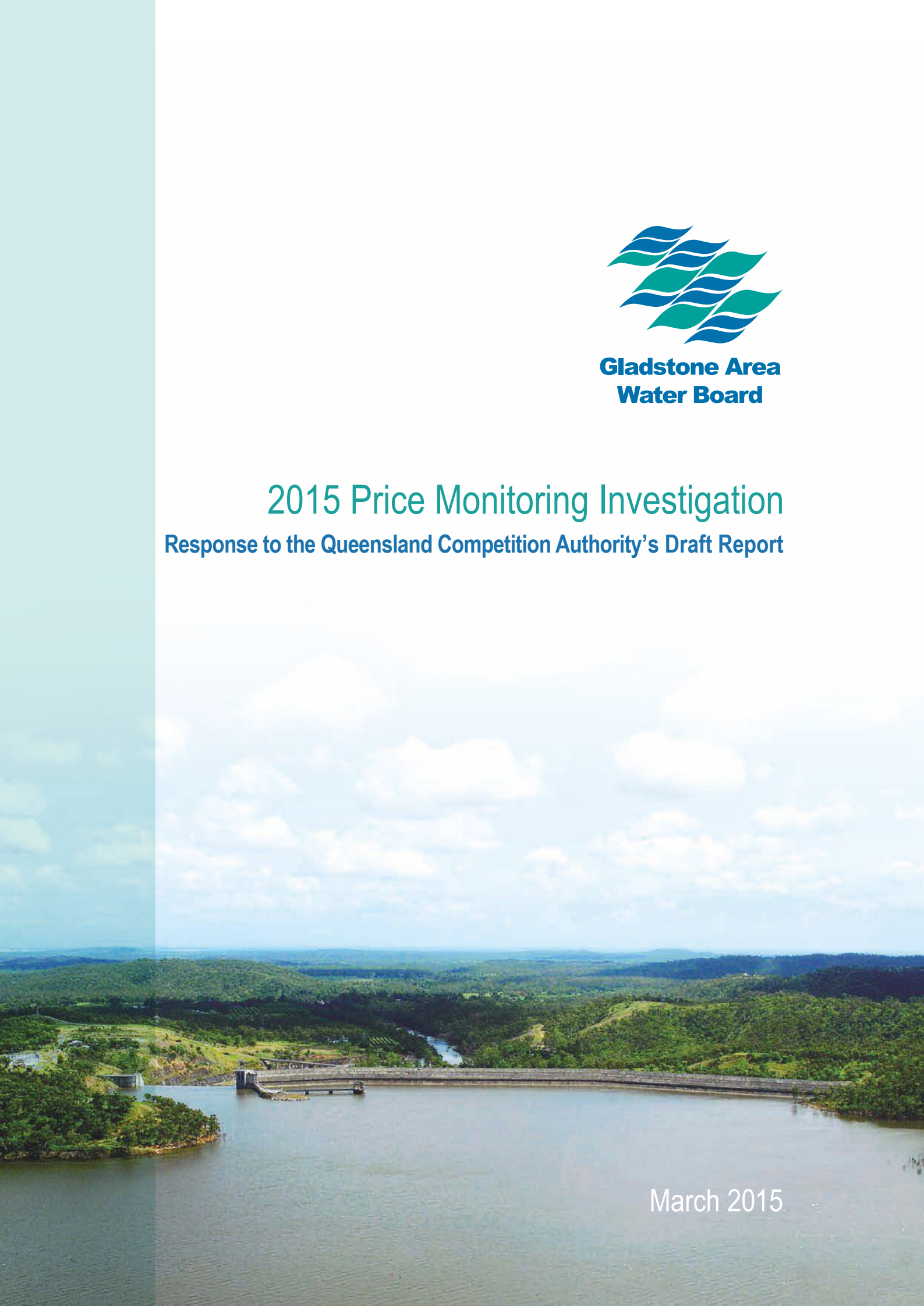
Gladstone Area Water Board

2015 Price Monitoring Investigation

Response to the Queensland Competition Authority's Draft Report



March 2015

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2015 Price Monitoring Investigation

Gladstone Area Water Board's Response to the QCA's Draft Report

Gladstone Area Water Board

Executive Summary

Introduction

In this submission, Gladstone Area Water Board (GAWB) has only responded to issues where the Authority has disagreed with the position stated in GAWB's initial submission. Collectively, these disputed issues account for less than 2% of proposed operating expenditure and approximately 10% of proposed capital expenditure. GAWB's indicative prices would be within 1% of the Authority's if not for the impact of two changes in circumstances (an updated demand forecast and the consequential requirement to augment capacity in the North Industrial Potable zone, both discussed further below).

