future returns.

GAWB proposed a market risk premium of 6.5% for the 2025–30 monitoring period, which was based on its consultant's estimate using the Ibbotson method.[221]

In applying the Ibbotson method we have used a sampling period from 1958 to February 2024, which results in a difference from GAWB's proposal due to the inclusion of observations since our rate of return review. We consider this provides for a data series that contains both a relatively large number of observations and consists of high-quality data.[222]

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[219] GAWB, sub 1, p 95.
[220] Consistent with our rate of return guideline, we will maintain confidentiality of this period until it has passed.
[221] GAWB, sub 1, p 95.
[222] This is consistent with our recent reports related to the irrigation schemes of Sunwater and Seqwater. Refer to our website for information on our irrigation price investigation 2025–29.

Beta

We consider it reasonable to apply an asset beta of 0.39 and an equity beta of 0.66 to determine our bottom-up WACC estimate for the 2025–30 price monitoring period.

The asset beta is a firm-specific, standardised measure of the volatility of returns on a firm's assets relative to the volatility of returns on the market portfolio. The equity beta, in addition, reflects the financial risk of using debt as part of the funding for the business.[223]

GAWB proposed an asset beta of 0.45. GAWB's proposal applied a different methodology to estimate a bottom-up beta than that outlined in our rate of return review, which we were explicitly directed to use by the amending referral notice.[224, 225]

To determine a reasonable beta estimate for GAWB, we have had regard to GAWB's business environment, as well as the pricing and contractual arrangements proposed by GAWB that influence its exposure to systematic risk.[226]

Box 1 describes some key characteristics that we consider will influence GAWB's exposure to systematic risk.

[223] The asset beta is unobservable and must be obtained by de-levering an estimated equity beta. The choice of de-levering formula represent various assumptions regarding the firm.
[224] Synergies estimated GAWB's beta using 5 years of returns data in its regression instead of the 10 years outlined in our rate of return review. This results in a relatively higher beta estimates, as confirmed by our own analysis.
[225] Amending referral notice, p 4.
[226] In response to our draft report, GAWB submitted that we had previously considered their exposure to systematic risk to be materially different to Seqwater and other urban water providers. This characterisation is misleading. Our position in our 2020–25 price monitoring report was that '[o]ur analysis indicates that water utilities are comparable firms, as they have systematic risk that is broadly similar to that of GAWB, at this time'. This was also consistent with our 2015–20 GAWB review.

Box 1: Factors influencing GAWB's exposure to systematic risk

GAWB is the sole provider of bulk water services in the Gladstone region. Its monopoly business activities include the storage, treatment, and delivery of raw and potable water to Gladstone Regional Council and industrial customers.

Bulk water is an essential resource for both industrial and residential customers, typically exhibiting low price elasticity. Furthermore, GAWB's industrial customers may face high switching costs due to significant sunk capital investment.

GAWB's commercial framework provides it with the ability to obtain contractual arrangements and enact pricing practices which decrease its exposure to demand risk. Such contractual arrangements include early termination and reservation reduction penalties, contract length premiums, capacity preservation fees, and security payments.

It is further protected from demand risk through its hybrid revenue cap. In aggregate, these factors allow GAWB a high degree of revenue certainty by decoupling its revenue from demand.

This is supported by GAWB's pricing practices, which provide:

- for GAWB to recover its revenue requirements, for any level of contracted water demand
- a structure for fixed charges (based on reservation amounts) to recover the majority of its revenue (around 95%).

Sustained demand for the service also mitigates GAWB's exposure to risk in the longer term. This is assisted by the development opportunities and economic benefits of operating in the Gladstone State Development Area.

To inform our assessment on a reasonable beta for GAWB, we have considered observed betas obtained from a sample of sufficiently comparable listed firms as a benchmark.

We consider that beta estimates obtained from a sample of regulated energy and water businesses provide useful reference points to inform our decision on an appropriate beta for GAWB.

Importantly, regulated energy and water businesses have similar attributes to GAWB's provision of bulk water in the Gladstone region, including:

- a customer base that has no alternative service options, which exhibits a resilient demand for the service through economic cycles
- services that are subject to cost-based regulatory regimes.

GAWB submitted the following differences between itself and other water utilities in order to justify that its exposure to systematic risk is materially higher than a typical urban water utility (such as Seqwater).[227]

- GAWB has a highly concentrated industrial customer base.
- There are no other aspects of GAWB's services or operations that decrease its systematic risk exposure relative to Seqwater, or the listed water utilities in the comparator set.
- GAWB's exposure to the emerging hydrogen industry in the Gladstone region is far more likely to increase its systematic risks.[228]

We maintain that an energy and water comparator set is appropriate for determining GAWB's bottom-up WACC. In this regard:

- GAWB's commercial framework mitigates the impact on its revenues from delivered volumes. We note that GAWB proposed to recover approximately 95% of its revenue from fixed charges based on reservation/contracted demand.
- GAWB's current hybrid revenue cap results in a new price path every price monitoring period. As such, its revenue is unaffected by customers adjusting their reserved/contracted demand between price monitoring periods.
- GAWB has the ability to include contractual arrangements that penalise customers if they reduce their reservation/contracted demand during their contract term or even terminate their contract.[229]
- While customer demand is uncertain, GAWB has queued demand in excess of capacity of Awoonga Dam. GAWB has advised that it is working with several proponents towards entering into long-term water supply contracts.

For the reasons outlined above we consider that GAWB's revenues are sufficiently decoupled from its demand such that fluctuations in demand are unlikely to materially impact revenues.

Consistent with our preferred methodology outlined in our rate of return review, we have calculated GAWB's betas applying the Brealey-Myers levering formula and using 10 years of returns data. This produces an average asset beta of 0.39 and an equity beta of 0.66[230] as a reference point (see Table 28).[231]

Table 28: QCA asset beta estimates using 10 years of weekly data

	Mean	Median
Asset beta (estimated)	0.3921	0.3730
Equity beta (50% gearing)	0.6642	0.6260

Note: Equity beta calculated using Brealey-Myers levering formula and a debt beta of 0.12.
Source: QCA analysis.

[227] GAWB, sub 27, pp 24-25.
[228] GAWB, sub 1, pp 95–96.
[229] Other contractual arrangements include revenue surety are contract length premiums, capacity preservation fees and security payments. These favourable conditions are likely a result of its market power and the necessary nature of bulk water.
[230] Applying a debt beta of 0.12 and gearing of 50%.
[231] Our approach to estimating the equity beta uses the Brealey-Myers levering formula. See QCA, *Rate of return review*, version 4, final report, September 2024, p 92.

In accordance with our rate of return review, we have compared our bottom-up WACC estimate with recent regulatory decisions to assess its reasonableness.[232] In considering whether it is appropriate to apply an equity beta of 0.66 to determine our bottom-up WACC estimate for GAWB's 2025–30 price monitoring period, we have reviewed a number of recent Australian regulatory decisions for other water entities in our top-down assessment.

From the arguments advanced by GAWB, we are not persuaded to use a higher beta reference point for our bottom-up WACC estimate. Moreover, we undertake our overall assessment of the rate of return (rather than adjusting individual WACC parameters) in our top-down assessment.[233]

Gamma

We consider it reasonable to apply a gamma of 0.484 to determine our bottom-up WACC estimate for the 2025–30 price monitoring period.

Gamma is the value to investors of an existing dividend imputation credit. The Australian taxation system allows companies to provide shareholders with credits that reflect the company taxes paid on profits that are distributed as dividends. These credits can be used to reduce a shareholder's tax liabilities, thereby decreasing the shareholder's cost to invest. Equivalently, they reduce the overall cost of capital.[234]

GAWB proposed a gamma value of 0.484 to determine its WACC estimate, which is consistent with the gamma calculated as part of our rate of return review.[235]

From our analysis, there has not been a material change in the gamma since our rate of return review, and we do not consider there is reason to depart from a gamma estimate of 0.484 at this time.

Cost of debt

We consider it reasonable to apply a cost of debt of 6.32% to determine our bottom-up WACC estimate for the 2025–30 price monitoring period.

The cost of debt is the cost to a firm of servicing and raising debt from a range of lenders. It is a fundamental component of the WACC, as debt financing is a significant cost to capital-intensive firms with long-lived assets such as GAWB.[236]

In accordance with the terms of the referral notice, we have applied a 10-year transition from the 'on-the-day' approach to our preferred 'trailing average' approach, consistent with the AER's transitional arrangements. The AER's transitional arrangement is presented in detail in the AER's 2023 *Rate of Return Instrument*.[237] In the first year of the transition, a weight of 100% is applied to the prevailing rate. In each subsequent year, 10% is removed from the weighting of the first year and added to the weighting of the subsequent year's prevailing rate.[238]

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[232] QCA, *Rate of return review*, version 4, final report, September 2024, p 24.
[233] QCA, *Rate of return review*, final report, September 2024, pp 21-22.
[234] QCA, *Rate of return review*, final report, September 2024, p 100.
[235] GAWB, sub 1, p 101.
[236] QCA, *Rate of return review*, final report, version 4, September 2024.
[237] AER, *Rate of Return Instrument*, February 2023, pp 5–10.
[238] AER, *Rate of Return Instrument – Explanatory Statement*, February 2023, p 237.

We consider it is appropriate for price monitoring purposes to adopt a simple (unweighted) trailing average consistent with our rate of return guideline.[239]

For our price monitoring purposes, the cost of debt for the 2025–30 period will comprise the first half of the 10-year transition to a simple trailing average. We note that it is open to GAWB to adopt a different approach and this would be identified in our mid-term price monitoring review.

The method for calculating the cost of debt outlined in our rate of return review involves extrapolation of the RBA's F3 bond yield data. GAWB proposed an alternative extrapolation method in its submission based on advice from Queensland Treasury Corporation (QTC), who has provided further detail on the proposed method in its own submission.[240] We have subsequently updated our preferred method of extrapolation of the RBA's F3 table data in our rate of return review. This report makes use of our latest rate of return review to estimate the cost of debt.

Credit rating

The credit rating of a firm is a measure of its ability to repay its debt. A higher credit rating indicates a firm is less likely to default and therefore has a lower cost of debt. The credit rating of a firm is determined by considering the firm's business and financial risk profiles and the firm's capital structure. Our current methodology prescribes determining the applicable credit rating based on the credit rating of a benchmark firm, on a case-by-case basis.

GAWB proposed an investment grade BBB credit rating. This rating is consistent with our previous investigations of GAWB and is commonly applied to regulated water businesses.

In accordance with our current methodology, we have not found sufficient reason to move from GAWB's previous credit rating of BBB.

Debt management strategy

In accordance with the referral notice, we will apply a 10-year transition period from an 'on-the-day' approach to a 'trailing average' approach using the AER's transitional arrangement.[241]

GAWB and QTC submitted that a weighted trailing average should be applied instead of a simple trailing average.[242, 243, 244] This would allow new benchmark debt to be initially compensated at the prevailing rate using an 'on-the-day' approach and then transitioned to a 10-year simple trailing average using the AER's transitional arrangement. They argued that a weighted trailing average would provide correct compensation for efficient costs, given the large amount of forecast capital expenditure in the 2025–30 price monitoring period.

Our rate of return review considered this issue and determined that our preference is to adopt an unweighted (simple) trailing average to determine the benchmark cost of debt. As such, we have used a simple trailing average for calculating the cost of debt.

Nonetheless, we accept that there is a legitimate issue where the marginal cost of new debt raising is materially different than the average cost of historic debt. We note that this could be a

[239] QCA, *Rate of return review*, final report, version 4, September 2024, p 52.
[240] QTC, sub 2.
[241] Referral notice, section F, Appropriate Rate of Return, p 4.
[242] GAWB, sub 1, pp 97–98.
[243] QTC, sub 2.
[244] QTC, sub 31.

disincentive to undertake large capital investments (especially when significant construction risks are borne by the business) relative to the regulated asset base.

Notwithstanding this, GAWB may choose an alternative approach to a simple trailing average, although we will undertake our price monitoring task in accordance with the requirements outlined in the referral notice.

Debt-raising cost

The debt-raising cost is an allowance, in addition to the debt risk premium, to account for the transaction costs associated with raising debt.

GAWB used a debt-raising cost of 0.10% in its cost of debt calculation. As this is consistent with our rate of return review, we consider this allowance is appropriate.

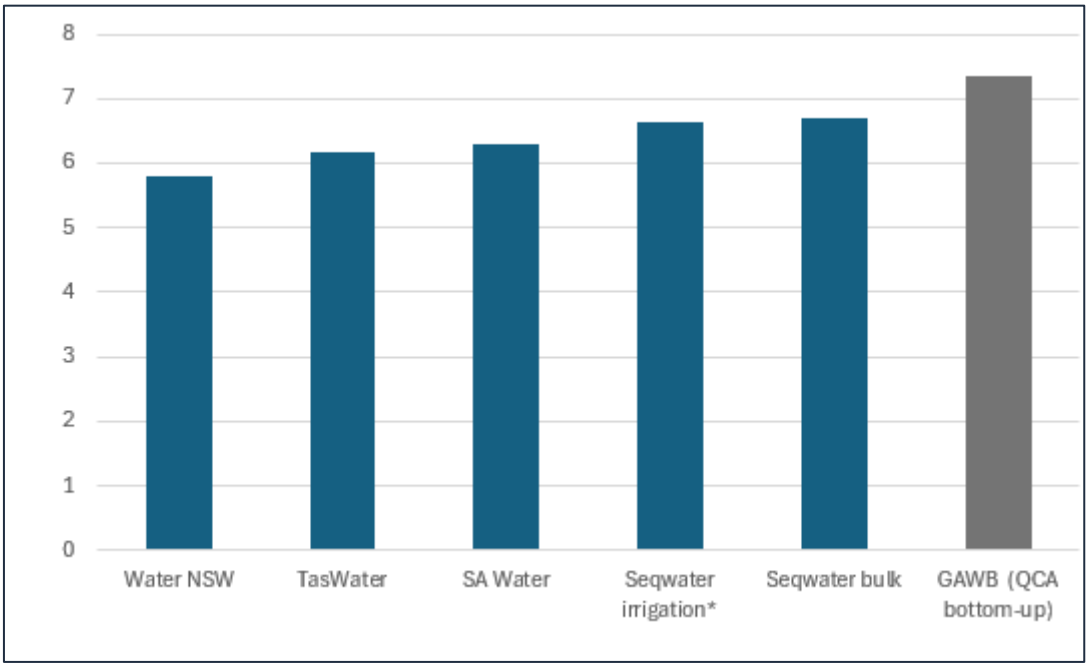
7.1.2 Top-down assessment

A top-down assessment allows us to evaluate the robustness of our bottom-up estimated WACC. The focus of the assessment is the overall reasonableness of the total return in the prevailing circumstances, not the appropriateness or reasonableness of the individual WACC parameter values.

Consistent with the rate of return review, we have considered recent WACC decisions by other Australian regulators for water businesses. We have compared our bottom-up WACC estimate for GAWB to the corresponding nominal post-tax WACCs calculated for a range of Australian regulated businesses. In making this comparison, we have calculated the time-varying parameters of the other regulators' WACC values, with reference to an April 2024 averaging period.

On a normalised basis, our bottom-up WACC estimate for GAWB sits above the range of other recent WACC decisions by other Australian regulators for water businesses (Figure 13). We consider that this outcome is consistent with our assessment of relative risk.

Figure 13: Normalised comparisons for Australian regulated water businesses (%)



Sources: IPART, *WACC calculator (Spreadsheet model true-up calculator)*, November 2021, accessed 5 August 2024; OTTER, *Investigation into TasWater's prices and services for the period 1 July to 30 June 2026*, final report, May 2022; ESCOSA, *SA Water Regulatory Determination 2024*, final determination, June 2024; QCA, *Rural irrigation price review 2025–29: Seqwater*, draft report, June 2024; QCA, *Seqwater Bulk Water Price Review 2022–26*, final report, March 2022.

The objective of performing this WACC normalisation comparison is to get a sense of the reasonableness of our bottom-up WACC estimate from an overall, or top-down, perspective. It is important to note that, as the task of the normalisation process is to generate an estimate of what the regulator would have determined the rate of return to be at the same point in time, various assumptions are required. As such, the outcomes of this exercise are not determinative and should be treated with some level of caution.

GAWB submitted that it is essential for the WACC to be adequate to incentivise future investment in bulk water services, having regard to the level of risk inherent in its capital investment program.[245] We consider that our comparison of other regulatory decisions supports our bottom-up WACC estimate being sufficient to promote efficient investment in the infrastructure required to provide the service.

As outlined in our rate of return review, we do not automatically adjust our bottom-up estimate of the WACC at each review, but at those times in which circumstances exist that necessitate an adjustment, to provide a reasonable overall WACC.[246]

We consider that our bottom-up WACC estimate of 7.39% provides an appropriate indicative rate of return for GAWB for the 2025–30 price monitoring period.

7.2 Return on assets and working capital allowance

The referral notice requests that GAWB's allowable costs include an appropriate return on the RAB using an appropriate rate of return and an allowance for working capital.[247]

7.2.1 Return on assets

The referral notice defines the appropriate rate of return to be a weighted average cost of capital based on our 2023 rate of return review.[248] Table 29 outlines our findings on GAWB's return on assets allowance. The differences are caused by our findings on GAWB's rate of return and updated forecast CPI inflation.

Table 29: Return on assets ($ million, nominal)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total
GAWB submission	65.33	77.64	91.59	96.64	97.99	429.18
QCA final	60.90	72.83	86.02	90.84	92.16	402.75
Difference	(4.42)	(4.81)	(5.57)	(5.80)	(5.83)	(26.44)

[245] GAWB, sub 1, p 93.
[246] QCA, *Rate of return review*, final report, version 4, September 2024, pp 21-25.
[247] Referral notice, section F, Allowable Costs, p 3.
[248] Referral notice, section F, Appropriate Rate of Return, p 4.