Operating expenditure

GAWB accepts the Authority's recommendation for the adoption of different electricity cost escalators. However, GAWB believes that Jacobs has incorrectly estimated the extent to which the introduction of variable speed drives (VSDs) at the Gladstone Water Treatment Plant (GWTP) will reduce peak load and energy consumption. GAWB submits that the overall reduction in electricity costs will be immaterial to delivered water prices.

GAWB submits that the Authority has misinterpreted Jacobs' recommendation with respect to staffing levels, and that Jacobs did not intend that overall costs should be reduced. GAWB also submits that Jacobs erred quantitatively in the recommended reallocation of one Full Time Equivalent employee (FTE) from Asset Life Cycle Management (ALCM) to Operations, with the net effect being an unintended reduction of staff costs by $98,000.

Capital expenditure

Awoonga Dam pump station

GAWB identified several options to mitigate the risk of the failure of the Awoonga Dam pump station, and determined that a solution involving an offline storage and repump station should be the preferred option. In its review, Jacobs disagreed that mitigation of the risk associated with the transfer of raw water from Awoonga Dam to Toolooa is required, but acknowledged the need to provide for inspection of critical infrastructure at Awoonga Dam. On this basis, Jacobs recommended that the installation of a pontoon pump station was a lower cost solution than GAWB's preferred option.

GAWB engaged external experts to review the pontoon pump solution. This review concluded that the solution would pose unacceptable risks to employees, public, and property during flood events. GAWB also notes that Jacobs' capital costs were derived from concept designs rather than from detailed designs (as used for GAWB's cost estimates of its preferred solution) and should therefore have additional contingency allowance applied. The price impact of adopting Jacobs' recommended solution is negligible when compared to GAWB's preferred solution.

GAWB therefore submits that the offline storage solution is technically superior to Jacobs' recommended pontoon pump solution (more precisely, the Jacobs' solution has fatal flaws), and provides higher value including deferral of a major asset replacement.

Boat Creek reservoir

The Authority accepted GAWB's argument for augmentation to the Boat Creek reservoir, but recommended a smaller augmentation than that proposed by GAWB. GAWB acknowledges that if it decides to undertake a larger augmentation than that recommended by the Authority, GAWB will need to justify the efficiency of the investment before the additional costs are included in the Regulated Asset Base (RAB) and recovered in prices from 1 July 2020. Prices will be set based on the costs of the Authority's recommended smaller augmentation.

Rate of return on investment

For the purposes of developing indicative prices, GAWB has adopted the Weighted Average Cost of Capital (WACC) recommendation and parameters outlined in the Authority's draft report.

GAWB respectfully requests that the Authority reconsider its approach to specifying a benchmark rate of return on investment. GAWB submits that its proposed trailing average cost of debt approach is preferable to the Authority's "on the day" approach (for reasons articulated in GAWB's initial submission). Further, the Authority's methodology for implementing its "on the day" approach is complex, lacks transparency and is difficult for stakeholders to replicate; should the Authority retain this approach, GAWB submits that the Authority should adopt the Reserve Bank of Australia (RBA) data series to estimate the debt risk premium (DRP), rather than the Authority's in-house approach.

GAWB encourages the Authority to consider the benefits to all stakeholders of adopting a national standard approach (that is, the approach adopted by the Australian Energy Regulator (AER)). GAWB also submits that using the AER's WACC framework, as GAWB has proposed, should be acceptable to Authority as a reasonable benchmark.

Regulatory framework

Form of regulation (size of the deadband)

The Authority has recommended a 10% revenue deadband based on approaches that the Authority contends are used in other jurisdictions. GAWB submits that the Authority has incorrectly compared deadbands based on water sales volumes with deadbands based on total revenue. The examples that the Authority has cited from other jurisdictions are for 10% ***volume*** rather than ***revenue*** deadbands; fixed charges mean that the equivalent total ***revenue*** deadband is 5% or lower in the examples cited. GAWB submits that it would not be able to retain financeability ratios consistent with the level required for a 'Ba' credit rating if total revenue fell by 10%.