Sources: GAWB, sub 1; QCA analysis.

7.2.2 Working capital allowance

The requirement for a working capital balance is due to the delay between the delivery of bulk water and payment received. The allowance is calculated by multiplying the working capital balance by the rate of return, therefore compensating GAWB for the opportunity cost of the working capital balance.

In previous periods GAWB's working capital requirement has reflected its accounts receivable, accounts payable and inventory. GAWB has submitted a working capital allowance based on a $10 million its short-term debt facility arrangements, proposing to receive the rate of return on this for every year of the 2025–30 price monitoring period.

It is unclear whether a portion of the submitted $10 million requirement is attributable to the Fitzroy to Gladstone pipeline (FGP). This is relevant to our pricing monitoring investigation, as the amending referral excludes consideration of the FGP costs. As such, our position on GAWB's working capital allowance is to use an interim allowance, pending further information from GAWB, that excludes the FGP project impacts. We expect this to occur in our mid-term review.

Table 30: Working capital allowance ($ million, nominal)

	2025–26	2026–27	2027–28	2028–29	2029–30	Total
GAWB submission	0.79	0.79	0.79	0.79	0.79	3.94
QCA final	0.74	0.74	0.74	0.74	0.74	3.70
Difference	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.24)

Note: Differences are due to our rate of return and GAWB's proposal.
Sources: GAWB, sub 1, QCA analysis.

7.3 Tax allowance

The referral notice includes a tax allowance in GAWB's allowable costs so that it can meet its forecast tax liabilities.[249] GAWB is required to make tax equivalent payments as a participant in the National Tax Equivalent Regime consistent with Queensland's obligations under the 1995 Competition Principles Agreement.[250] Providing an explicit tax allowance in the allowable costs is consistent with our preferred form of weighted average cost of capital.[251]

The tax allowance is calculated by multiplying the corporate tax rate (30%) and the taxable income and then subtracting the value of the dividend imputation credits (gamma). The taxable income is calculated using the appropriate prices (Chapter 10), the forecast demand (Chapter 3), and GAWB's tax shield. Table 31 outlines our findings on GAWB's tax allowance. Differences are predominantly attributable to our lower proposed rate of return.

[249] Referral notice, section F, Allowable Costs, p 3.
[250] To meet competitive neutrality principles, the regime notionally applies the tax laws to government owned businesses as though they were subject to federal income tax (see the Australian Taxation Office website and GAWB, *Annual Report 2023–24*, p 49).
[251] A tax allowance may be incorporated into the weighted average cost of capital.

Table 31: Tax allowance ($ million, nominal)

	2025–26	2026–27	2027–28	2028–29	2029–30	Total
GAWB submission	4.07	3.13	3.18	5.34	10.28	26.00
QCA final	2.22	3.54	4.25	4.63	4.81	19.46
Difference	(1.84)	0.41	1.07	(0.71)	(5.47)	(6.54)

Sources: GAWB, sub 1, QCA analysis.

8 Allowable costs and revenue

We are required to consider appropriate prices for GAWB's bulk water services that allow GAWB sufficient allowable revenue to recover the allowable costs of providing its bulk water services as specified in the referral notice.[252] This chapter presents our estimate of the allowable revenue to be recovered from GAWB's bulk water prices for the 2025–30 price monitoring period. Our estimate of allowable revenue is based on our assessment of allowable costs and revenue adjustments.

8.1 Allowable costs

To determine GAWB's allowable costs we add together the allowances for each of the following cost components:

- operating expenditure – the ongoing costs of supplying bulk water and maintaining bulk water assets, and corporate costs (Chapter 4)
- a return on assets – an appropriate return on investments made in assets to provide bulk water services, reflecting our assessment of capital expenditure, the value of GAWB's regulatory asset base (RAB), and a rate of return taking into account matters specified in the referral notice (Chapters 5 to 7)
- a return of assets (depreciation) – the cost of capital investments over the useful life of the assets (Chapter 6)
- a return on working capital – the cost of holding capital to allow GAWB to manage the timing difference between the outflow of cash associated with current liabilities and the receipt of cash associated with current assets (Chapter 7)
- tax – an allowance to enable GAWB to meet its tax equivalence obligations (Chapter 7).

Our position on allowable costs (Table 32) reflects our findings on each cost component in earlier chapters for each year of the price monitoring period.

[252] Referral notice, section F, p 3.

Table 32: QCA findings on allowable costs ($ million, nominal)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Opex	43.93	43.69	46.46	48.88	52.91	235.88
Return on capital	60.90	72.83	86.02	90.84	92.16	402.75
Return of capital (depreciation)[a]	0.35	4.64	6.72	9.19	10.79	31.69
Tax allowance	2.22	3.54	4.25	4.63	4.81	19.46
Working capital allowance	0.74	0.74	0.74	0.74	0.74	3.70
Allowable costs	**108.14**	**125.45**	**144.18**	**154.29**	**161.41**	**693.47**

a Depreciation is net of indexation.
Note: Totals may not add due to rounding.

8.2 Revenue adjustments

To determine allowable revenue to be recovered from appropriate prices, we need to identify adjustments to account for:

- revenue received, or expected to be received, from sources other than prices (revenue offsets)
- accelerated depreciation associated with disposal of assets from the previous monitoring period (to ensure GAWB receives the outstanding value of investments that are written off, net of proceeds of sales).

GAWB said that these adjustments are made to take account of differences between forecasts used to set revenues for the current pricing period and actual revenue collected from customers during the period. The adjustments are offset against the calculation of allowable revenue for the next pricing period.[253]

The purpose of these adjustments is to ensure that GAWB's prices do not over- or under-recover its allowable revenue required to provide bulk water services.[254]

Revenue offsets

GAWB receives revenue from several sources, including 'other revenue' expected to be generated from non-bulk water activities during the 2025–30 monitoring period and 'ancillary charges revenue' that it received during the 2020–25 monitoring period.

[253] GAWB, sub 1, p 104.
[254] Referral notice, section F, Appropriate prices and Allowable revenue, p 3.

Other revenue

GAWB has provided forecasts of revenue it expects to receive from grants, leases, agistment and hatchery sales during the 2025–30 price monitoring period.[255] GAWB has forecast this revenue using the actual income received in its 2022–23 base year, with an assumed trend applied across the forecast period. Grant revenues are forecast to remain constant over the pricing period, with other income increasing by forecast inflation.

Based on the information GAWB provided, our position is that GAWB's forecasts for other revenues are reasonable. Using the base year revenues is a sound basis for forecasting and avoids the need for us to undertake a review of lease and agistment agreements.

Ancillary charges revenue (adjustments from the prior period)

GAWB's proposed revenue adjustments account for additional revenue received from various ancillary charges received during the 2020–25 period.[256] This includes any revenue from over-run charges, short-term contract length premiums, and capacity preservation fees (if not rebated to customers).

GAWB's submission provided actual data for 2020–21 to 2022–23 and GAWB said it would update this for 2023–24 data in response to our draft report[257], although subsequently committed to updating this prior to setting its prices.[258] Over-run charges are the primary source of this revenue ($1.53 million), which GAWB has rolled forward at 4.74% per annum (its 2020–25 rate of return), for a total revenue offset of $1.86 million.[259]

GAWB confirmed that is has chosen to not levy short-term contract length premiums since 2021–22 but noted its intention to retain the ability to differentiate prices based on contract length.[260]

While GAWB has levied a capacity preservation fee to some customers in 2023–24 (and it is expected this will continue), this is expected to be rebated directly to each relevant customer. As such, no amounts are expected to be captured as a prior-period adjustment at this time.

Based on the information GAWB has provided – including its revenue calculations – our position is that GAWB's adjustments for ancillary charges revenue (from prior periods) are reasonable. We appreciate GAWB is using actual data to establish its prior period adjustments and understand updates are required for 2023–24 data.

GAWB said that it will further update the prior-period adjustments for actual data up to the end of May 2025, before it sets prices for 2025–26.[261]

[255] GAWB, response to RFI 35.
[256] GAWB's proposed application of these ancillary charges during the 2025–30 monitoring period is discussed in section 9.5.
[257] GAWB, sub 1, p 104.
[258] GAWB, sub 27, p 33.
[259] GAWB, sub 1, pp 105–106.
[260] GAWB, sub 1, p 106.
[261] GAWB, sub 1, p 104.

Accelerated depreciation associated with disposal of assets (prior period adjustment)

Revenue that is yet to be recovered from assets that are written off before the 2025–30 monitoring period but still have residual value in GAWB's regulated asset base, is treated as accelerated depreciation net of proceeds of sales.

GAWB identified assets that are no longer required for the provision of its services, which are subject to disposal and removed from its regulated asset base (usually as part of asset upgrades or replacements). As these assets may have residual value in the regulated asset base, GAWB may not have recovered its full return of capital for these assets. In recognition of this, GAWB proposed a revenue adjustment to accelerate the recovery of this remaining depreciation, net of any sale proceeds.[262]

GAWB has provided information accounting for regulatory asset base disposals of $3.90 million during the 2020–25 period, with a net value of $1.29 million after sale proceeds. GAWB proposed to recover this from its prices over the 2025–30 monitoring period.

GAWB has committed to updating the values of accelerated deprecation ahead of its negotiated price setting processes for the monitoring period.[263]

Based on the information GAWB provided – including its regulatory asset base and revenue calculations – our position is that GAWB's accelerated depreciation, net of proceeds of sales, are reasonable.

QCA findings on revenue adjustments

We have assessed GAWB's proposed revenue adjustments and consider them appropriate. Each revenue adjustment for the monitoring period is outlined in Table 33.

Table 33: Revenue adjustments to allowable revenue, ($ million, nominal)

	2025-26	2026-27	2027-28	2028-29	2029-30
Revenue offsets	(2.75)	(0.92)	(0.94)	(0.96)	(0.98)
• **Other revenue**	(0.90)	(0.92)	(0.94)	(0.96)	(0.98)
• **Ancillary charges revenue**	(1.86)	–	–	–	–
Accelerated depreciation	1.29	–	–	–	–
Revenue adjustments	**(1.46)**	**(0.92)**	**(0.94)**	**(0.96)**	**(0.98)**

Note: Totals may not add due to rounding.
These revenue adjustments are subsequently allocated to relevant zones when we determine allowable revenue (section 8.3).

[262] GAWB, sub 1, pp 108–110.
[263] GAWB, sub 27, p 32.

8.3 Allowable revenue

Our findings on the costs to be recovered from bulk water customers (after applying the cost and revenue offsets) is provided in Table 34.

Table 34: QCA findings of GAWB's allowable revenue, ($ million, nominal)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Allowable costs	108.14	125.45	144.18	154.29	161.41	693.47
Revenue adjustments	(1.46)	(0.92)	(0.94)	(0.96)	(0.98)	(5.24)
Allowable revenue	**106.68**	**124.53**	**143.25**	**153.33**	**160.43**	**688.23**

Based on our assessment of GAWB's proposed allowable costs and revenue adjustments, this would provide GAWB $688.23 million of allowable revenue for the 2025–30 price monitoring period. This is $50.06 million (6.8%) lower than the amount submitted by GAWB.

9 GAWB's pricing practices

GAWB's pricing practices refer to the methods applied to determine its prices that recover its allowable revenue, given forecasts of demand. GAWB's proposed prices reflect zonal pricing, allowing for customers' prices to be differentiated based on their location within the delivery network and the infrastructure used to supply them. GAWB also proposes maintaining various ancillary charges.

The referral notice directs us to consider the appropriate prices for the monitoring period and then monitor how they compare to GAWB's actual prices charged in a mid-term review.[264] In calculating forecast appropriate prices, we have applied GAWB's proposed pricing practices.

Our investigation monitors GAWB's pricing practices, but it does not make determinations regarding them. Although the referral notice does not direct us to investigate GAWB's pricing practices in this price monitoring investigation[265], we have provided some discussion for the purposes of transparency for customers and interested parties, particularly where GAWB is proposing changes to its existing arrangements.

Ultimately, GAWB determines its tariff structures and pricing arrangements through commercial negotiation with its customers.

9.1 Overview of GAWB's pricing approach

For purpose of pricing, GAWB establishes pricing zones, allocates allowable revenue to each zone, and determines prices based on forecast demand for each zone.

GAWB intends to continue with its existing pricing approach, where:

- prices are developed separately for storage, delivery and administration services
  - all customers pay the same storage price and an administration price based on the quality of water received (treated or raw); and the sum of delivery charges for each pricing zone that the water flows through to reach the customer delivery point[266]
  - fixed and variable components are applied for storage and delivery[267]
- ancillary charges and pricing mechanisms may also apply in addition to the above prices.

GAWB's pricing approach for the 2025–30 price monitoring period involves:

- establishing zones for pricing proposes (section 9.2)
- allocating allowable costs and revenue adjustments to zones (section 9.3)
- developing prices for each zone (section 9.4)
- ancillary charges (section 9.5)

[264] Referral notice, sections B1.1 and C1.1–1.2.
[265] Under s 23 of the QCA Act, we may be directed to undertake an investigation about the pricing practices of monopoly business activities.
[266] This depends on a customer's location on GAWB's network and which specific zones are traversed in order to supply water to each customer. For example, a customer taking supply from a pricing zone at the end of the network will be charged for more zones than a customer taking supply that goes through less zones.
[267] The majority of GAWB's allowable revenue (around 96%) is recovered through the fixed components.

- other pricing mechanisms (section 9.6).

Box 2: GAWB's approach to pricing

GAWB uses a zonal pricing framework that apportions its allowable revenue to distinct, location-based pricing zones. Zones are established for storage, distribution areas (raw and treated) and corporate costs.

Based on the forecast demand entering a zone and its allowable costs, GAWB calculates a zone's price required to recover its allowable revenue (net of revenue adjustments).

Customers are charged based on the zones their water traverses. Effectively, each customer pays a toll (zonal price) for each zone.

The customer pays the sum of the tolls (zonal price) from each zone that the water passes through to reach their connection – referred to as the 'rolled-up' price.

This segmentation allows for locational marginal pricing, using cost-reflective price signals.

While GAWB's pricing structure has many aspects, we note simplification will not reduce allowable costs. Rather, it would simply re-allocate those costs in a different manner. Previously we have assessed GAWB's tariff structure and found it to be appropriate.[268]

9.2 GAWB's pricing zones

GAWB is proposing 25 pricing zones for the 2025–30 price monitoring period, adding four new pricing zones in the northernmost section of the network where recent – and expected – customer growth is driving network augmentation and expansion.[269] All other pricing zones are consistent with those applying during the current monitoring period.

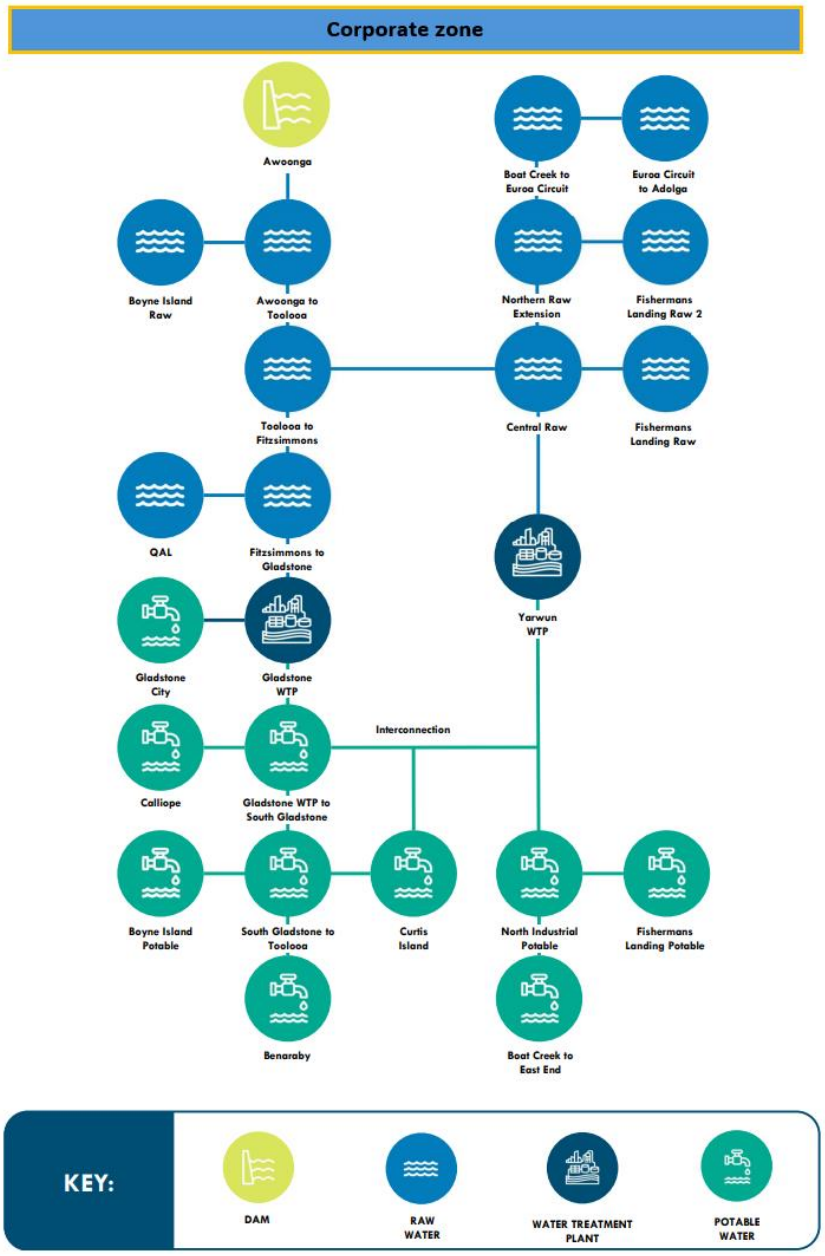
GAWB's assets for the provision of bulk water include Awoonga Dam, pump stations, delivery pipelines, water treatment plants, storage facilities, land and buildings. GAWB maintains three categories of pricing zones:

- storage (Awoonga Dam zone)
- delivery network zones
  - location-based distribution zones (raw and treated)
  - water treatment plants zones
- corporate zone (administration).