Form of regulation (temporary revenue cap)

The Authority recommended that a 5% revenue deadband be applied to the proposed temporary revenue cap on delivery services. GAWB respectfully requests that the Authority reconsider this recommendation because:

1. it is not in customers' interest to remove the pure revenue cap protection;
2. it is not reasonable for the Authority to only accept transition measures that unambiguously favour customers without accepting the measure that allocates risk between GAWB and the customers; and
3. GAWB contends that its proposal provides an appropriate incentive to negotiate higher maximum daily quantities (MDQs) and to find new customers.

Short-duration contract surcharge

GAWB accepts the Authority's recommendation that contract surcharges only be applied where a customer entered into short-duration contracts for all connections. However, GAWB proposes changes to the Authority's drafting in relation to refunding these surcharges to remove potential ambiguity.

Over-run charges

GAWB accepts the Authority's recommendation that over-run charge revenue (net of costs) be rebated to customers. However, GAWB proposed changes to the Authority's drafting in relation to refunding these charges to remove potential ambiguity.

Demand

Whilst customers have generally confirmed their expected volume and MDQ requirements for the next five years, final commitments have not yet been received from some customers. Total contracted volumes are expected to be lower than was previously forecast, however in some zones demand has increased (with consequences for supply capacity as discussed below).

North Industrial Potable capacity upgrade

Customers served by the Yarwun Water Treatment Plant (YWTP) have indicated an intention to contract for demands that, in aggregate, exceed the plant's capacity. In this context, GAWB is pursuing options to augment the potable water supply in the area. GAWB's currently preferred option for this augmentation has an estimated capital cost of $6.6 million, and this estimate has been adopted for the purposes of calculating indicative prices. GAWB is currently consulting with affected customers with respect to this proposed augmentation. Final tariffs notified to customers will include capital expenditure based on the preferred augmentation solution at that time having regard to the outcome of consultation with customers, final demand commitments and refined cost estimates.

Indicative prices

GAWB's indicative prices for the period from 1 July 2015 to 30 June 2016 (2016[1]) are set out in Table 1 below. For ease of comparison with existing prices, delivery prices are expressed in $/ML of annual volume reservation.

Table 1: Indicative 2016 water prices by pricing zone

Pricing zone	2011 Prices indexed to 2016 $/ML	Indicative 2016 prices $/ML	Difference $/ML	Difference %
Awoonga	532	392	–140	–26%
Boyne Raw	1,152	1,000	–152	–13%
Central/Mt Miller Pipeline/Hanson Rd Pipeline	1,026	825	–201	–20%
QAL	962	791	–171	–18%
Fisherman's Landing Raw	1,964	1,284	–680	–35%
Gladstone City*	1,627	1,468	–159	–10%
GWTP to South Gladstone*	1,624	1,492	–132	–8%
Calliope*	2,380	1,936	–444	–19%
South Gladstone to Toolooa	1,933	1,709	–224	–12%
Boyne Potable*	2,263	2,005	–258	–11%
Benaraby*	3,049	2,745	–304	–10%
North Industrial Potable	2,672	2,331	–341	–13%
Fisherman's Landing Potable*	7,666	6,067	–1,599	–21%
Boat Creek to East End*	8,358	7,794	–564	–7%

* Gladstone Regional Council (GRC) has off-takes in each of these seven pricing zones. The average indicative 2016 price for water supplied to GRC is approximately 9% lower than the current average price.

[1] The date conventions used in this document identify financial years by reference to the calendar year in which they end.

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Glossary

Term	Meaning
AER	Australian Energy Regulator
ALCM	Asset Life Cycle Management
AROR	Allowed Rate of Return
Authority	Queensland Competition Authority
Base Year	2015, i.e. the year ending 30 June 2015
CAPEX	Capital Expenditure
CSS	Contingent Supply Strategy
CUIA	Common Use Infrastructure Agreement
current regulatory period	2011–2015, i.e. the five year period ending 30 June 2015
DRP	Debt Risk Premium
ESC	Essential Services Commission (Victoria)
FFO	Funds from Operations
FTE	Full Time Equivalent
GAWB	Gladstone Area Water Board
GRC	Gladstone Regional Council
GWTP	Gladstone Water Treatment Plant
ICRC	Independent Competition and Regulatory Commission (Australian Capital Territory)
IPART	Independent Pricing and Regulatory Tribunal (New South Wales)
kL p.a.	Kilolitres per annum
kW	Kilowatts
LNG	Liquefied Natural Gas
MDQ	Maximum Daily Quantity
ML	Megalitres
next regulatory period	2016–2020, i.e. the five year period ending 30 June 2020
PwC	PricewaterhouseCoopers
QCA	Queensland Competition Authority
QTC	Queensland Treasury Corporation
RAB	Regulated Asset Base
RBA	Reserve Bank of Australia
VSD	Variable Speed Drive
WACC	Weighted Average Cost of Capital
WTP	Water Treatment Plant
YWTP	Yarwun Water Treatment Plant