[268] QCA, *Gladstone Area Water Board price monitoring 2020–25 Part A: Overview*, final report, May 2020, pp 118–123.
[269] The prudency and efficiency of expansion and augmentation capex associated with these new zones is discussed in Chapter 4 and Appendix E.

Figure 14 shows GAWB's delivery network and pricing zones.[270]

Figure 14: GAWB's pricing zones: storage, delivery and corporate



9.3 Allocation of allowable cost and revenue to zones

GAWB's allowable costs and revenue adjustments (section 8.1) relate to the pricing zones in which they are incurred or directly attributed. Prices are set based on the allowable revenue and forecast demand for each zone.

GAWB allocates its assets to pricing zones according to where the benefit of the asset is realised. GAWB then allocates the allowable costs from each asset (return on capital, depreciation and tax

[270] GAWB also maintains a corporate pricing zone that is used to allocate indirect costs and overheads.

allowances) to that zone, with tax allowances allocated based on the relative value of each pricing zone's asset base.

GAWB's assets are allocated to zones based on their location in the network, unless there is a specific and compelling reason otherwise.

Table 35 outlines the various allocations of allowable costs and revenue adjustments, which then provides for the allowable revenues to be recovered from each zone. This process provides for the allowable revenues for each zone that GAWB can seek to recover from its prices during the monitoring period.

Table 35: Allocation of GAWB's allowable costs and revenue adjustments

	Allocation method
Allocation of allowable costs	
Return on capital and depreciation	Allocated to pricing zones according to where the benefit of the asset is realised, based on the zones it has established. GAWB then allocates the allowable costs from each asset (return on capital and depreciation).
Tax allowance	Allocated based on the relative value of each pricing zone's asset base.
Operating costs	GAWB used the percentage allocations we accepted in our 2020-25 review to allocate the costs from its base year, 2022–23, to each zone (business unit approach). This enabled the implementation of a base-step-trend operating cost on a consistent basis. Step changes were then allocated to zones accordingly, except hatchery and tariff review that were allocated to the Awoonga pricing zone. Allocations to new zones included forecast electricity usage for that zone.
Working capital	Allocated to GAWB's corporate zone.
Allocation of revenue adjustments	
Other revenue	Allocated to Awoonga or corporate zones.
Ancillary charges	Allocated to the pricing zone of the customer from which it was received.
Accelerated depreciation	Allocated to the pricing zone where the asset was located.

Source: QCA analysis.

9.3.1 Consistent cost recovery of reliability investment

GAWB's substantial hydrogen augmentation program includes a small number of related upstream investments, designed to maintain system resilience and reliability in light of the new expected downstream demand. Specifically, these projects are:

- offline storage (OLS) pump station and storage upgrades
- Awoonga Dam pump station – pump redundancy improvements.

These assets are located in the upstream zones of the GAWB network, at Awoonga Dam or just downstream of it. The existing assets being upgraded are allocated to pricing zones that reflect their physical location, consistent with GAWB's zonal pricing framework.[271]

However, GAWB has proposed that the cost of these two upgrades be allocated to the new 'Northern Raw Extension' pricing zone, which will be at in the northern reaches of the augmented GAWB network.[272] The effect of this allocation is that the costs of the investments will be borne solely by new customers located in the Northern Raw Extension zone and new zones downstream of it.[273] These customers are predominantly prospective hydrogen facilities.

GAWB's pricing proposal did not comment on the rationale for allocating these costs in this way. We note that:

- the upgrades to both facilities will occur in the same physical location as the original assets. GAWB's zonal pricing framework therefore would allocate the cost of upgrades to the same pricing zones as the original assets, by default
- notwithstanding the physical location of the assets, the proposed upgrades are designed to maintain system-wide redundancy and resilience. These projects represent investment in common infrastructure that is driven by system-wide demand, to maintain reliability standards for all downstream customers, new and existing.

In response to our draft report, GAWB said that the need for these investments has been triggered by new water demand from hydrogen customers. In the absence of that demand, these upgrades would not be required.[274] GAWB argued that it would not be economically efficient or equitable for existing customers to bear the costs of upgrades they have not caused.[275]

Historically, the QCA has endorsed the general principle that GAWB's common infrastructure costs should be allocated to all existing and future new customers.[276] GAWB has previously supported this position.[277] We intend to continue to monitor GAWB's prices on this basis. However, adopting this allocation approach does not preclude GAWB from applying commercial arrangements to manage infrastructure risks associated with new demand, in the form of capital contributions, access charges or similar.[278]

Consistent with our draft report we have allocated the costs of these two projects to the 'Awoonga to Toolooa' and 'Awoonga' pricing zones. This is consistent with GAWB's established zonal pricing approach and principles for allocating common infrastructure costs. We consider this is appropriate for our price monitoring exercise. Nonetheless, it is a matter for GAWB to determine the most appropriate allocation of these costs in the circumstances. Should GAWB depart from its established zonal pricing approach, we would expect it to transparently explain the rationale for doing so to its customers, during the price negotiation process. This would be identified in our mid-term price monitoring review.

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[271] The OLS is allocated to the Awoonga–Toolooa pricing zone, and the Awoonga Dam pump station is allocated to the Awoonga zone.
[272] GAWB, response to RFI 7.
[273] Specifically, Boat Creek to Euroa Circuit, Euroa Circuit to Aldoga, and Fisherman's Landing Raw 2.
[274] GAWB, sub 27, pp 28–29.
[275] GAWB, sub 27, 28.
[276] QCA, *Gladstone Area Water Board Investigation of Pricing Practices*, final report, June 2010, pp 44–45.
[277] GAWB, *Response to Draft Report Investigation of Pricing Practices*, May 2010, pp 29–30; GAWB, *Commercial Framework and Pricing Principles, for the 2010 price review*, submission to the QCA, September 2009, p 124.
[278] QCA, *Gladstone Area Water Board Investigation of Pricing Practices*, final report, June 2010, p 45.

9.4 GAWB's prices

GAWB proposes to continue with its three distinct tariff structures based on the function of the pricing zone – administration, storage, and delivery – as outlined in Table 36.[279]

Table 36: GAWB's tariffs

Pricing zone	Charge	Demand
Awoonga (storage)	Storage access	Contracted water reservation
	Storage volumetric	Metered volume
Corporate (administration)	Storage	Contracted water reservation
	Raw	Contracted water reservation
	Treated	Contracted water reservation
Distribution network (delivery)	Delivery access	Reserved maximum daily quantity (MDQ)
	Delivery volumetric	Metered volume
	Delivery MDQ volumetric	Based on forecast aggregate MDQ

Note: 1. GAWB's submission outlines further detail on each of its proposed tariff components. 2. We note that GAWB is proposing to set its delivery metered MDQ volumetric charge to zero.
Source: GAWB, sub 1, pp 117, 121.

9.5 Ancillary charges

In addition to the prices GAWB charges to recover its allowable revenue, GAWB also proposed to continue levying various ancillary charges where appropriate (over-run charges; short-term contract length premiums; and capacity preservation fees).[280]

GAWB proposed to continue its practice of returning additional revenue generated from ancillary charges to the pricing zone from which it originated in future price monitoring periods.[281] Moreover, any additional revenue would also be excluded from any future revenue cap adjustments, except for over-run charges. Where additional demand arising from an over-run has caused a material increase in GAWB's costs, the revenue cap adjustment would be net of any efficient increase in costs.[282]

For the 2025–30 monitoring period, GAWB proposed to continue applying the ancillary charges outlined in Table 37.[283]

[279] GAWB, sub 1, p 117.
[280] GAWB, sub 1, p 117–118.
[281] GAWB, sub 1, p 117.
[282] GAWB, sub 1, p 118.
[283] GAWB, sub 1, p 118.

Table 37: GAWB's proposed ancillary charges

Ancillary charge	Description	Implications for future allowable revenues
Over-run charges	Applied when customers exceed their contracted annual volumes and MDQs. Levied on delivery, storage and administration charges, according to the percentage by which the customer's actual usage exceeds specific thresholds (reserved volumes and MDQ).	GAWB proposes that any additional revenue that is net of any (efficient) increase in costs that is caused by the additional demand, would be returned to customers in future price monitoring periods.
Contract length premium	A sliding scale discount for contact length, with the highest rates applied to the shortest contracts (two years or less) and the lowest rates to the longest contracts (15 to 20 years).	Any extra revenue generated from these premiums is returned to customers after deducting any related costs incurred by GAWB.
Capacity preservation fee	To be applied for the period that GAWB holds supply capacity for a customer, until such time as a water supply contract becomes unconditional and the ultimate reservation amount under the contract is reached.	When the customer commences paying for water, the revenue collected is offset against the customer's storage charges payable under its contract. If the reserved capacity is reduced or the customer does not enter a water supply contract, the revenue is returned to all customers at the start of the subsequent monitoring period.

Source: GAWB, sub 1, pp 117–118.

9.6 Other pricing mechanisms

9.6.1 Review triggers

It is commonplace for businesses to incorporate 'review triggers' or cost pass-through arrangements within commercial arrangements. These arrangements allow a business to potentially increase prices to recover unforeseen costs. Triggers are typically linked to specific, predefined circumstances or events that lead to a material and uncontrollable change in a business's costs or revenues.

GAWB proposal

GAWB said it wanted to maintain its review triggers for the 2025–30 pricing period, namely[284]:

- force majeure events
- drought response measures.

[284] GAWB, sub 1, p 129.

We understand that GAWB has not previously triggered a review event, and there is no precedent for us to apply in terms of process.

GAWB noted our previous review findings where we suggested that there should be a materiality threshold for review events and that we should have an approval role in assessing such events.[285]

Responding to this, GAWB outlined a potential criteria and assessment process for assessing a review trigger event. GAWB envisaged that the process would be similar to a price monitoring investigation, while reflecting the limited scope of a review trigger event.[286] GAWB also proposed that materiality of the incremental costs be subject to a qualitative assessment and specific criteria, rather than a quantitative materiality threshold.[287]

GAWB noted that our price monitoring investigation is informative, rather than deterministic.[288] GAWB acknowledged that its board is responsible for setting prices, and any updates to prices during the regulatory period are governed by the terms of its commercial arrangements with customers.[289]

QCA analysis and assessment

The QCA has no enduring role for ongoing administration of GAWB's pricing arrangements during a price monitoring period.

In a price monitoring setting, it would not be appropriate for us to have a role in administering review events, the trigger thresholds that apply, or seek to establish a role for us in any future assessment process unless these matters are explicitly contemplated within a government referral notice.

Similarly, the current – and previous – ministerial referral notices do not incorporate any intra-period administrative roles for the QCA, beyond a mid-term report.[290] The scope of the mid-term report itself is narrow. It does not contemplate any role for us to assess claims for price adjustments arising from review trigger events.

Should government require us to perform a role relating to intra-period review events, this responsibility would likely need to be conferred through a ministerial direction or other statutory obligation.

Nonetheless, we understand that GAWB may want to foreshadow its review events ahead of the monitoring period so this is understood by customers when we undertake our midterm monitoring exercise. On this basis, we would welcome submissions from GAWB and its customers providing information on the appropriateness of GAWB's review events and processes that exclude us from their assessment (unless conferred under a government direction).

9.6.2 Revenue cap deadband

GAWB currently operates a revenue cap with a plus or minus 10% deadband for variations relative to its annual revenue requirement. If the deadband is breached in any year, an adjustment is made

[285] GAWB, sub 1, p 129–130.
[286] GAWB, sub 1, p 130.
[287] GAWB, sub 1, pp 129–130.
[288] GAWB, sub 1, p 130.
[289] GAWB, sub 1, p 130.
[290] Referral notice.

at the start of the subsequent price monitoring period for any additional, or foregone, revenue beyond the 10% deadband. As such, GAWB bears up to 10% of any annual revenue variations relative to its annual requirement.[291]

GAWB proposal

For the 2025–30 price monitoring period, GAWB proposes to reduce the revenue deadbands from 10% to 5%. GAWB considered that the underlying conditions that supported the use of a deadband are no longer prevalent because the capacity of Awoonga Dam is now fully allocated.[292]

GAWB said that while it is willing to retain some exposure to demand risk, it proposes narrowing the deadband to plus or minus 5% of its annual revenue requirement to provide an appropriate balance between the financial risk to GAWB and price shocks to customers.[293]

QCA analysis and assessment

It is not clear that the deadband is serving any meaningful purpose, given that:

- the majority of GAWB's allowable revenue (around 95%) is recovered through the fixed smoothed tariff components (section 10.1)
- all available capacity of Awoonga Dam has been allotted or contracted[294] (Chapter 3).

Moreover, we note that even after the failure of CS Energy's Callide C power plant in May 2021, after which demand for raw water fell by nearly [redacted], the revenue impact was not sufficient to exceed the deadband and trigger a revenue adjustment for the 2020–25 monitoring period.

On this basis, we have no objections to GAWB's proposal to reduce the deadband to 5%.

We are also open to considering meaningful proposals to address more pressing concerns, such as a capital expenditure true-up to address variability in forecast capital expenditure (see section 9.6.3).

There could also be scope for GAWB to consider a simpler revenue-cap mechanism, to enable fixed cost recovery[295] and address demand uncertainty. This could include a hybrid revenue-cap-style framework (potentially with no deadbands), that could be easily used for our future price monitoring purposes.

9.6.3 Capital expenditure true-up

Given uncertainty in future demand and capital expenditure arising from the emerging hydrogen industry, for our price monitoring purposes we consider a limited ex post revenue adjustment for capital charges should be applied.

GAWB's revenue modelling provides for a forecast return on, and return of, capital from investments expected to capitalise within the forecast price monitoring period. This is based on the forecast

[291] GAWB, sub 1, pp 125–126.
[292] GAWB, sub 1, pp 126–128.
[293] GAWB, sub 1, p 127.
[294] GAWB, sub 1, p 128. Note that the full yield (water allocation) of Awoonga Dam is 78,000 ML but it cannot be fully contracted due to storage and network losses and environmental discharge requirements, among other factors.
[295] Application of a revenue cap could exclude variable costs, as variable tariffs are cost reflective, and therefore vary with demand. Any arrangement should be developed after consideration of the allocation of demand risk, which GAWB is proposing to retain a level of.

commissioning dates, which is standard practice. However, GAWB's pricing approach currently does not include a backward-looking adjustment to 'true-up' the revenue associated with actual outturn capital expenditure. That is, if the forecast investments do not go ahead, or are delayed outside of the monitoring period, GAWB retains any forecast return on and return of capital derived from those capital forecasts. This is a windfall revenue gain to GAWB. The potential gain is tempered by potential for foregone revenue associated with capital projects that were delivered but not included the forecast.

However, in GAWB's current circumstances, we consider the scale of the augmentation program, and general doubts surrounding its deliverability, suggest a limited ex post revenue true-up is an appropriate means for us to undertake any future price monitoring activities.

For our price monitoring purposes, this true-up may include an ex post calculation of any material windfall gain (or loss) in revenues attributable to capital charges derived from capex not delivered (or delayed) during the 2025–30 period. Any resulting revenue loss or gain would be carried forward to adjust revenues and prices in the subsequent pricing period. This complements the existing roll-forward of the regulatory asset base, which includes a backward-looking adjustment that ensures only actual outturn capex is added to the asset base. GAWB supported a revenue true-up for capex.[296]

This approach is pragmatic for our price monitoring activities, given the uncertainty surrounding the scope, efficient cost and timing of the hydrogen augmentation program. It also addresses our broader concerns surrounding GAWB's ability to deliver its 2025–30 capital program more generally.

Ultimately, it is for GAWB and its customers to decide whether such an approach should be used in its commercial pricing framework. Should GAWB seek to implement such an arrangement, the approach would go some way to ensuring customers do not bear the cost of investments that do not proceed, and ensuring GAWB is adequately funded to deliver important investments.

9.7 Prudent discounts

GAWB has previously provided discounts to specific customers in limited and targeted situations. For example, customers that are receiving treated water but only require raw water may be allowed a discount for the value of the water treatment costs. This is not a controversial pricing practice and GAWB does not financially benefit from prudent discounts.[297]

We understand that during the monitoring period there may be cases where raw water will now be accessible due to the network augmentations. As noted in Chapter 3, there is substantial uncertainty surrounding new hydrogen-related demand and the scope of augmentations needed during 2025–30 to service that demand. At the time of preparing this report, GAWB was assessing the implications of changing demand expectations and was yet to confirm the implications for prudent discounts during the 2025–30 period. GAWB said that it will confidentially advise the QCA of any prudent discounts that remain in place as part of the mid-term review.[298]

[296] GAWB, sub 27, p 20.
[297] GAWB does not receive any tax benefit from prudent discounts.
[298] GAWB, sub 27, p. 29.

9.8 QCA conclusions

We have not been asked to make recommendations on GAWB's pricing and commercial practices in this price monitoring review.

As a general observation, we consider GAWB's pricing and commercial practices should be sufficiently flexible to accommodate uncertain and growing demand, particularly arising from the emerging hydrogen industry. We also understand this demand will be ramping up over time.

For the purposes of our monitoring framework, we propose to adopt a limited ex post revenue true-up to accommodate revenue and pricing uncertainty arising from GAWB's substantial capital program.

10 Appropriate prices

In this chapter, we set out our findings on GAWB's appropriate prices. The referral requires us to determine appropriate prices that are consistent with GAWB's allowable revenue (Chapter 8) and forecast demand (Chapter 3).[299]

We also provide information on the price impacts (section 10.4).

10.1 Allowable revenue by zone

To determine appropriate prices we need to allocate allowable costs and revenue adjustments to establish the allowable revenue for each zone. This allocation is outlined in Table 38.

Table 38: QCA allowable revenue by zone ($ million, nominal)

Pricing zone	2025-26	2026-27	2027-28	2028-29	2029-30
Storage					
Awoonga	38.06	42.34	45.09	47.35	49.37
Admin					
Corporate	7.79	8.49	9.19	9.90	11.39
Delivery					
Awoonga to Toolooa	14.85	16.95	21.03	24.86	25.66
Toolooa to Fitzsimmons	4.09	4.09	4.34	4.52	4.74
Boyne Raw	0.42	0.85	1.16	1.18	1.20
Central Raw	2.00	2.14	2.17	2.21	2.25
Fitzsimmons to Gladstone	0.80	0.81	0.83	0.86	0.89
QAL	0.99	1.39	1.78	1.81	1.77
Fishermans Landing Raw	0.24	0.26	0.26	0.27	0.49
Gladstone WTP	13.70	12.58	13.41	13.97	14.57
Gladstone City	0.28	0.27	0.28	0.29	0.29
Gladstone WTP to South Gladstone	3.22	3.36	3.49	3.64	3.74
Calliope	1.29	1.38	1.43	1.46	1.49
South Gladstone to Toolooa	0.79	0.81	0.83	0.85	1.34
Boyne Potable	1.02	1.32	1.58	1.62	1.65

[299] Referral notice.

Pricing zone	2025-26	2026-27	2027-28	2028-29	2029-30
Benaraby	0.57	0.59	0.61	0.67	0.77
Yarwun WTP	2.17	2.18	2.38	2.58	2.66
North Industrial Potable	1.28	1.36	1.37	1.35	1.37
Fishermans Landing Potable	0.05	0.05	0.06	0.06	0.06
Boat Creek to East End	1.93	3.22	3.29	3.36	3.47
Boat Creek to Euroa Circuit	1.36	4.19	5.68	5.87	6.10
Euroa Circuit to Aldoga	0.04	1.10	2.24	2.29	2.34
Fishermans Landing Raw 2	0.02	0.03	0.74	1.51	1.54
Northern Raw Extension	0.16	4.77	9.88	10.71	11.15
Curtis Island	9.56	9.99	10.11	10.15	10.13
Total allowable revenue	106.68	124.53	143.25	153.33	160.43

Source: QCA analysis.

10.2 Smoothing

After establishing the allowable revenue for each zone, we are then required by the referral to generate smoothed prices for each zone.[300] This means prices increase by forecast CPI growth during the period, to recover GAWB's allowable revenue on a net present value basis.

10.3 Appropriate prices

The referral notice directs us to consider the appropriate prices for the monitoring period and then monitor how they compare to actual prices charged in a mid-term review.[301] In calculating forecast appropriate prices, we have applied GAWB's pricing practices as outlined in Chapter 9. Our estimates of appropriate prices are presented in Table 39.

Table 39: QCA position on GAWB's appropriate prices

Pricing zone	Storage	Storage	Delivery	Delivery	Admin
	Storage access ($/contracted ML)	Storage volumetric ($/metered ML)	Delivery access ($/reserved MDQ)	Delivery volumetric ($/metered ML)	($/contracted ML)
Awoonga	640.49	2.21	–	–	51.62
Awoonga to Toolooa	640.49	2.21	10,675.48	51.31	154.86
Toolooa to Fitzsimmons	640.49	2.21	13,244.46	51.31	154.86

[300] The referral notice definition of 'appropriate prices' requires GAWB's prices to be smoothed over the price monitoring period. Referral notice, section F- Appropriate prices.
[301] Referral notice, B(1.1) and C(1.1-2).

Pricing zone	Storage	Storage	Delivery	Delivery	Admin
Boyne Raw	640.49	2.21	35,886.56	51.31	154.86
Central Raw	640.49	2.21	16,376.92	51.31	154.86
Fitzsimmons to Gladstone	640.49	2.21	14,077.54	51.31	154.86
QAL	640.49	2.21	17,523.72	51.31	154.86
Fishermans Landing Raw	640.49	2.21	22,888.44	52.07	154.86
Gladstone WTP	640.49	2.21	35,868.44	174.24	361.35
Gladstone City	640.49	2.21	39,987.25	174.24	361.35
Gladstone WTP to South Gladstone	640.49	2.21	42,936.17	174.31	361.35
Calliope	640.49	2.21	63,634.02	198.29	361.35
South Gladstone to Toolooa	640.49	2.21	52,790.66	179.25	361.35
Boyne Potable	640.49	2.21	71,560.92	179.68	361.35
Benaraby	640.49	2.21	92,700.75	215.90	361.35
Yarwun WTP	640.49	2.21	45,675.41	162.94	361.35
North Industrial Potable	640.49	2.21	56,452.33	166.69	361.35
Fishermans Landing Potable	640.49	2.21	101,723.18	166.69	361.35
Boat Creek to East End	640.49	2.21	190,926.95	319.28	361.35
Boat Creek to Euroa Circuit	640.49	2.21	362,776.47	373.34	154.86
Euroa Circuit to Aldoga	640.49	2.21	458,555.39	373.34	154.86
Fishermans Landing Raw 2	640.49	2.21	219,220.49	301.16	154.86
Northern Raw Extension	640.49	2.21	178,302.00	301.16	154.86
Curtis Island	640.49	2.21	196,092.71	483.39	361.35

Note: Delivery access charges are shown as monthly amounts. The annual price per reserved MDQ is 12 times the monthly amount.
Source: QCA analysis.

Table 40 compares our estimated appropriate prices with those submitted by GAWB, on the same comparative basis as outlined in GAWB's submission.[302] Our estimated average prices are lower than those proposed by GAWB in all zones.

Table 40: Average price per contracted ML for 2025-26

Pricing zone	GAWB proposal	QCA	Difference (%)
Awoonga	748.08	693.93	(7)
Awoonga to Toolooa	1,296.02	1,282.82	(1)
Toolooa to Fitzsimmons	1,408.39	1,388.87	(1)
Boyne Raw	2,505.98	2,402.38	(4)
Central Raw	1,539.77	1,509.37	(2)
Fitzsimmons to Gladstone	1,446.09	1,425.09	(1)
QAL	1,597.28	1,566.57	(2)
Fisherman's Landing Raw	2,101.33	2,029.95	(3)
Gladstone WTP	2,818.96	2,738.52	(3)
Gladstone City	2,985.16	2,897.89	(3)
Gladstone WTP to South Gladstone	3,170.16	3,068.91	(3)
Calliope	3,969.95	3,811.71	(4)
South Gladstone to Toolooa	3,615.15	3,487.89	(4)
Boyne Potable	4,449.17	4,259.59	(4)
Benaraby	5,673.22	5,417.08	(5)
Yarwun WTP	3,884.71	3,739.18	(4)
North Industrial Potable	5,041.86	4,285.81	(15)
Fisherman's Landing Potable	9,369.82	8,310.19	(11)
Boat Creek to East End	22,284.28	20,137.82	(10)
Curtis Island	25,104.39	23,798.78	(5)
Boat Creek to Euroa Circuit	17,601.54	13,215.86	(25)
Euroa Circuit to Aldoga	21,049.35	16,364.76	(22)
Fisherman's Landing Raw 2	12,305.76	8,402.16	(32)
Northern Raw Extension	10,839.96	7,056.89	(35)

Sources: GAWB, sub 1, p 123; QCA analysis.

[302] GAWB, sub 1, pp 121–122.

Table 41compares our findings with GAWB's current prices to show the impact on customers, using the same comparative basis as outlined in GAWB's submission.[303] Our estimates of appropriate prices are higher than those that currently applied by GAWB, except for the North Industrial Potable zone where our estimated average price is marginally lower than GAWB's current average price. Prices in all other zones are forecast to increase by between 7% and 83%. We have considered the drivers of these increases in section 10.4.

Table 41: Average price comparison (2025–26 dollars)

Pricing zone	Current	QCA	Change (%)
Awoonga	527.22	693.93	32%
Awoonga to Toolooa	1,005.71	1,282.82	28%
Toolooa to Fitzsimmons	1,098.58	1,388.87	26%
Boyne Raw	1,312.59	2,402.38	83%
Central Raw	1,204.54	1,509.37	25%
Fitzsimmons to Gladstone	1,127.82	1,425.09	26%
QAL	1,225.62	1,566.57	28%
Fisherman's Landing Raw	1,626.11	2,029.95	25%
Gladstone WTP	2,289.25	2,738.52	20%
Gladstone City	2,439.23	2,897.89	19%
Gladstone WTP to South Gladstone	2,565.82	3,068.91	20%
Calliope	3,207.29	3,811.71	19%
South Gladstone to Toolooa	3,006.16	3,487.89	16%
Boyne Potable	3,410.28	4,259.59	25%
Benaraby	4,624.75	5,417.08	17%
Yarwun WTP	3,481.47	3,739.18	7%
North Industrial Potable	4,302.31	4,285.81	0%
Fisherman's Landing Potable	7,682.19	8,310.19	8%
Boat Creek to East End	13,707.99	20,137.82	47%
Curtis Island	21,910.86	23,798.78	9%

Note: The current average price is based on the prices applying in the 2024-25 financial year (escalated to 2025–26 dollars).
Sources: GAWB, sub 1. p 123; QCA analysis.

[303] GAWB, sub 1, pp 122-123.

10.4 Price impacts

As part of our price monitoring investigation, stakeholders questioned whether GAWB's proposed prices and pricing zones were equitable and raised concerns with the level of transparency provided by GAWB.[304]

In response to this, we have looked at the price impacts on existing customers. This provides stakeholders with information on how the allocation of GAWB's allowable costs impacts customers across its network.

We expect GAWB will provide more detail and greater transparency to its customers regarding the drivers for price increases for each of its customers.

10.4.1 Drivers of price impacts – existing customers by zone

This analysis has been developed to demonstrate how increases in GAWB's zonal prices are being influenced by the following factors, relative to GAWB's current average prices[305]:

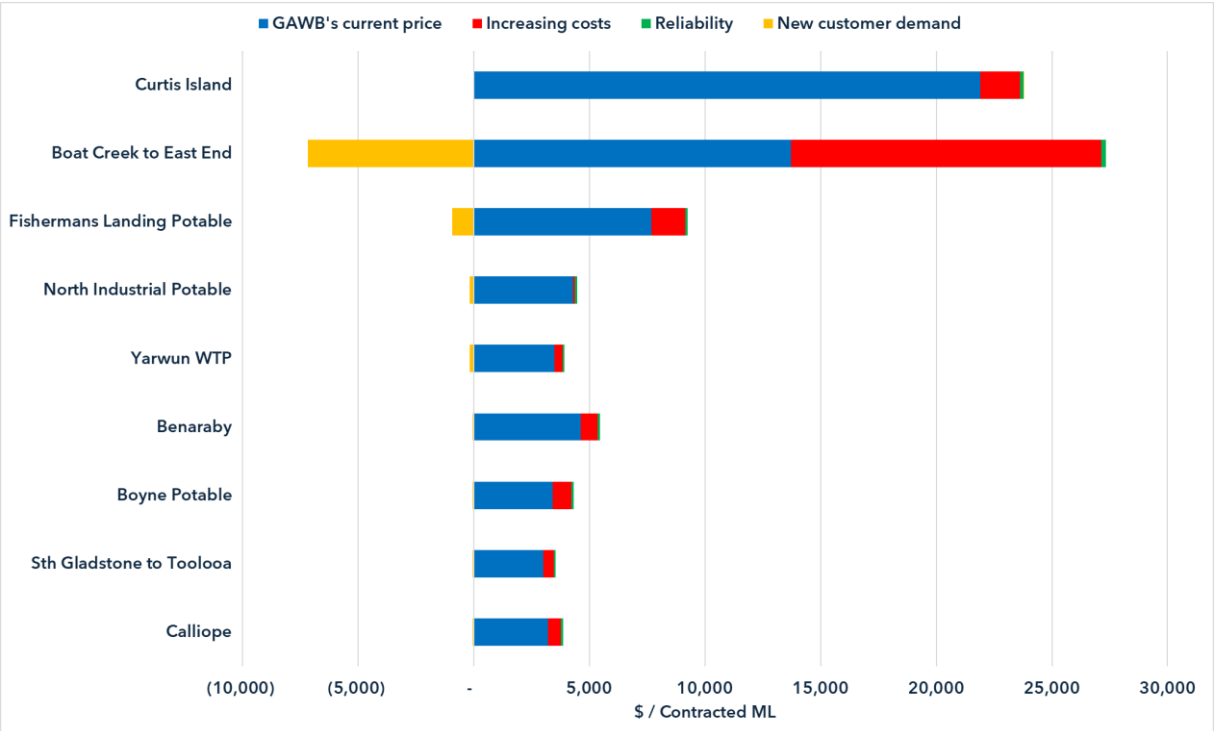
- Increasing costs – the allowable cost increases identified in this report that are not allocated to one of the four new pricing zones. This represents the price impacts if there was no 'new customer demand'.
- Reliability – GAWB proposes to invest to maintain its network reliability (section 9.3.1) in light of increasing forecast demand. We identify this impact on GAWB's existing pricing zones.
- New customer demand – referring to the price impact arising from increases in forecast demand driven by renewable energy and hydrogen projects.

Figure 15 and Figure 16 show the average price in 2025–26 implied by our findings on GAWB's appropriate prices, decomposed into the abovementioned components.[306]

[304] Rio Tinto, sub 18, pp 2–4; Cement Australia, sub 20, p 3; Gladstone Regional Council, sub 21, pp 1, 3; C Bryce MP, sub 22, p 6; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 4; ConocoPhillips, sub 25, p 2; Fortescue, sub 26, pp 2–3.
[305] That is, GAWB's 2024-25 average prices escalated to 2025–26 dollars.
[306] For presentational purposes, we have grouped GAWB's existing pricing zones for average prices up $3,500/ML (Figure 15); and for average prices above $3,500/ML (Figure 16).

Figure 15: Average price per contracted ML for 2025-26, composition by factors

Figure 16: Average price per contracted ML for 2025-26, composition by factors



Source: QCA analysis.

Our analysis shows that:

- prices for existing customers are expected to increase substantially due to GAWB's increasing costs; however, these increases are tempered to an extent by forecast new customer demand, which spreads those higher costs over a larger demand base
- forecast new customer demand is not increasing prices for existing customers. The allowable costs allocated to the new pricing zones (capital expenditure and incremental operating expenditure) are recovered entirely by customers in the new pricing zones, and do not affect prices for existing customers.

Table 42 identifies the impact of each factor, ultimately reflecting the appropriate prices of this report.

Table 42: Average price per contracted ML for 2025-26

Pricing zone	Current	Increasing costs	Reliability	New customer demand	Appropriate price
Awoonga	527.22	170.77	12.35	(16.42)	693.93
Awoonga to Toolooa	1,005.71	223.60	91.56	(38.05)	1,282.82
Toolooa to Fitzsimmons	1,098.58	240.74	91.72	(42.16)	1,388.87
Boyne Raw	1,312.59	1,025.17	95.45	(30.83)	2,402.38
Central Raw	1,204.54	265.84	92.16	(53.17)	1,509.37
Fitzsimmons to Gladstone	1,127.82	247.74	91.72	(42.20)	1,425.09
QAL	1,225.62	290.41	92.08	(41.54)	1,566.57
Fishermans Landing Raw	1,626.11	360.83	93.57	(50.56)	2,029.95
Gladstone WTP	2,289.25	408.92	92.64	(52.29)	2,738.52
Gladstone City	2,439.23	418.06	92.72	(52.13)	2,897.89
Gladstone WTP to South Gladstone	2,565.82	462.09	93.24	(52.24)	3,068.91
Calliope	3,207.29	557.50	95.31	(48.39)	3,811.71
South Gladstone to Toolooa	3,006.16	438.97	93.85	(51.10)	3,487.89
Boyne Potable	3,410.28	799.61	96.28	(46.59)	4,259.59
Benaraby	4,624.75	736.71	98.36	(42.73)	5,417.08
Yarwun WTP	3,481.47	343.93	95.12	(181.34)	3,739.18

Pricing zone	Current	Increasing costs	Reliability	New customer demand	Appropriate price
North Industrial Potable	4,302.31	68.13	96.95	(181.58)	4,285.81
Fishermans Landing Potable	7,682.19	1,448.47	110.09	(930.57)	8,310.19
Boat Creek to East End	13,707.99	13,432.63	182.43	(7,185.23)	20,137.82
Curtis Island	21,910.86	1,714.83	139.47	33.61	23,798.78

Source: QCA analysis.