2015 Price Monitoring Investigation

Gladstone Area Water Board's Response to the QCA's Draft Report

Gladstone Area Water Board

1 Introduction

This submission sets out GAWB's response to issues raised in the Authority's *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*.

GAWB would like to acknowledge the diligence and professionalism of the QCA team and its consultants during this price monitoring review. The QCA team's approach to this investigation was professional, focussed and consultative, which is acknowledged by GAWB. Regulation that exhibits these hallmarks advances the interests of GAWB and its customers alike.

In this submission GAWB has responded only to issues where the Authority has disagreed with a position in GAWB's initial submission. Because the focus is on remaining points of disagreement, a reader might conclude that there are many significant differences between GAWB's preferred pricing practices and the Authority's recommendations. However, GAWB and the Authority agree over 98% of the required operating expenditure and approximately 90% of the required capital expenditure. Given the large number of inputs to be settled to generate prices, the number of issues is small.

Indeed, despite requesting some changes to Authority's recommendations, GAWB's indicative prices would be within 1% (the materiality threshold) of the Authority's indicative tariffs in every zone if not for the impact of two changes, namely:

- an updated demand forecast; and
- the consequential requirement to augment capacity in the North Industrial Potable zone.

1.1 Approach in this Response to the Draft Report

Table 2 assigns GAWB's response to issues where the Authority has disagreed with a position in GAWB's initial submission into three categories:

1. GAWB agrees (where GAWB agrees that the Authority's recommended approach is preferred, and has adopted the approach);
2. GAWB accepts (where GAWB does not agree that the Authority's recommended approach is preferred, but GAWB recognises that it is the Authority's role to make such recommendations); and
3. GAWB does not accept (where GAWB considers that the Authority's recommendation is inappropriate and respectfully requests that the Authority modify its recommendation).

Where GAWB does not accept the Authority's recommendation, indicative prices set out in Section 10 reflect GAWB's preferred approach.

Table 2: Disposition of issues where the Authority has disagreed with GAWB's proposal

Reference	Issue	GAWB Agrees	GAWB Accepts	GAWB Does Not Accept
Section 2.1	Electricity cost escalators	✓		
Section 2.1	Other electricity cost efficiencies			✓
Section 2.2	Staffing costs			✓
Section 3.1	Offline storage and repump station			✓
Section 3.2	Boat Creek reservoir augmentation	✓		
Section 4	Benchmark rate of return on investment		✓	
Section 5.1	The size of the deadband applied to the hybrid price/revenue cap form of regulation			✓
Section 5.2	The deadband applied to the temporary revenue cap on delivery services			✓
Section 5.3	Refunding short-duration contract surcharge revenue to customers		✓	
Section 5.4	Refunding over-run charge revenue to customers		✓	
Section 5.5	Rate of escalation of the grandfathered volume-based tariffs		✓	
Section 5.6	Use of the average daily quantity in the peak month as the MDQ for connections where GAWB controls the flow rate		✓	
Section 6	Roll-in of previously deferred Contingent Supply Strategy (CSS) costs.		✓	

2 Operating expenditure

The Authority accepted some 98% of GAWB's proposed operating expenditure as efficient. Only two significant changes to GAWB's inputs were recommended, in relation to:

- electricity costs; and
- staffing levels.

Each of these issues is discussed below.

2.1 Electricity costs

Jacobs recommended different electricity cost escalators than those proposed by GAWB. These escalators are based on more recent information and, in some cases, a different approach to estimating the future costs of components comprising GAWB's delivered electricity price. The Authority has adopted Jacobs' recommended electricity cost escalators. GAWB accepts the Authority's recommendation.

The Authority also reduced forecast electricity costs based on expectations of savings associated with the installation of VSDs at GWTP.

> In addition to GAWB's identified savings, Jacobs identified that the installation of VSDs at the Gladstone WTP will reduce electricity consumption and the peak load from 2016–17. Jacobs estimated that this could result in savings of 20% … Based on the net cost of electricity at the Gladstone WTP (Jacobs 2015) we consider a reasonable estimate of annual electricity savings to be $52,000 in 2016–17, increasing to $59,000 in 2019–20.[2]

GAWB agrees that the upgraded VSDs will reduce electricity consumption and peak demand. However, GAWB's analysis shows that the expected consumption and peak demand reductions are minimal and certainly much less than 20% of the total GWTP costs.

The use of synchronous reluctance motors may offer a small improvement in motor efficiency, in the region of 1%, over the proposed operating range. At this stage of the project, it is not clear if synchronous motors are available in the size required for this application as the catalogue supplied by Jacobs had a maximum size of 315kW in the high efficiency range, compared to the 410kW/450kW required.

GAWB calculates that the reconfiguration of the pumps will result in a lower volume-head and therefore lower pumping requirements. The reduction in volume-head is approximately 1.5%. Applying a 1.5% reduction to the variable components of energy costs for GWTP gives an annual energy saving that is immaterial.

The indicative prices presented in Section 10 are based on the Authority's recommended electricity cost escalators but no cost savings from installation of the VSDs.

[2] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 17

2.2 Staffing levels

2.2.1 ALCM staffing

The Authority's draft report recommends the reduction of two FTEs but accepts the operating expenditure as determined by Jacobs, which is calculated on the reduction of one FTE. GAWB submits that in making this recommendation, the Authority has misinterpreted the Jacobs report. In addition, Jacobs has made an error in determining the carry forward in the reduction in costs.

Jacobs' initial analysis of ALCM expenditure led GAWB to identify an error in the submission: the misclassification of a treatment plant operator as a maintenance worker.

Jacobs correctly reported this error once it was identified by GAWB and recommended reallocation of one FTE from ACLM to Operations.

Jacobs states:

> ALCM FTEs have increased from 19 FTEs in 2010 to 35.5 FTEs in 2015. We are of the opinion that an additional 15.5 FTEs from the 2010 level is justified for ALCM based on the additional responsibilities and obligations of the organisation. We recommend resolution of the misclassification of a water treatment plant operator position.[3]

The Authority's draft report states:

> Jacobs accepted the additional expenditure to be prudent, but found that one of the additional 16.4 FTEs was considered not efficient and one mechanical fitter was misclassified as an ALCM staff member when the position should be a WTP operator.[4]

For clarity, table I.8 of the Jacobs report[5] identifies GAWB's proposed ALCM FTE of 35.5 and Jacobs' recommended FTE of 34.5. Jacobs recommend the reduction of ALCM staffing by one FTE only.

The calculation of the reduction in ALCM staffing cost was completed by Jacobs using GAWB 2015 data. Jacobs recalculated ALCM staffing expenditure based on 34.5 FTE using a simple average cost approach rather than position based approach. The value of the one position is deducted from the base operating expenditure cost. The amended 2015 expense was then carried forward and inflation applied for 2016 and subsequent years. This approach inadvertently excluded other employment costs included within GAWB's 2016 forecast.

A spreadsheet detailing this information was provided to Jacobs on 2 February 2015, however the updated values have not been reflected in Jacobs report. The adjustment will result in an increase in Jacobs/QCA stated value by $100,000.

GAWB requests that the Authority carry forward only the reallocation of one position to the value of approximately $98,000. For the avoidance of doubt, GAWB agrees with the reallocation of one FTE from ALCM to Operations.

2.2.2 Operations staffing

The misclassification of the WTP operator was not reallocated to the cost of Operations staffing.

In reducing the expenditure for ALCM maintenance Jacobs failed to recognise the resultant increase in Operations expenditure arising from the correct allocation of the treatment plant operator. Table H.7 of the Jacobs report[6] recognises the requirement for

[3] Jacobs, *GAWB 2015–20 Review of Capex and Opex – Final Report*, February 2015, pages 9, 26, 39 & I-1

[4] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 10

[5] Jacobs, *GAWB 2015–20 Review of Capex and Opex – Final Report*, February 2015, page I-9

[6] Jacobs, *GAWB 2015–20 Review of Capex and Opex – Final Report*, February 2015, page H-8

10.2 FTE Water Treatment Plant operators. However, the costs reflect just 9.2 FTE (Jacobs did not add the costs of the reallocated staff member).