Glossary

ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
BPIC	Best Practice Industry Conditions
capex	capital expenditure
CPI	consumer price index
DRP	debt risk premium
EEPL	East End pipeline
ERA	Economic Regulation Authority
ESC	Essential Services Commission
ESCOSA	Essential Services Commission of South Australia
FGP	Fitzroy to Gladstone pipeline
GAWB	Gladstone Area Water Board
GL	gigalitre
GRC	Gladstone Regional Council
GWTP	Gladstone water treatment plant
ICRC	Independent Competition and Regulatory Commission
ICT	Information and communications technology
IPART	Independent Pricing and Regulatory Tribunal
IDC	interest during construction
MCA	multi-criteria analysis
MDQ	maximum daily quantity
ML	megalitre
MRP	market risk premium
MYFER	mid-year financial and economic review
NPV	net present value
OLS	offline storage facility
opex	operating cost expenditure
OTTER	Office of the Tasmanian Economic Regulator
price monitoring period	the period 1 July 2025 to 30 June 2030
QCA	Queensland Competition Authority
QCA Act	*Queensland Competition Authority Act 1997*

QTC	Queensland Treasury Corporation
RAB	regulated asset base
RBA	Reserve Bank of Australia
Referral	the amending referral notice and directions issued by the Treasurer and Minister for Trade and Investment on 23 May 2024 under sections 23A and 24 of the QCA Act
reserved demand	the total quantity of water reserved by GAWB's customers under their contractual arrangements (including any conditional contractual arrangements) and water that is the subject of a water supply proposal provided under GAWB's *Queuing Guideline (Source Capacity),* as defined in the referral
RFI	request for information
SMP	statement on monetary policy
STNA	short-term network augmentation
Synergies	Synergies Economic Consulting
s, ss	section, subsection
WACC	weighted average cost of capital
water security assets	the FGP and all Water Allocations transported to the Network via the FGP, as defined in the referral
WPI	wage price index
WTP	water treatment plant

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——*Rate of return review*, final report, version 4, September 2024.

——*Rural irrigation price review 2025–29: Seqwater*, draft report, June 2024.

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Queensland Government, *Policy for fish stocking in Queensland*, December 2020.

——*Queensland Energy and Jobs Plan*, September 2022.

——*Common user infrastructure assessment principles*, Queensland Treasury website, 2023, accessed 7 November 2024.

——*Standard Best Practice Industry Conditions – Building Construction Projects 2023–2027,* March 2024.

——*Budget Strategy and Outlook, Budget Paper No. 2*, Queensland Budget 2024–25.

Reserve Bank of Australia (RBA), *Statement on Monetary Policy*, November 2024.

Stanwell, Statement regarding the Central Queensland Hydrogen Project (CQ-H2), 3 February 2025, Stanwell website, accessed 7 March 2025.

Appendix A: Referral notice

The referral notice was issued by the Treasurer and Minister for Trade and Investment on 14 December 2023 and subsequently amended on 23 May 2024. Both referral notices are available on our website.

QUEENSLAND COMPETITION AUTHORITY ACT 1997

Section 23A(6)

AMENDING REFERRAL

A. Section 23A(6) – Amendment to Referral to the Authority to undertake a Price Monitoring Investigation in relation to GAWB

(1.1) Under section 23A(6) of the Act, I amend the referral given to the Authority on 14 December 2023, referring the Monopoly Business Activities of GAWB for a price monitoring investigation.

(1.2) The referral is amended and restated so that the provisions of the referral are as set out in Schedule 1 to this Amending Referral.

B. Section 23A(7) – Reasons

(1.3) The referral is being amended to exclude consideration of the costs associated with the Fitzroy to Gladstone Pipeline from the price monitoring investigation. The pricing impacts of costs associated with the Fitzroy to Gladstone Pipeline can be considered with greater precision in a subsequent investigation undertaken by the Authority closer to the commissioning of the Fitzroy to Gladstone Pipeline, which is expected in early 2026.

(1.4) The extended timeframe will also allow for greater certainty of future demand.

Schedule 1

QUEENSLAND COMPETITION AUTHORITY ACT 1997

Section 23A and Section 24

REFERRAL

A. Section 23A – Referral to the Authority to undertake a Price Monitoring Investigation in relation to GAWB

(1.1) Under section 23A of the Act, I refer the Monopoly Business Activities to the Authority for a price monitoring investigation (referred to as the Investigation).

(1.2) The period for the Investigation is the Price Monitoring Period.

B. Section 24 – Directions

(1.1) Under section 24 of the Act, I direct the Authority to consider the Stated Matters in conducting the Investigation, to the extent relevant, noting that the Stated Matter in Section C(1.2) will only be able to be considered and reported on by the Authority after 30 June 2028.

C. The Stated Matters

(1.1) The Appropriate Prices for the Price Monitoring Period, excluding Water Security Assets.

(1.2) How the Appropriate Prices compare to actual prices charged by GAWB over the period 1 July 2025 to 30 June 2028.

(1.3) The Queensland Government's Renewable Energy Targets as detailed in the Queensland Energy and Jobs Plan.

(1.4) The Queensland Government's Common User Infrastructure Assessment Principles.

D. Consultation

(1.1) Under section 12(3), I direct the Authority to undertake an open consultation process with all relevant parties.

E. Timing

(1.1) I direct the Authority under section 24(1) to report the results of the Investigation in accordance with the following timetable:

(a) A Draft Report with respect to the Authority's Investigation by no later than 29 November 2024;

(b) A Final Report with respect to the Authority's Investigation by no later than 30 April 2025;

(1.2) I require the Authority under section 23A(3)(b) to report the results of its

Investigation in a Mid-Term Report by no later than 31 October 2028.

F. Definitions and Interpretations

In this Referral these terms have the following meanings:

Term	Meaning
Allowable Costs	(a) Prudent and efficient operational, maintenance and administrative costs, including allowances for working capital and tax, where applicable. (b) Forecast expenditure for prudent and efficient operational, maintenance and administrative costs, assessed using a base-step-trend approach, focusing on necessary step changes of expenditure expected to occur during the period. Base-year operating expenditures are to be escalated using Forecast Inflation. Calculated considering issues of materiality between forecast operating and maintenance expenditure in aggregate. (c) Prudent and efficient capital expenditure (d) Prudent and efficient costs associated with catchment management. (e) Prudent and efficient recreational facilities costs. (f) An Appropriate Rate of Return on the RAB. (g) An appropriate allowance for the depreciation of the RAB assets determined consistent with the Authority's previous approach in the Authority's Gladstone Area Water Board price monitoring 2020-2025 Final Report. (h) An allowance for tax, where applicable. (i) Costs required to meet regulatory obligations and deliver agreed service levels taking into consideration the strategic and operational plans approved by the responsible Minister under the Water Act and the Water Supply Act.
Allowable Revenue	Revenue received from providing Monopoly Business Activities.
Appropriate Prices	Prices that are consistent with the following: (a) Allowable Costs; (b) Reserved Demand. Prices that are: (a) smoothed over the Price Monitoring Period; and (b) allow GAWB sufficient Allowable Revenue to recover the Allowable Costs of providing the Monopoly Business Activities. Appropriate Prices should include any proposed Network augmentation or expansion capital expenditure forecast to occur during the Price Monitoring Period, where that Network

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Term	Meaning
	augmentation or expansion is sized, configured, priced, and timed to: (a) Service 2030 forecast Reserved Demand and any reasonably expected future demand that would make use of the Network; and (b) Not be inconsistent with the Queensland Government's Common User Infrastructure Assessment Principles.
Appropriate Rate of Return	A Weighted Average Cost of Capital based on the methodologies outlined in the Authority's Rate of Return Review Final Report 2023. For estimating the cost of debt, a 10-year transition from the 'on-the-day' approach to the 'trailing average' approach (consistent with the Australian Energy Regulator's transition arrangements) applies.
Authority	Queensland Competition Authority
Forecast Inflation	Inflation based on the methodology outlined in the QCA's Inflation Forecasting Position Paper.
GAWB	Gladstone Area Water Board
Monopoly Business Activities	• Bulk water storage, including water storage for another person. • Bulk water delivery services. • Bulk water treatment services. • Supplying bulk water to another person, other than supplying bottled or containerised water.
Network	GAWB's bulk water delivery infrastructure network in the Gladstone region which includes Awoonga Dam and more than 200 kilometres of bulk water pipelines, treatment plants, quality testing facilities, raw and potable water pumping stations, raw and potable water reservoirs, and offline water storage facilities.
Price Monitoring Period	1 July 2025 to 30 June 2030.

Term	Meaning
RAB	Regulated Asset Base (a) The opening RAB as at 1 July 2020* is not to be optimised and have the remaining lives as used by the Authority in the Authority's Gladstone Area Water Board price monitoring 2020-2025 Final Report. (b) The opening RAB as of 1 July 2025 determined by: i. Assessing the prudency and efficiency of capital expenditure from 1 July 2020 to 30 June 2025, based on an appropriate sample of capital projects. ii. Rolling forward the RAB from 1 July 2020 to 30 June 2025, in accordance with the methodology previously applied by the Authority in the Authority's Gladstone Area Water Board price monitoring 2020-2025 Final Report, adjusted for any findings in (i) above. iii. Adjusted for depreciation and actual inflation over the period. (c) The RAB for the period 1 July 2025 to 30 June 2030 forecast: i. Including an appropriate allowance for prudent and efficient capital expenditure, based on an appropriate sample of capital projects, focusing on the projects with a material impact on the RAB in aggregate. *Noting that for the 2019-20 year the capital expenditure used to determine the RAB will be adjusted to take into account GAWB's actual capital expenditure.
Referral	This referral notice issued by the Treasurer to the Authority, under Section 23A and Section 24 of the QCA Act, for the Authority to conduct a price monitoring investigation relating to the Monopoly Business Activities.
Reserved Demand	The total quantity of water reserved by GAWB's customers under their contractual arrangements (including any conditional contractual arrangements) and water that is the subject of a water supply proposal provided under GAWB's *Queuing Guideline (Source Capacity)*.
Stated Matters	Those matters listed in Section D
Treasurer	Treasurer of Queensland
Water Act	*Water Act 2000*
Water Allocation	An authority granted under section 146 or section 147 of the Water Act to take water from an available water resource, managed under a Resource Operations Licence in an approved water plan area (in accordance with Chapter 2, Part 2, Division 3 of the Water Act).
Water Security Assets	The Fitzroy to Gladstone Pipeline (including related Water Allocations) and all associated costs of operating and

Term	Meaning
	maintaining the Water Security Assets.
Water Supply Act	*Water Supply (Safety and Reliability Act) 2008*

Appendix B: Declaration

QUEENSLAND COMPETITION AUTHORITY ACT 1997
SECTIONS 19, 23 and 24
MINISTERS' DECLARATION AND REFERRAL NOTICE

As the Premier and the Treasurer of Queensland, we hereby declare under Section 19 of the *Queensland Competition Authority Act 1997* that the following government business activities undertaken by the Gladstone Area Water Board be declared to be government monopoly business activities:

(i) bulk water storage, including water storage for another person;
(ii) bulk water delivery services;
(iii) bulk water treatment services;
(iv) supplying bulk water to another person, other than supplying bottled or containerised water.

As the Premier and the Treasurer of Queensland, we hereby refer under section 23 of the *Queensland Competition Authority Act 1997* the declared government monopoly business activities to the Queensland Competition Authority for the following investigations:

(a) an initial investigation about the pricing practices relating to the declared activities; and
(b) investigations for monitoring the pricing practices relating to the declared activities.

Under Section 24 of the *Queensland Competition Authority Act 1997* we direct the QCA in relation to this referral to:

(a) report the results of the initial investigation to Ministers within three months of this notice; and
(b) monitor prices included in contractual arrangements entered into during, and after, the period of the QCA initial investigation.

Peter Beattie
Premier

Date Signed: 13.9.00

David Hamill
Treasurer

Date Signed: 27/8/00

Appendix C: Stakeholder submissions

The submissions we received are listed below (Table 43 and Table 44). They are numbered for reference purposes only – the numbers are used in the footnotes in the report. Table 46 sets out our responses to key issues raised in submissions. The submissions are available on our website.

Table 43: Gladstone Area Water Board pricing submission

	Submission number	Type of submission	Date
GAWB	1	Pricing submission – public version	May 2024
	2	Pricing submission – confidential version	May 2024
	3	Attachment 1 – Referral and direction notice	May 2024
	4	Attachment 2 – Frontier Economics report, *Real price escalators*, May 2024	May 2024
	5	Attachment 3 – Frontier Economics report, *Estimation of Gladstone Area Water Board's productivity growth rate*, May 2024	May 2024
	6	Attachment 4 – Synergies Economic Consulting report, *GAWB's WACC for 2025–30 price monitoring period,* May 2024	May 2024
	7	Attachment 5 – Marsh Pty Ltd, Gladstone Area Water Board report, *Insurance pricing report for the period commencing 1 July 2025*, May 2024	May 2024

Table 44: Submissions received in response to GAWB's pricing submission

Stakeholder	Submission number	Date
Cement Australia Holdings Pty Ltd	20	2 August 2024
Cement Australia and Mitsubishi Gas Chemical Company	24	15 August 2024
Colin Bryce MP	22	13 August 2024
Conoco Phillips	25	16 August 2024
Fortescue Hydrogen Systems Australia Pty Ltd (Fortescue)	26	16 August 2024
Gladstone Regional Council	21	8 August 2024
Queensland Treasury Corporation	15	27 July 2024 (updated 2 August 2024)

Stakeholder	Submission number	Date
	16	24 July 2024
Resident 1	8	3 June 2024
Resident 2	9	3 June 2024
Resident 3	10	3 June 2024
Resident 4	11	3 June 2024
Resident 5	12	3 June 2024
Resident 6	13	3 June 2024
Resident 7	14	3 June 2024
Rio Tinto Aluminium Limited	18	31 July 2024
	19	31 July 2024
Southern Oil/Northern Oil Refineries	17	31 July 2024
Submission withdrawn	23	14 August 2024

Table 45: Submissions received in response to QCA draft report

Stakeholder	Submission number	Date
GAWB – Submission (public version)	27	17 February 2025
GAWB - Attachment 1: Frontier Economics report, *Real price escalators – Gladstone Area Water Board, Response to QCA Draft Report,* 13 February 2025	28	17 February 2025
GAWB - Attachment 2: Synergies Economic Consulting report, *Review of QCA's WACC assessment in its Draft Report for GAWB's 2025–30 pricing period,* February 2025.	29	17 February 2025
GAWB - Attachment 3: Synergies Economic Consulting report, *Applying regulatory pricing principles in GAWB's 2025–30 pricing period,* February 2025.	30	17 February 2025
Queensland Treasury Corporation	31	17 February 2025

Table 46: QCA responses to stakeholder comments

Issue	Stakeholder comments	QCA response
Price increases	Stakeholders raised concerns over the significant price increases submitted by GAWB and the impact this would have on households and businesses, the competitiveness of local industries and future investment.[307] The increases were particularly concerning where there was the possibility of further increases within the price monitoring period due to the Fitzroy to Gladstone pipeline (FGP).[308]	We have developed appropriate prices consistent with the terms of the referral. The referral excludes the costs associated with the FGP from GAWB's allowable costs. Due to the size of the investment and the current uncertain conditions 'these costs can be considered with greater precision in a subsequent investigation … closer to the commissioning of the FGP, which is expected in early 2026'.[309]
Matters for us to consider	Stakeholders said we must consider GAWB's submission having regard to a range of factors, including economic and regional development, facilitating socially desirable investment, sustainable development, affordability and customer hardship.[310]	Refer to Appendix D for our consideration of section 26 of the QCA Act matters.
Competitive procurement	Cement Australia and Mitsubishi Gas Chemical Company said benchmarking should be considered, to demonstrate that GAWB determines prices as though it is a competitive supplier.[311]	We have assessed the prudency and efficiency of GAWB's proposed operating costs (Chapter 4) and actual capital expenditure (Chapter 5). This included consideration of procurement for a number of cost elements, which involved tendering processes.
Forecast demand	Stakeholders considered forecast demand associated with the hydrogen and renewables sector was uncertain and said it was important to consider the impacts this could have on prices and price certainty.[312]	We have considered these matters within our proposed capital expenditure true-up (Chapters 3 and 9).

[307] Northern Oil Refineries, sub 17, p 1; Rio Tinto, sub 18, p 2; Cement Australia, sub 20, p 3; Gladstone Regional Council, sub 21, p 2; C Bryce MP, sub 22, pp 2–3; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 1; Fortescue, sub 26, p 1.
[308] Rio Tinto, sub 18, p 4; Cement Australia, sub 20, p 4; Gladstone Regional Council, sub 21, p 2; C Bryce, sub 22, p 6; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 2.
[309] Amending referral notice, p 1.
[310] Rio Tinto, sub 18, p 3; Cement Australia, sub 20, p 3; Gladstone Regional Council, sub 21, p 2; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, pp 1–3; Fortescue, sub 26, p 3.
[311] Cement Australia, sub 20, p 5; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 3.
[312] Rio Tinto, sub 18, pp 4–5; Cement Australia, sub 20, p 4; C Bryce MP, sub 22, p 6.

Issue	Stakeholder comments	QCA response
Excessive operating costs	While recognising changes in the local labour market, stakeholders considered GAWB's submitted labour costs excessive,[313] with Gladstone Regional Council stating that significant increases to remuneration expenditure failed to consider the flow-on impact to customers.[314] Gladstone Regional Council considered that a higher efficiency target should be applied to controllable costs, to encourage GAWB to minimise costs in servicing the Gladstone region.[315] It also stated that we must consider the prudency and efficacy of additional expenditure in 2023–24 and 2024–25 (in addition to step changes to the base year), given the cumulative and compounding effect of such increases.[316]	Our consideration of these matters is at Chapter 4.
Exclusion of FGP costs	Stakeholders were concerned that the submitted operating costs included costs associated with the FGP and stated that we should not allow for the double-recovery of such costs.[317]	Our consideration of this matter is at Chapter 4.
Capital expenditure	Cement Australia and Mitsubishi Gas Chemical requested that the scope, standard and timing of capital works, including the geographical location of new or augmented assets, be reviewed.[318]	Our consideration of these matters is at Chapter 5 and Appendix E.
Allocation of new capital expenditure	Rio Tinto, Gladstone Regional Council and ConocoPhillips sought further clarity on how capital expenditure would be allocated among customers and said expenditure associated with meeting the demand of new customers	Our consideration of these matters is at Chapters 9 and 10.