GAWB submits that the cost for the reallocated WTP operator should be included in the total cost for Operations staffing. This will result in costs increasing by $98,000 in 2016.

2.2.3 Summary

GAWB expects that a review of the Jacobs report will confirm that no overall reduction in staffing costs was intended. The indicative prices presented in Section 10 therefore are based on GAWB's original proposal for staffing costs.

3 Capital expenditure

The Authority accepted some 90% of GAWB's proposed capital expenditure as efficient. Only two significant changes to GAWB's inputs were recommended, in relation to:

- the offline storage and repump station; and
- the Boat Creek reservoir augmentation.

Each of these issues is discussed below.

3.1 Offline storage and repump station

GAWB's analysis of system risks has identified Awoonga Dam pump station as a major network risk. Failure of the pump station could result in GAWB being unable to supply water for up to 14 days.

GAWB identified options to mitigate this risk, including:

- an offline storage and repump station, geographically remote from Awoonga Dam; and
- a floating pontoon pump station.

The offline storage solution was determined to be superior on a number of grounds. In particular, the offline storage:

- allows inspection of critical infrastructure at Awoonga Dam;
- allows the Awoonga Dam to Toolooa reservoir pipelines to be temporarily removed from service for inspection and maintenance;
- defers replacement of the DN700 pipeline from Awoonga Dam to Toolooa reservoir; and
- provides a 14 day alternative supply of water independent of the prevailing conditions at Awoonga Dam (if an outage of Awoonga Dam pump station occurs at a time when the dam is nearly full or spilling, then the pontoon pump station could not be deployed).

Jacobs conceded that dam safety required that GAWB be able to undertake inspection of critical infrastructure at Awoonga Dam. Jacobs, however, considered that the least cost method of meeting this requirement was to install a pontoon pump station.[7]

The Authority accepted Jacobs' analysis and recommended that the capital programme include $11.99 million[8] for the pontoon pump station rather than $21.95 million for GAWB's proposed offline storage.

GAWB does not accept that the pontoon pump solution is superior (or indeed feasible). In particular GAWB submits that:

- a pontoon pump station poses unacceptable risk to public safety and GAWB's workforce;
- the differential price impact of the pontoon pump station is negligible when compared to GAWB's proposed offline storage (and therefore it is not in customers' interest to substitute the pontoon pump station for the proposed offline storage);
- the capital cost estimates for the pontoon pump station and offline storage used by Jacobs are not comparable (and if made comparable, then the offline storage is preferred based on the negligible price impact); and
- the offline storage offers significant additional value for customers.

[7] Jacobs, *GAWB 2015–20 Review of Capex and Opex – Final Report*, February 2015, pages 3, 22, 31 & Appendix B

[8] Jacobs, *GAWB 2015–20 Review of Capex and Opex – Final Report*, February 2015, page 26

3.1.1 Risk to public safety and GAWB's workforce

As a result of Jacobs' recommendation, GAWB revisited the pontoon pump solution and engaged David Murray of CDM Smith, who has 39 years experience in the planning, design and construction phases of major water infrastructure projects in Queensland including dams, weirs and large diameter pipelines.

The review by CDM Smith recommended that the pontoon pump station not be adopted. This recommendation is based on the identification of significant dam safety and workplace health and safety risks, where the mitigation strategies were not viable or reliable. The CDM Smith report is attached as Appendix A.

CDM Smith concludes, and GAWB agrees, that the risk associated with routine activities on a pontoon pump station, though not desirable, can be mitigated. The risks that cannot be sufficiently mitigated are those associated with non-routine activities during emergency situations, such as retrieving the pontoon in a flood event. The risk is unacceptable to GAWB and unlikely to be acceptable to other operators.

Also of importance is the security of the pontoon during a flood event. The pontoon pump is 14m long, 8.5m wide, 78 tonnes in weight, secured by two land-mounted anchor points and an underwater anchorage. There is a credible risk that the pontoon could become untethered and the likelihood of this occurrence increases with the severity of the flood event as water velocities, wave action and debris load increase accordingly. The consequence may be the partial blocking of the spillway resulting in a reduction of spillway capacity leading to overtopping of the dam and dam failure or the pontoon passing over the spillway creating the potential for significant physical damage to the spillway, associated services and downstream infrastructure. In addition, 105m of floating pipeline, if not recovered, would result in a similar outcome (but more likely to partially block the spillway than downstream infrastructure).

It is worth noting that notification times for extreme weather events may be short. In January 2013 the flood forecasting models, using Bureau of Meteorology 4-day rainfall forecasts, did not predict that the water level in Awoonga Dam would rise above 48m until the reservoir had reached 43.4m. The 4.6m rise occurred within 33 hours. The dam rose most rapidly from 43m to 47m in just 23 hours. If relocation of the pontoon did not commence until the water level reached 48m, the dam would at this point be spilling at a velocity of 4.8ML per second.

In simple terms: it is not safe for GAWB staff to recover the pontoon in a flood event and it is not safe for the pontoon to remain floating during a flood.

Finally, CDM Smith contrasted the proposed pontoon pump station with the existing floating pump station on Eungella Dam (upon which the concept was modelled). The Eungella Dam pump station is on a much smaller dam with no immediate downstream population at risk. Moreover, the decision to accept the risks associated with a pontoon pump station at Eungella Dam was based in part on the fact that two backup storages (with more than 14 days storage) were included in the project. Therefore the risk profiles of the two installations are significantly different.

3.1.2 Price impact

Jacobs made its recommendation in favour of the pontoon pump station based on a significantly lower estimated capital cost. However, the forecast economic life of the pontoon pump station is much lower than that of the offline storage assets (25 years[9] compared to a weighted average economic life of 76 years).

The effect of the shorter economic life is to significantly increase the depreciation component of prices. Moreover, under the Authority's recommended approach to inflation indexing the RAB, a significant proportion of the costs of the offline storage will be appropriately charged to future users of the asset, reducing the cost to current users.

Under the WACC assumptions set out in the Authority's draft report, the price impact of the proposed offline storage is approximately $22/ML. The price impact of the proposed pontoon pump station is approximately $20/ML. That is, the difference in price impact ($2/ML) is negligible, given the uncertainty of cost estimates associated with the pontoon pump station (i.e. developed from a concept study).

GAWB has provided a model setting out the price impacts of the pontoon pump station and the offline storage to the Authority.

3.1.3 Capital costs

GAWB submits that the capital cost estimates used by Jacobs to conclude that a pontoon pump solution is preferred are not comparable.

GAWB's capital expenditure proposal is based on a detailed design and relevant recent experience with civil contracting costs in the region. It includes a contingency of 30%, typical for a project of this nature that has reached Preliminary Design stage.

The cost of the pontoon pump solution, on the other hand, is estimated from a concept design, but also includes a contingency allowance of 30%. A 50% contingency would generally be considered appropriate for a feasibility/concept level of design, particularly where there are major unknowns and deficiencies in the concept design (as in this case).[10] Further, some key requirements for the Pontoon Pump Station appear to have been overlooked.[11] It is very likely that a detailed design would result in a higher cost estimate.

If the costings for the pontoon pump station are adjusted to make them more comparable, then the pontoon pump station would have a greater price impact than GAWB's proposed offline storage solution. It is noted that the costings for the pontoon pump station option do not include allowance for replacement of the DN700 Awoonga Dam to Toolooa Reservoir pipeline, which will cost in the order of $40 million over the next 20 year period.

3.1.4 Summary

The pontoon pump solution has fatal flaws: a floating pump station entails public safety risks, GAWB employee safety risks, dam safety risks and risks of damage to downstream infrastructure than cannot be reliably mitigated.

Even if the risk issues could be resolved at no cost, the pontoon pump solution would result prices that are at best $2/ML lower, and likely higher, than the offline storage solution.

Finally, the offline storage solution offers significant additional value to customers.

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[9] CDM Smith, *Response to QCA Draft Report – Review of Pontoon Pump Station Option*, March 2015, page 6-1

[10] CDM Smith, *Response to QCA Draft Report – Review of Pontoon Pump Station Option*, March 2015, page 8-1

[11] CDM Smith, *Response to QCA Draft Report – Review of Pontoon Pump Station Option*, March 2015, page 4-2

The indicative prices presented in Section 10 therefore are based on GAWB's original proposal for the offline storage and repump station.