[313] Northern Oil Refineries, sub 17, p 1; Gladstone Regional Council, sub 21, p 3.
[314] Gladstone Regional Council, sub 21, p 3.
[315] Gladstone Regional Council, sub 21, p 3.
[316] Gladstone Regional Council, sub 21, p 3.
[317] Rio Tinto, sub 18, p 4; Gladstone Regional Council, sub 21, pp 2–3.
[318] Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 3.

Issue	Stakeholder comments	QCA response
	should be excluded from prices for existing customers, the council and the region's households and businesses.[319]	
Allocation of risk	Rio Tinto said that GAWB bears little to no risk for inefficient capital allocation and was of the view that where capital projects have benefits beyond what is required by the users, GAWB should be required to fund the excess.[320]	Our consideration of these matters is at Chapters 7, 9 and 10.
Rate of return	Gladstone Regional Council considered that a capital structure of 60% should be applied, consistent with regulatory guidance for other water utilities.[321] On the cost of debt, it stated that the QCA's preferred approach of using a simple average should be applied.[322]	Our consideration of these matters is at Chapter 7.
Rate of return	QTC said that estimating the cost of debt using a simple trailing average would not provide GAWB with correct compensation when it was expecting to make large new investments in the upcoming price monitoring period. QTC was of the view that a weighted trailing average (with weights based on annual changes in forecast benchmark debt) was appropriate and consistent with the cost of debt transition requirement in the referral notice.[323] QTC considered that our preferred approach for extrapolating the cost of debt to 10-years created downward bias and we should instead undertake a linear extrapolation of the RBA's 7-year and 10-year BBB total yields.[324] QTC stated that an annuity-based true-up should be implemented to account	Our consideration of these matters is at Chapter 7.

[319] Rio Tinto, sub 18, pp 2–3; Gladstone Regional Council, sub 21, p 3; ConocoPhillips, sub 25, p 2.
[320] Rio Tinto, sub 18, p 5.
[321] Gladstone Regional Council, sub 21, p 4.
[322] Gladstone Regional Council, sub 21, p 4.
[323] Queensland Treasury Corporation, sub 15, pp 1, 4–7, 11–15; sub 31, pp 1–2, 4–6.
[324] Queensland Treasury Corporation, sub 15, pp 2, 8–9; sub 31, p 3.

Issue	Stakeholder comments	QCA response
	for mismatches between the actual trailing average and the trailing average set for the price monitoring period.[325]	
Form of regulation and review triggers	Gladstone Regional Council was of the view that the deadband on water delivery revenue of ±10% should be retained.[326] Regarding review triggers, Gladstone Regional Council said the current materiality threshold (15% of revenue) should remain in the absence of further information on the make-up of aggregate revenue and the timeframes for trigger events to be identified and adjustments to pricing made.[327]	Our consideration of these matters is at Chapter 9.
Pricing practices – pricing structure	Stakeholders questioned whether the submitted prices and pricing zones were equitable and raised concerns with the level of transparency provided.[328] Cement Australia did not consider it appropriate that GAWB's pricing model effectively penalises customers for reducing water consumption by increasing prices.[329] GAWB argued that investments to maintain system redundancy and reliability (driven by expected new hydrogen demand), should be borne by new hydrogen customers only, rather than allocated in accordance with its established zonal pricing framework.[330]	Our consideration of these matters is at Chapters 9 and 10.
Pricing practices –	Gladstone Regional Council and Rio Tinto said that existing users, the	Our consideration of these matters is at Chapters 9 and 10.

[325] Queensland Treasury Corporation, sub 15, pp 2, 10.
[326] Gladstone Regional Council, sub 21, p 4.
[327] Gladstone Regional Council, sub 21, pp 4–5.
[328] Rio Tinto, sub 18, pp 2–4; Cement Australia, sub 20, p 3; Gladstone Regional Council, sub 21, pp 1, 3; C Bryce MP, sub 22, p 6; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 4; ConocoPhillips, sub 25, p 2; Fortescue, sub 26, pp 2–3.
[329] Cement Australia, sub 20, p 4.
[330] GAWB, sub 27, pp 28–29.

Issue	Stakeholder comments	QCA response
pricing structure	council and the region's households and businesses should not have to bear the costs associated with providing services to new customers.[331] On the other hand, Fortescue and Cement Australia and Mitsubishi Gas Chemical questioned whether it was appropriate for new customers to be charged significantly different prices compared to existing customers in a similar delivery location. [332] Fortescue questioned whether it was appropriate for GAWB to create 4 new pricing zones for hydrogen customers who make up no more than 10% of its maximum water supply capacity,[333] while Cement Australia and Mitsubishi Gas Chemical Company did not consider it necessary for GAWB to modify existing pricing zones to capture its renewable methanol project.[334] Both requested a broader review of the underlying pricing model,[335] including whether alternative models would better support the clean energy transition.[336]	
FGP pricing	Stakeholders considered that transparency should have been provided on the expected costs associated with the FGP and the allocation of these costs as part of the current QCA review process (and not a separate process).[337]	The referral excludes the costs associated with the FGP from GAWB's allowable costs. [338]
Future review	Rio Tinto welcomed GAWB's intention to undertake a review of its pricing structure in the next price monitoring	Our consideration of these matters is at Chapters 9 and 10.

[331] Rio Tinto, sub 18, pp 2–3; Gladstone Regional Council, sub 21, pp 1, 3.
[332] Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 3; Fortescue, sub 26, p 3.
[333] Fortescue, sub 26, p 3.
[334] Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 2.
[335] Cement Australia, sub 20, pp 4–5; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, pp 2–4; Fortescue, sub 26, p 4.
[336] Cement Australia and Mitsubishi Gas Chemical Company, sub 24, pp 2–4; Fortescue, sub 26, p 4.
[337] Rio Tinto, sub 18, p 4; C Bryce MP, sub 22, p 6.
[338] Referral notice (Attachment A).

Issue	Stakeholder comments	QCA response
	period to deliver simplicity and more transparency but expected the review to deliver benefits to customers.[339] Gladstone Regional Council wished to ensure that a cost-reflective price structure remained in place.[340]	
Ancillary charges	Gladstone Regional Council was of the view that any additional revenue GAWB received from applied surcharges on short-term contracts should be returned to customers, noting this was previously recommended by the QCA, and GAWB is already compensated for the relative risk of its customer base through the WACC.[341]	Our consideration of these matters is at Chapters 9 and 10.
FGP not providing water security	There were concerns that the FGP would not address water security concerns where there was an increase in demand from new hydrogen customers.[342]	Our consideration of these matters is at Chapter 3.
Commercial and regulatory framework	GAWB acknowledged it is not bound by the QCA's price monitoring investigation under section 23A of the QCA Act when setting prices, but argued that the QCA's findings have a significant influence on actual pricing outcomes in practice. GAWB said its current contractual framework heavily refers to QCA findings and this practically limits its ability to deviate from them.[343]	We have not been asked to undertake a pricing practices investigation in this instance, or to opine on GAWB's contractual framework. As such, how GAWB and its customers choose to use the findings of our price monitoring investigation in negotiating prices and contractual terms is a commercial matter for GAWB and its customers. These issues are outside the scope of this price monitoring investigation.
Other matters	Cement Australia and Mitsubishi Gas Chemical questioned whether the Queensland Government's common user infrastructure assessment principles supported the development of competitive industries and stated	These matters are outside the scope of our investigation.

[339] Rio Tinto, sub 18 p 5.
[340] Gladstone Regional Council, sub 21, p 4.
[341] Gladstone Regional Council, sub 21, p 4.
[342] C Bryce, sub 22, pp 4–5.
[343] GAWB, sub 27, pp 8–9

Issue	Stakeholder comments	QCA response
	that GAWB's submitted prices would not support the government's renewable energy target.[344] Stakeholders considered the minimum usage agreement enforced by Gladstone Regional Council unacceptable and said we should review the pricing policies of GAWB to end this practice.[345]	

[344] Cement Australia, sub 20, pp 3–4; Cement Australia and Mitsubishi Gas Chemical Company, sub 24, p 2.
[345] Residents 1–7, sub 8, 9, 10, 11, 12, 13 and 14.

Appendix D: Consideration of section 26 and referral stated matters

We explain how we have considered and had regard to each of the matters in section 26 of the QCA Act and the referral notice (section C), in accordance with section 24(1)(b) of the QCA Act.

Matter		QCA consideration
Section 26 matter		
(1)(a)	The need for efficient resource allocation	We form a view on appropriate prices that reflects our assessment of the prudent and efficient costs of supplying bulk water, which is consistent with promoting efficient investment by GAWB and efficient consumption by customers (Chapters 3, 5 and 10).
(1)(b)	The need to promote competition	Consistent with competitive neutrality principles, GAWB should not have a competitive advantage over private sector firms due to government ownership. In accordance with these principles, we consider appropriate prices based on cost allowances reflecting the tax obligations and return on equity of a benchmark efficient firm (Chapter 7). We also apply revenue offsets to ensure that GAWB's bulk water prices do not recover the costs/revenues of providing other services in potentially competitive markets (for example GAWB's commercial activities using its hatchery facility).
(1)(c)	The protection of consumers from abuses of monopoly power	Appropriate prices reflect our assessment of the prudent and efficient costs of supplying bulk water (Chapters 4, 5 and 7). This prevents GAWB from earning excessive profits due to its monopoly position.
(1)(d)(i)	The cost of providing the service in an efficient way, having regard to relevant interstate and international benchmarks	Appropriate prices reflect our assessment of the prudent and efficient costs of supplying bulk water. We have regard to benchmarking, where we consider this to be appropriate, including considering benchmark analysis undertaken to inform potential efficiency gains for opex and capex. For instance, we had regard to remuneration

Matter		QCA consideration
		benchmarking (section 4.5) and efficiency factor benchmarking analysis (section 4.6.2). We also have considered normalised WACC outcomes (Chapter 7).
(1)(d)(ii)	The actual cost of providing the service	Our assessment of the prudency and efficiency of costs was informed by information provided by GAWB about its actual and forecast costs (Chapters 4 and 5).
(1)(d)(iii)	The standard of the service, including quality, reliability and safety	When assessing GAWB's forecast costs, we considered GAWB's operating environment and its regulatory obligations. Our assessment considered whether GAWB could meet the required standards of quality, reliability and safety when delivering bulk water services. Cost reductions are not efficient if they are achieved at the expense of service quality.
(1)(e)	The appropriate rate of return on assets	Our assessment of appropriate prices reflects a rate of return on assets that is calculated in accordance with the parameters in the referral notice, including a return on capital that reflects a benchmark efficient firm (Chapter 7).
(1)(f)	The effect of inflation	Inflation is relevant to several aspects of our assessment, including the rate of return, indexation of the regulatory asset base and cost escalation (for example, Chapter 3). We determined the forecast rate of inflation using our published methodology, as required by the referral notice. We established the opening value for the RAB using the actual rate of inflation (Chapter 6).
(1)(g)	The impact on the environment of prices charged by GAWB	Environmental impacts are generally managed through non-price means. Our assessment of appropriate prices provides for GAWB to recover sufficient revenue to meet its environmental obligations, including compliance with legislation and regulations; for example, costs associated with catchment management and mitigating the impact of Awoonga Dam on native fish populations.
(1)(h)	Considerations of demand management	We have not identified any concerns with demand management during our investigation.
(1)(i)	Social welfare and equity considerations including community service obligations, the availability of services to	We have considered the impact of our recommended prices on customers (Chapter 10), noting that GAWB will ultimately decide whether to adopt our findings or set different prices.

Matter		QCA consideration
	consumers and the social impact of pricing practices	
(1)(j)	The need for pricing practices not to discourage socially desirable investment or innovation	Our assessment of appropriate prices supports efficient investment, because they allow GAWB to recover the prudent and efficient costs of providing bulk water services (Chapter 10). As required by the referral notice, we have considered whether GAWB's proposed augmentation capex to enable new hydrogen industry customers is consistent with the Queensland Government's common user infrastructure assessment principles.
(1)(k)	Legislation and government policies relating to ecologically sustainable development	Appropriate prices enable GAWB to recover the prudent and efficient costs of meeting its regulatory requirements, including its environmental obligations and water security planning requirements (Chapters 4 and 5).
(1)(l)	Legislation and government policies relating to occupational health and safety and industrial relations	Our findings on forecast opex provide GAWB with sufficient revenue to satisfy occupational health and safety and industrial relations obligations (Chapter 4).
(1)(m)	Economic and regional development issues, including employment and investment growth	Appropriate prices enable GAWB to recover its prudent and efficient costs over time, while providing it with sufficient revenue to invest efficiently, which benefits businesses and households using the service.
(1)(n)	Any directions given by the government to GAWB	We take the directions provided to GAWB into account where they are relevant to our assessment, for example the direction to GAWB to exclude all FGP costs from its pricing submission to the QCA.
(2)	Any water pricing determinations	Not applicable, as there are no water pricing determinations in effect.[346]
Referral notice stated matters (section C)		
C.(1.1)	The appropriate prices for the price monitoring period, excluding water security assets (that is, the Fitzroy to Gladstone pipeline and all associated costs).	Our draft report forms a view on appropriate prices that reflects our assessment of the prudent and efficient costs of supplying bulk water by GAWB to satisfy forecast demand. It also excludes costs associated with the Fitzroy to Gladstone pipeline.

[346] Water pricing determinations apply to private sector water supply activities that are declared under Part 5A of the QCA Act. There are currently no declared water supply activities under Part 5A.

Matter		QCA consideration
C.(1.2)	How the Appropriate Prices compare to actual prices charged by GAWB over the period 1 July 2025 to 30 June 2028	We will address this stated matter when preparing our mid-term report, due by no later than 31 October 2028.
C.(1.3)	The Queensland Government's Renewable Energy Targets as detailed in the Queensland Energy and Jobs Plan	We have considered the impacts of GAWB's forecast renewable energy generation within our assessment of the proposed electricity step change.
C.(1.4)	The Queensland Government's common user infrastructure assessment principles.	We have seen no evidence that GAWB's proposed capital augmentation plans are inconsistent with the principles. It is ultimately a matter for government to determine its role in supporting and delivering these investments.

Appendix E: Forecast capital expenditure

Our findings and observations on GAWB's forecast capex projects are set out below. Our findings have been informed by our analysis of the information provided, interviews with GAWB staff, and Aither's detailed technical review and engineering opinions.

Our draft report raised several issues regarding GAWB's forecast capex program, particularly regarding customer consultation and efficient sizing of planned augmentation assets. GAWB provided further information in February 2025, which has addressed these issues. That said, we maintain our view that the deliverability of the capital program in full is highly uncertain, particularly the hydrogen-related augmentation program.

Our consideration of forecast capital expenditure does not represent 'preapproval' for future inclusion of prudent and efficient capex into GAWB's asset base. As a number of these projects are at early stages of planning and development, our assessment is based on the material provided and status of projects at the time of review. It is not a definitive assessment of prudency and efficiency.

E.1 East End pipeline replacement and augmentation

Project overview

The East End pipeline (EEPL) is a 23-kilometre treated-water pipeline that distributes water for industrial and potable use from Boat Creek pump station to East End reservoir. It is the only treated-water supply to the Mt Larcom township. It also supplies several large industrial customers who could otherwise use raw water. The pipeline was built in 1981 and has reached end of life. The pipeline has a history of failures and requires replacement.

The emerging hydrogen sector in Gladstone is expected to increase demand for raw water in the northern parts of GAWB's network (Aldoga). By 2027, demand is forecast to exceed the capacity of the existing treated water pipeline and upstream treatment capacity. New hydrogen customers can largely be supplied with raw water, as water will be treated onsite as feedstock for hydrogen production.[347]

GAWB undertook a study to determine a water supply strategy that would address both capacity and asset condition, improve treated water quality for customers on the EEPL, and deliver the required raw water capacity to Aldoga.[348] As a result of this review, the scope of the EEPL replacement project was expanded to include 8.7 kilometres of new raw water pipeline from Yarwun to the Aldoga area, to be built adjacent to the replacement treated water pipeline.

[347] GAWB, response to RFI 9B, *CAP2019-069 East End Pipe Replacement*, 15 February 2024, p 5.
[348] GAWB, response to RFI 76, *Hydrogen program execution plan,* June 2024, p 4.

GAWB proposes to deliver the two pipelines contemporaneously, at an estimated capital cost of [redacted].[349]

Project scheduling documents and checklists reviewed indicate the project is progressing through stage gate 2 (planning) and into the procurement phase at the time of our review.[350] We understand construction is expected to commence in June 2025 and be completed in June 2026.[351]

Aither found that the need for the treated water pipeline replacement was clearly evidenced and well supported by options analysis. However, it considered that prudency and efficiency of the project overall was not fully demonstrated, given the limited information supporting the new raw water pipeline component.

QCA analysis and findings

Prudency

The need to replace the treated water pipeline is clearly supported by condition assessments, asset age and a history of failures. In our view, this element of the project is prudent.

While not included in the short-term hydrogen augmentation program, the new raw water pipeline is linked to the same demand growth driver and is likely prudent, based on the information available.

We have seen evidence that GAWB has consulted with prospective hydrogen customers regarding their requirements, and this process has informed the design and sizing of the proposed Yarwun to Aldgoa raw water pipeline. Nonetheless, any material change to the status of prospective hydrogen customers ([redacted]) would require GAWB to review the timing and/or scope of the proposed Yarwun to Aldoga raw water pipeline.

Efficiency

GAWB submitted a project business case, which summarises the options analysis undertaken. This demonstrates that a range of genuine options were considered.[352] However, we have not sighted the detailed evaluation of those options, or the results of the multi-criteria analysis that informed the choice of preferred option. That said, the documentation reviewed indicates that the options analysis undertaken was adequate. In future reviews, we would expect the provision of detailed supporting information concurrently with GAWB's submission to demonstrate that where necessary, options analysis is supporting investment decisions. This would be a necessary requirement for any ex post assessment.

As the new Yarwun to Aldoga raw-water pipeline is a network augmentation investment, the referral notice asks us to consider the appropriate timing and sizing of the asset. GAWB's business case (February 2024) states that the selected option for the raw water pipeline is 'sized to match the

[349] This project was included in the 2020–25 capital forecast at a forecast cost of $3.146 million, and forecast commissioning in 2021–22. Initial scoping activities, including those informing GAWB's 2020–25 capital forecast, contemplated a partial replacement of the treated water pipeline only. The project scope has since increased substantially to include the new raw water pipeline.
[350] GAWB response to RFI 47,49, 50, EEPL Replacement Gate 2 Checklist.
[351] GAWB response to RFI 47,49, 50, EEPL Replacement Schedule Rev1.
[352] GAWB, response to RFI 9B, *CAP2019-069 East End Pipe Replacement*, 15 February 2024, pp 18–21.

contracted raw water demands (approximately 600mm internal diameter)'.[353] This potentially conflicts with the referral notice which includes 'reasonably expected future demand' as a factor when considering the appropriate size of augmentation assets.

The concept of 'reasonably expected' future demand originates from the referral notice which was first issued in December 2023.[354] We understand the pipeline sizing assumptions stated in the February 2024 business case originate from an options analysis study undertaken in August 2023 and would therefore predate the concept of reasonably expected future demand. As planning progresses, we expect GAWB will refine the design to ensure the pipeline is appropriately sized to demand expectations.[355] As a general principle, we consider some excess capacity may be prudent and efficient if there is a reasonable likelihood of further demand growth in the corridor. This is not controversial.

Based on available information, the planned timing of the raw water pipeline (forecast to be commissioned in 2025–26) is not inconsistent with GAWB's forecast of demand from the hydrogen industry, as it stood at the time of our review.

This project is still in the planning and procurement phase, and cost estimates and are expected to be further refined. This is particularly true for the raw water pipeline component which is less advanced.

Current cost forecasts for the project are based on a class 4 construction estimate developed by quantity surveyors, which has been developed to a P90 level of confidence. This estimate is based on a bill of quantities, which is preliminary and carries a corresponding level of uncertainty.

Other observations

There are several risks accompanying this project that GAWB is currently managing:

- Slippage in the timing of hydrogen investments will impact on the urgency of the new Yarwun to Aldoga raw-water pipeline.[356] We note the treated water pipeline replacement will need to proceed regardless, due to asset condition (end of life replacement).
- The initial ramp-up in new hydrogen demands can be accommodated by the existing treated-water pipeline, although we understand the raw-water pipeline must be commissioned by the end of 2026 to ensure that new customer demand can be satisfied (based on demand and investment timing expectations at the time of our review). This places substantial pressure on GAWB to deliver the project efficiently.
- Around 80% of the capacity of the proposed Yarwun to Aldoga raw-water pipeline will be used by a single prospective hydrogen customer. If this investment is cancelled or substantially revised after construction of the pipeline commences, there may be significant excess capacity in the asset for some time. Nonetheless, a raw-water pipeline could potentially facilitate entry of other industries in the Aldoga area.

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[353] GAWB, response to RFI 9B, *CAP2019-069 East End Pipe Replacement*, 15 February 2024, p 5.
[354] Referral notice (Appendix A).
[355] GAWB's February 2024 business case (p 20) references an AECOM design report from 29 November 2023, but this was not included in the documentation provided to the QCA and Aither for review.
[356] GAWB, response to RFI 9B, *CAP2019-069 East End Pipe Replacement,* 15 February 2024, p 25.

Conclusion

We consider the EEPL project package is likely prudent based on the information available at the time of our review, noting its relatively early stage of development and the uncertainty surrounding hydrogen demand. The justification and documentation supporting the new Yarwun to Aldoga raw-water pipeline is not as comprehensive as the treated-water pipeline replacement component. Nonetheless, the information we have reviewed is broadly consistent with our expectations for a project at this level of maturity.

Efficiency cannot be conclusively determined given the maturity of the project and cost estimates; however, we have seen evidence that GAWB has so far undertaken sound options analysis, procurement processes, planning and governance, which are consistent with its project management framework and stated policies. This supports the likely efficiency of the project.

As noted in Chapter 3 (Forecast demand) we understand the status and expected demands of some prospective hydrogen customers has recently changed. At the time of preparing this final report, GAWB was reviewing the scope and timing of the Yarwun to Aldoga raw-water pipeline project in light of these developments.[357]

E.2 South Gladstone reservoir replacement

Project overview

GAWB's existing 9.1 ML South Gladstone potable water reservoir has been in service for 45 years. The nominal design life of the reservoir is 50 years, meaning it is nearing the end of its technical life. The reservoir has also developed a leak that GAWB submitted cannot be fully investigated or rectified without the reservoir being emptied.[358]

GAWB has proposed to build a replacement reservoir at a forecast cost of $13.7 million (including IDC), to be commissioned in 2029–30.

The South Gladstone reservoir is an important storage asset supplying the Gladstone Regional Council (GRC) and industrial customers. GAWB submitted that it cannot be removed from service for long enough to undertake the necessary condition assessments and repairs, without affecting customer supply continuity. We note GAWB has faced similar constraints when planning major works on other key assets. For example, one of the key drivers of GAWB's decision to build the offline storage facility was to provide continuity of supply while Awoonga Dam is unavailable during major maintenance and inspections of conduits.

GAWB commissioned a condition and options assessment, which identified six options. Multi-criteria analysis indicated the preferred option is to construct a new reservoir, at the same elevation and geographical location, adjacent to the existing reservoir. GAWB submitted it will then take the existing reservoir offline to be fully drained and then assess its condition. GAWB will then decide

[357] GAWB, response to RFI 102, p. 2.
[358] GAWB, response to RFI 9E, p 2.

whether to demolish the existing reservoir or refurbish it (that is, repair and retain the existing reservoir to increase storage resilience within the network).[359]

Aither found that:

- the need for remediation or replacement of the reservoir is evidenced
- contingencies and unit rates used in cost estimation appear reasonable
- the importance of the asset to the system is clearly articulated and the forecast replacement cost is proportionate for a reservoir of this size
- operating costs were not included in the multi-criteria analysis; however, this omission is not material in this case as replacement would have outperformed refurbishment in the options analysis due to the expected reduction in maintenance costs.[360]

QCA analysis and findings

Prudency

The project need (either replacement or refurbishment) has been clearly demonstrated by asset age and history of failure. We consider the project is prudent.

Efficiency

We saw evidence of sound options analysis, although only a few realistic options were considered. The multi-criteria analysis and detailed cost estimates for each option considered are described with reasonable transparency in the GHD scoping study report.[361] GAWB's analysis would be improved by explicitly considering lifecycle total costs of each option, including operating costs.[362] Nonetheless, we note this is unlikely to change the preferred option outcome in this example.[363]

GAWB also considered potential synergies and efficiencies that can be achieved through this project. For example, while the option did not ultimately prove optimal, GAWB investigated whether it was possible to build the new reservoir at a higher elevation, possibly removing the need to build and additional pump station.[364]

As with all ex ante projects reviewed, the cost estimates provided are subject to further refinement as GAWB progresses the project to procurement and delivery. Aither found that GAWB's unit rates appear reasonable, and the proposed cost is proportionate to a reservoir of this size.[365]

Notwithstanding some apparent inconsistencies in the use of checklists and project schedules, we have seen sufficient evidence to indicate that GAWB's capital processes have so far been largely applied as stated in its project management framework. The documentation provided was generally consistent with our expectations for a project of this complexity and planning maturity.

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[359] GAWB, response to RFI 9E, p 2.
[360] Aither report, p 86.
[361] GAWB, response to RFI 9E, GHD, *GAWB South Gladstone Reservoir scoping study report*, October 2019.
[362] We have accepted GAWB's proposed one-off project initiatives that are proposed to reduce future costs and improve maintenance planning in relation to: condition assessments and asset criticality reviews. These are discussed in Chapter 4.
[363] Aither report, p 86.
[364] GAWB, response to RFI 9E, p 3.
[365] Aither report, p 86.

Efficiency of the project cannot be conclusively determined ex ante. However, the information we reviewed suggests the project is likely to be efficient, having regard to the relatively early stage of project planning.

E.3 Hydrogen – short-term network augmentation program

Project overview

Gladstone is one of the locations of interest in Queensland for the emerging hydrogen industry due to land availability in the Gladstone State Development Area and the deepwater port.[366]

There are currently several hydrogen projects in various stages of planning and development. A number of these are expected to construct facilities at Aldoga and Fisherman's Landing, in the northern parts of GAWB's network. GAWB has been engaging with these hydrogen proponents with a view to entering long-term (20-year) water supply contracts.[367]

GAWB's capex forecast includes a substantial network of new and upgraded pipelines, reservoirs and pumping stations designed to supply new hydrogen industry. These projects aim to alleviate upstream network constraints and extend the supply network to the location of the proposed hydrogen facilities. GAWB's program also includes several upstream projects intended to maintain system and storage redundancy given the increased demand.

GAWB identifies the hydrogen augmentation program as the 'short-term network augmentation' (STNA) program.[368] This represents the network upgrades expected to be required to supply the first stage of hydrogen proponents (Table 47). In total, GAWB's capex forecast for the period includes around $310 million to deliver these short-term augmentations. GAWB proposed to deliver the STNA in four stages. The stages constitute work packages that align with new customer demands and the expected timing of the proponents' final investment decisions.[369]

Additional augmentations are also expected beyond 2030; however, these projects are less certain and currently on a longer planning and delivery timeline. We understand the longer-term augmentations will also represent a substantial capital program.[370]

[366] GAWB, response to RFI 76, *Hydrogen program execution plan*, June 2024, p 1.
[367] As noted in Chapter 3, GAWB is contracting only to the existing remaining capacity available from Awoonga Dam. Customer requests for supply beyond that capacity are subject to GAWB's queuing process.
[368] Some of the initial projects are identified by GAWB as the' Aldoga hydrogen enabling' works. For simplicity we refer to the entire program as the STNA.
[369] GAWB, response to RFI 76, *Hydrogen program execution plan*, June 2024, p 16.
[370] For example, GAWB is investigating options for a new pipeline to connect Awoonga Dam directly to the Fitzroy to Gladstone pipeline, to support bi-directional flow. This is identified as the 'Network Security Reliability Pipeline'. (GAWB, response to RFI 76, *Hydrogen program execution plan*, June 2024, pp 5-7).

Table 47: GAWB's proposed hydrogen capital program for 2025–26 to 2029–30

Project	Value ($ million, including IDC)	Pricing zone
[redacted] – raw water pipeline	31,549,111	Euroa Circuit to Aldoga
[redacted] stage 2 upgrade	4,363,200	Boat Creek to Euroa Circuit
[redacted] – raw water	31,611,528	Boat Creek to Euroa Circuit
[redacted] raw water pipeline	32,786,255	Northern Raw Extension
[redacted]	74,632,682	Northern Raw Extension
[redacted]	15,922,391	Northern Raw Extension
[redacted]	18,484,602	Northern Raw Extension
[redacted] – raw water	20,404,689	Northern Raw Extension
[redacted] – raw water	58,826,286	Northern Raw Extension
[redacted] – raw water pipeline: [redacted]	21,299,480	Fishermans Landing Raw 2
Total	**309,880,225**	

Source: GAWB, response to RFI 7; QCA analysis.

The cost estimates provided to the QCA in GAWB's pricing submission and model were based on information current at the time.[371] We acknowledge that the project scope and cost estimates are evolving. At the time of preparing this report, GAWB was considering the impact on the STNA program of recent changes in hydrogen demand expectations. As such, GAWB was not able to provide a revised capex forecast or pricing model for our consideration in this final report. GAWB indicated it will revise the capex forecast if required, prior to setting prices for 2025–26.[372]

GAWB noted that its capital forecasts for the STNA program may also need to be revised to include the estimated cost of applying the Queensland Government's *Standard Best Practice Industry Conditions – Building Construction Projects 2023–2027* (BPIC).[373] GAWB suggested that this will result in a significant uplift in estimated costs.[374, 375]

[371] GAWB, response to RFI 9A,'STNACA-1.ppt'.
[372] GAWB, sub 27, pp 20–21.
[373] See Queensland Government, *Standard Best Practice Industry Conditions – Building Construction Projects 2023-2027*, March 2024. The BPIC sets the Queensland Government's expectations for the wages and conditions that will apply on projects valued at $100m or over (and declared projects) in the Building Construction and Maintenance Procurement Category.
[374] GAWB, response to RFI 76, '12. STNA Totex Estimate Summary'.
[375] We note the Queensland Government has announced a pause on the application of some elements of the BPIC to government-funded construction projects, subject to further review of the policy (J Bleijie, B Mickelberg and S O'Connor,

For our price monitoring exercise, we have considered the cost forecasts and project identifiers contained in GAWB's pricing model (submitted in June 2024), along with the contemporaneous demand forecasts. The nomenclature, cost estimates and commissioning dates do not fully align with other documents subsequently provided, due to several reasons outlined by GAWB.[376] These inconsistencies are not unexpected and are largely attributable to the evolving nature of the projects.

Aither considered the efficiency and prudency of the program was not fully demonstrated, noting that:

- The need for the investment is evident; however, redacted documents initially provided did not enable a robust assessment. Unredacted information subsequently provided shed some light but significant uncertainty remains.
- It is unclear how the demand forecasts have translated into the individual projects. There is a logical connection based on geographical location of new users and the volumetric demand, but Aither could not form a view based on the information provided.
- Documentation to verify the options analysis and multi-criteria analysis undertaken was not sighted. Aither noted that opex and capex costs do not appear to carry weight in the multi-criteria analysis, based on the information reviewed.
- Unit rates and contingencies appear reasonable; however, efficiency cannot be determined based on the information provided.
- There are several discrepancies and variance in costs and naming of projects between documents.[377]

QCA analysis and findings

Consistent with the referral notice, we have considered the timing and sizing (capacity) of the proposed hydrogen augmentation projects. The indicative pricing implications of the hydrogen augmentation program are discussed in Chapter 10. Given the substantial uncertainty surrounding the emerging hydrogen customers, and recent developments in demand expectations, we have presented two indicative pricing scenarios; one that includes all STNA forecast capex and expected new hydrogen demand as proposed by GAWB in its 2024 pricing proposal, and a second scenario that excludes the STNA capex and new hydrogen demand (Appendix F).

Timing

The majority of GAWB's forecast augmentation capex is concentrated in 2026–27.[378] Based on expectations at the time of GAWB's pricing submission, new hydrogen customer demand is expected to commence ramping up from 2027–28 as proponents begin commissioning their new facilities and progressively increase their production. We understand that further ramping-up of demand is expected to continue into the 2030–35 period.

Construction productivity boosted with BPIC pause, media statement, 14 November 2024, Queensland Government, viewed 15 November 2024).

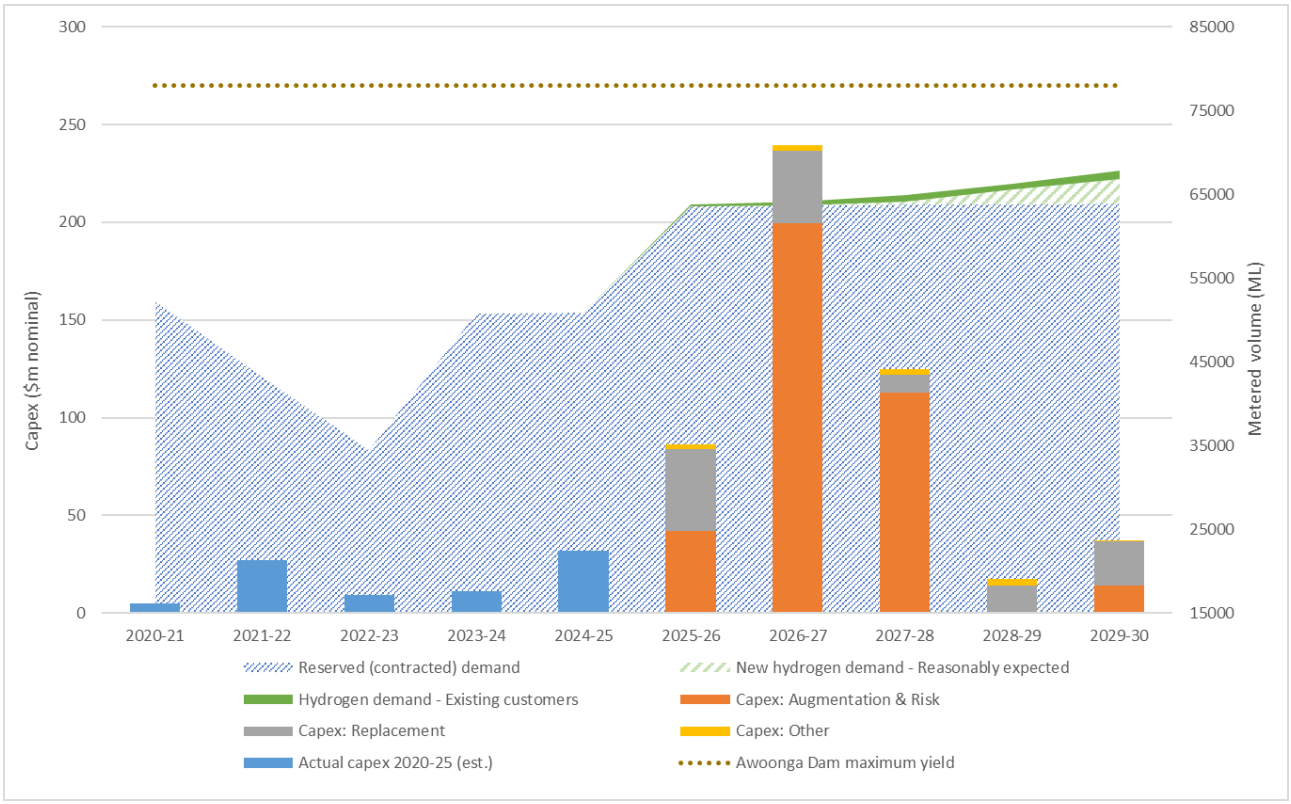
[376] For example, GAWB notes that the program was recently re-packaged into several stages at the request of the Queensland Government. This impacted design, cost estimates and delivery schedules. Stakeholder consultation has also resulted in some design and costing changes (GAWB, response to RFI 9A,'STNACA-1.ppt', p 4).

[377] Aither report, pp 83–84.

[378] Based on capitalisation dates set out in GAWB's response to RFI 7.

As Figure 17 illustrates, GAWB's projected short-term augmentation program broadly aligns with the expected onset of new 'reasonably expected' new hydrogen demand (Chapter 3), noting the majority of the STNA projects are planned for commissioning at least a year ahead of the expected demand ramp-up.

Figure 17: GAWB forecast capex and demand profile



Note: Demand values for 2023–24 and 2024–25 are forecasts. 'Other' capex includes the 'regulatory' and 'business process improvement' categories.
Source: GAWB, responses to RFIs 7 and 22; QCA analysis.

We reviewed GAWB's project schedules, which provide delivery timelines under two scenarios (Table 48).[379] The 'early completion' scenario is consistent with the projected capitalisation dates that GAWB has assumed in its capex and price modelling. The 'late completion' scenario would see much of the expenditure capitalise in 2027–28, with package 2 works (Calliope River crossing, Mt Miller reservoir and Phillip Street pump station) delivered in the first quarter of 2028–29.

Overall, the planned timing appears reasonable based on GAWB's demand expectations at the time of preparing its capex forecast.

[379] GAWB, response to RFI 47, 49 & 50, 'H2RELA-1' and 'H2RELA-2'.

Table 48: GAWB's scheduling scenarios for hydrogen augmentation expenditure

Project	Early completion scenario		Late completion scenario	
	Commencement	Completion	Commencement	Completion
Aldoga Enabling	May 2024	July 2026	Feb 2025	July 2026
STNA – Package 1	July 2025	November 2027	July 2026	November 2027
STNA – Package 2	November 2025	August 2027	October 2026	September 2028
STNA – Package 3	January 2026	April 2027	January 2027	March 2028
STNA – Package 4	July 2025	August 2027	December 2025	February 2028

Source: GAWB, response to RFI 47, 49 & 5, 'H2RELA-2' and 'H2RELA-1'.

Asset sizing

Ultimately, the design of the hydrogen enabling augmentations is dependent on end-customer demand. This presents challenges for GAWB as we understand that none of the commercial scale hydrogen proponents have reached final investment decisions on their facilities. At the time of this investigation, the most advanced projects were at the front-end engineering design phase of project development.[380]

The design and sizing of GAWB's raw-water network augmentations included in GAWB's capex forecast were developed by GHD between late 2023 and May 2024.[381] The augmentation options appear to be supported by rigorous hydraulic modelling. This analysis considers a range of potential customer demand scenarios and corresponding recommendations on appropriate asset sizes and network configurations.[382]

We reviewed GHD's reports and note the demand assumptions underpinning the initial designs of the hydrogen enabling assets.[383]

We sought further clarification from GAWB to demonstrate how it has considered reasonably expected future demand in the sizing of the augmentation assets. This linkage was not obvious during our initial review due to variations in nomenclature and project identifiers across documents. In response, GAWB provided additional analysis and information demonstrating that asset sizing for STNA infrastructure is directly informed by forecast demand and customer requirements. As noted in our review of the EEPL raw-water pipeline, we would expect to see some degree of excess capacity in augmentation asset sizing. Such excess capacity would not necessarily indicate an imprudent or inefficient investment decision if there is a reasonable expectation of future demand growth.

[380] GAWB, sub 1, p 29.
[381] See GAWB response to RFI 76, GHD, *Raw Water Network – NIZ System Augmentations Feasibility Study – Hydraulic modelling report*, 3 May 2024.
[382] See GAWB response to RFI 76, GHD, *Raw Water Network – NIZ System Augmentations Feasibility Study – Hydraulic modelling report*, 3 May 2024.
[383] GAWB response to RFI 76, *GHD, Raw Water Network – NIZ System Augmentations Feasibility Study – Hydraulic modelling report,* 3 May 2024, pp 5–7.

We understand GAWB is continuing to work with the relevant government departments to finalise the demand scenarios underpinning the detailed business case for the STNA.[384]

Prudency

Based on the information available at the time of our review, we consider the majority of the STNA program is prudent as it is justified by a clear demand driver. That said, GAWB is continuing to review the STNA based on evolving demand expectations. This may lead to changes in the timing and need for the STNA projects during the 2025–30 period.

GAWB provided evidence of its consultations with prospective customers that demonstrates customer needs have been adequately considered in developing the STNA work program.

Efficiency

The STNA program is not sufficiently progressed for us to form a conclusive view on its efficiency. Based on the documents reviewed, individual projects are at either 'concept' or 'planning' stages under GAWB's project management framework. At the time of our review, we understand that none of the STNA projects had completed the construction procurement stage.

Project costings were preliminary at the time of our review. These estimates are expected to be further refined as the project planning progresses to design, construction procurement and delivery. Efficiency cannot be conclusively determined given the maturity and status of the projects; however, we make the following general observations:

- GAWB appears to be relying on reasonable assumptions and generally sound capital planning processes to develop the STNA program. In most cases, documentation supporting the capital governance process appears reasonable considering the stage of project development.
- There is evidence of genuine options analysis; however, it is not clear whether the multi-criteria analysis allocated any weight to the capital or operating costs of options.[385] We understand each option was costed by GHD[386], and that 'the relative costs of options were also considered subsequent to the MCA'.[387] However, the documents received do not clearly demonstrate how costs informed the selection of options.
- Unit rates used in developing cost estimates appear reasonable, based on our engineering consultant's review.
- GAWB has advised, subsequent to its submission, that the Queensland Government's BPIC requirements may apply to this program. GAWB's initial forecasts did not include the cost of complying with the BPIC. GAWB indicated that this could materially increase project costings.[388] GAWB's future estimates will need to be revised to account for this.
- There remains substantial uncertainty regarding when, and if, all of the proposed hydrogen investments will proceed, and what the final water demands of those facilities will be. This uncertainty has increased since our draft report with the Queensland Government

[384] GAWB, response to RFI 76, '*Hydrogen program execution plan*', June 2024, p 33.
[385] GAWB, response to RFI 52, GHD preferred options memorandum, 1 August 2024.
[386] GAWB, response to RFI 52, GHD preferred options memorandum, 1 August 2024, Appendix A.
[387] GAWB, response to RFI 52, GHD preferred options memorandum, 1 August 2024, p 5.
[388] Based on GAWB response to RFI 76, '12. STNA Totex Estimate Summary'.

announcing it will not provide further funding support to the CQ-H2 project in Aldoga.[389] This project is a major determinant of the scope and timing of GAWB's STNA program as it currently stands. There is a risk of substantial rework should CQ-H2 or any of the other hydrogen proponents materially change their investment plans. GAWB's project planning needs to be sufficiently flexible to respond to the possibility of changing demands and timings, to ensure that prudent and efficient solutions are pursued.

- As noted in Chapter 5, the compressed timeline and large scale of the broader capital program presents a material risk to timely delivery of the augmentations. That said, we have included significant increases in operating costs in recognition of the capability uplift that is required for GAWB to deliver services to its existing and prospective customers over the monitoring period.
- As noted in Chapter 10, we consider two of the STNA capital projects represent reliability investments that provide shared benefits to all downstream customers. For our price monitoring, we have allocated these projects consistent with GAWB's established zonal pricing framework, rather than allocating solely to new hydrogen customers, as proposed by GAWB.

Notwithstanding our concerns, we have not made any adjustments to the STNA forecast for price monitoring purposes as we consider it is broadly consistent with the parameters of the referral notice, and reasonably reflects the information available to GAWB at the time of developing its pricing proposal. It is appropriate that GAWB is sufficiently funded to deliver these investments during the 2025–30 period, should the hydrogen industry develop to the timeline that GAWB has previously advised.

Given the degree of uncertainty and early status of the cost estimates, we consider the STNA program would be a clear candidate for detailed ex post prudency and efficiency review in future.

Further, we will adopt a limited ex post revenue adjustment within our price monitoring framework to symmetrically address the potential revenue impact of changes in scope, efficient cost and timing of the STNA program. This should ensure that our revenue and price estimates for price monitoring purposes ultimately reflect the actual prudent and efficient costs of delivering the program (see Chapter 9). Importantly, it is for GAWB and its customers to decide whether such an approach should be used in its commercial pricing framework.

[389] PV Magazine, Queensland ends support for 3 GW green hydrogen project, 4 February 2025, PV Magazine website, accessed 7 March 2025

Appendix F: Illustrative prices without new customer demand

Background

As noted in Chapter 3 (Forecast demand) and Chapter 5 (Capital expenditure), there is substantial uncertainty surrounding the scope and timing of expected new demand from prospective hydrogen customers in the Gladstone region during the 2025–30 period. This uncertainty has become more pronounced since we released our draft report, with recent changes to the status of some prospective hydrogen customers' investments, and the Queensland Government's recent announcement to withdraw further financial support for the CQ-H2 hydrogen project.

At the time of preparing this final report, GAWB was reviewing the impacts of these recent developments on forecast demand and capital expenditure. Any material changes in the expected scope and timing of new hydrogen customers would likely have a material impact on GAWB's augmentation capex program. Relevantly, this could mean that some (or possibly all) of the $310 million Short-Term Network Augmentation (STNA) program expenditure may not be required during the 2025-30 pricing period.

Pricing scenario

In recognition of the increasing uncertainty, we have estimated alternative indicative prices under a scenario in which during the price period:

- none of the expected new hydrogen customer demand emerges (5,666 ML in total); and
- the entire Short Term Network Augmentation (STNA) capital program does not commence.

This scenario also excludes forecast capital expenditure associated with the proposed Yarwun to Aldoga raw water pipeline (see Appendix E), on the basis that existing customers in the Aldoga area can continue to be supplied with treated water from the East End pipeline, at lower overall cost.

To reflect this, we have made the following adjustments:

- removed new hydrogen customer demand
- removed the STNA capital program from the forecast RAB
- removed investments proposed to be undertaken to maintain system reliability at higher system demand
- removed operating costs allocated to the new pricing zones, as a proxy for incremental operating cost reductions, which provides for forecast operating costs of $233.08 million[390]

After making the adjustments noted above, the indicative prices for the without-hydrogen scenario have been developed consistent with the method described in Chapter 10.

[390] This is $2.8m less than our forecast operating costs we considered as prudent and efficient in Chapter 4.

It is important to note that this pricing scenario is illustrative only; It does not constitute a QCA view on the likely trajectory of hydrogen industry development in Gladstone during the 2025–30 period.

Illustrative prices

Table 49 Indicative allowable costs: no-hydrogen growth scenario ($ million, nominal)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Opex	43.91	43.64	46.13	47.87	51.53	233.08
Return on capital	59.44	62.66	64.28	64.88	66.26	317.52
Return of capital (depreciation)[a]	0.58	5.29	6.93	8.36	9.46	30.62
Tax allowance	2.23	3.18	2.34	1.76	1.86	11.38
Working capital allowance	0.74	0.74	0.74	0.74	0.74	3.70
Allowable costs	106.90	115.51	120.42	123.62	129.85	596.30

a Depreciation is net of indexation.
Note: Totals may not add due to rounding.

Table 50 Indicative allowable revenues by pricing zone: no-hydrogen growth scenario ($ million, nominal)

Pricing zone	2025-26	2026-27	2027-28	2028-29	2029-30
Storage					
Awoonga	38.27	42.47	43.76	44.80	46.78
Admin					
Corporate	7.80	8.50	9.16	9.85	11.35
Delivery					
Awoonga to Toolooa	14.85	16.89	17.52	17.78	18.50
Toolooa to Fitzsimmons	4.10	4.10	4.32	4.47	4.70
Boyne Raw	0.42	0.85	1.15	1.16	1.18
Central Raw	2.01	2.15	2.15	2.16	2.20
Fitzsimmons to Gladstone	0.80	0.81	0.83	0.86	0.89
QAL	1.00	1.39	1.77	1.78	1.74
Fisherman's Landing Raw	0.24	0.26	0.26	0.26	0.49

Pricing zone	2025-26	2026-27	2027-28	2028-29	2029-30
Gladstone WTP	13.71	12.59	13.38	13.91	14.51
Gladstone City	0.28	0.27	0.28	0.29	0.29
Gladstone WTP to South Gladstone	3.23	3.36	3.47	3.60	3.69
Calliope	1.29	1.39	1.42	1.43	1.46
South Gladstone to Toolooa	0.79	0.81	0.82	0.84	1.34
Boyne Potable	1.03	1.32	1.56	1.59	1.62
Benaraby	0.57	0.59	0.60	0.66	0.75
Yarwun WTP	2.18	2.18	2.36	2.56	2.64
North Industrial Potable	1.28	1.37	1.35	1.33	1.34
Fisherman's Landing Potable	0.05	0.05	0.06	0.06	0.06
Boat Creek to East End	1.94	3.23	3.25	3.29	3.39
Curtis Island	9.59	10.01	10.02	10.00	9.97
Total allowable revenue	105.44	114.60	119.49	122.66	128.87

Source: QCA analysis.

Table 51: Indicative prices: No-hydrogen growth scenario

Pricing zone	Storage	Storage	Delivery	Delivery	Admin
	Storage access ($/contracted ML)	Storage volumetric ($/metered ML)	Delivery access ($/reserved MDQ)	Delivery volumetric ($/metered ML)	($/contracted ML)
Awoonga	634.55	2.24	-	-	51.02
Awoonga to Toolooa	634.55	2.24	8,975.38	52.65	153.05
Toolooa to Fitzsimmons	634.55	2.24	11,590.39	52.65	153.05
Boyne Raw	634.55	2.24	33,938.49	52.65	153.05
Central Raw	634.55	2.24	14,875.22	52.66	153.05
Fitzsimmons to Gladstone	634.55	2.24	12,421.79	52.65	153.05
QAL	634.55	2.24	15,843.29	52.65	153.05
Fisherman's Landing Raw	634.55	2.24	21,336.85	53.41	153.05
Gladstone WTP	634.55	2.24	34,110.18	175.17	357.11
Gladstone City	634.55	2.24	38,222.76	175.17	357.11

Pricing zone	Storage	Storage	Delivery	Delivery	Admin
Gladstone WTP to South Gladstone	634.55	2.24	41,119.52	175.24	357.11
Calliope	634.55	2.24	61,649.51	199.22	357.11
South Gladstone to Toolooa	634.55	2.24	50,932.63	180.18	357.11
Boyne Potable	634.55	2.24	69,535.70	180.61	357.11
Benaraby	634.55	2.24	90,574.75	216.83	357.11
Yarwun WTP	634.55	2.24	42,908.76	156.44	357.11
North Industrial Potable	634.55	2.24	53,441.46	162.64	357.11
Fishermans Landing Potable	634.55	2.24	101,209.30	162.64	357.11
Boat Creek to East End	634.55	2.24	162,719.79	258.76	357.11
Curtis Island	634.55	2.24	193,306.53	484.32	357.11

Note: Delivery access charges are shown as monthly amounts. The annual price per reserved MDQ is 12 times the monthly amount.
Source: QCA analysis.

Table 52: Average price per contracted ML for 2025-26: Hydrogen vs no-hydrogen

Pricing zone	With hydrogen	Without hydrogen	Difference (%)
Awoonga	693.93	687.42	(1)
Awoonga to Toolooa	1,282.82	1,208.09	(6)
Toolooa to Fitzsimmons	1,388.87	1,316.66	(5)
Boyne Raw	2,402.38	2,316.64	(4)
Central Raw	1,509.37	1,444.28	(4)
Fitzsimmons to Gladstone	1,425.09	1,352.79	(5)
QAL	1,566.57	1,493.26	(5)
Fisherman's Landing Raw	2,029.95	1,960.88	(3)
Gladstone WTP	2,738.52	2,657.76	(3)
Gladstone City	2,897.89	2,816.88	(3)
Gladstone WTP to South Gladstone	3,068.91	2,985.03	(3)
Calliope	3,811.71	3,721.96	(2)
South Gladstone to Toolooa	3,487.89	3,402.26	(2)
Boyne Potable	4,259.59	4,167.09	(2)

Pricing zone	With hydrogen	Without hydrogen	Difference (%)
Benaraby	5,417.08	5,318.71	(2)
Yarwun WTP	3,739.18	3,515.37	(6)
North Industrial Potable	4,285.81	4,045.35	(6)
Fisherman's Landing Potable	8,310.19	8,805.93	6
Boat Creek to East End	20,137.82	13,015.06	(35)
Curtis Island	23,798.78	23,584.06	(1)

Source: QCA analysis.