3.2 Boat Creek Reservoir augmentation

GAWB proposed an augmentation to the Boat Creek reservoir, largely to target levels of risk storage in accordance with GAWB's network security standards.

The Authority accepted the requirement for additional storage but found that GAWB had not justified the scale of the proposed augmentation and recommended a smaller augmentation.[12]

GAWB accepts the recommendation for the purposes of the capital expenditure programme used to develop prices.

At the time of the augmentation, GAWB will be better informed on the costs of different augmentation scaling options as well as customer demand commitments. GAWB acknowledges that if it decides to undertake a larger augmentation than that recommended by the Authority, as it is a more efficient option at that time, GAWB will need to justify the efficiency of the investment before the additional costs are included in the RAB and recovered in prices from 2021.

The indicative prices presented in Section 10 therefore take into account the recommendation in the Authority's draft report.

[12] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 27

4 Rate of return on investment

GAWB accepts that it is the Authority's role to specify a benchmark rate of return on investment.

Prices are very sensitive to the rate of return on investment. Because it would materially affect price, it is problematic for GAWB to adopt an approach different from that recommended by the Authority (notwithstanding that GAWB, Queensland Treasury Corporation (QTC) and other jurisdictional regulators see merit in alternative approaches). In particular, adopting an approach different from that recommended by the Authority could lead the Authority to incorrectly conclude that GAWB was abusing its monopoly power. To reduce this risk, GAWB will adopt the methodology recommended by the Authority in its final report.

However, GAWB respectfully requests that the Authority reconsider its approach to specifying a benchmark rate of return on investment as discussed below.

4.1 Trailing average cost of debt is superior to an "on the day" approach

GAWB submits that the proposed trailing average cost of debt approach is preferable to the "on the day" approach.

As discussed in GAWB's initial submission,[13] the benefits of using a trailing average cost of debt in the WACC calculation are that:

- GAWB can adopt more typical debt portfolio refinancing practices (refinancing 10% of its debt portfolio each year, rather than attempting to refinance the entire portfolio over a few weeks at every price review); and
- prices will be more stable over time as only 10% of the cost of debt is re-priced each year based on the prevailing benchmark debt yield.

The AER has confirmed that it will use a trailing average approach that applies to the total 10-year benchmark debt yield to determine the cost of debt allowances for more than 30 regulated gas and electricity network businesses across Australia with total assets in excess of $100 billion.

GAWB considers there are benefits in using a cost of debt approach that has received broad support at the national level. Consistency of approach will reduce the costs of regulatory reviews, reduce uncertainty for investors (both in utilities and projects with significant exposure to utility costs). GAWB submits that the Authority should facilitate standardisation by adopting a trailing average approach that applies to the total 10-year benchmark debt yield, which is consistent with the AER's approach.

GAWB notes that the AER's trailing average approach is the outcome of an extensive consultation process that involved consumer groups, regulated network businesses and other interested parties. This approach is considered by the AER to achieve the allowed rate of return objective (AROR), which requires the cost of debt to be "commensurate with the efficient financing costs of a benchmark entity". Achieving the AROR is a formal requirement under the National Electricity Rules and the National Gas Rules.

[13] GAWB, *2015 Price Monitoring Investigation – Submission to the Queensland Competition Authority*, September 2014, page 59 *et seq*

4.2 GAWB has proposed a reasonable benchmark

The terms of reference require the Authority to "consider the WACC applied by GAWB against the benchmark WACC".[14] The Authority has selected a benchmark WACC based on its preferred methodology (or its previously preferred methodology where it has yet to conclude its current WACC methodology review).

GAWB submits that using a cost of debt approach that is consistent with the AER's approach should be acceptable to the Authority. The fact that the Authority has not yet determined its final cost of debt approach should not be used to dismiss GAWB's proposal, which is orthodox and consistent with the views of a national regulator. By using an approach that has been endorsed by a national regulator, GAWB's proposal should not be seen as unreasonable or an abuse of monopoly power.

That is, GAWB submits that it was appropriate for the Authority to have accepted GAWB's proposed WACC methodology which uses the AER's cost of debt approach, as an acceptable benchmark WACC.

4.3 Modifications to the Authority's cost of debt estimation methodology

Regardless of the whether the Authority uses an on-the-day or trailing average approach, GAWB submits that it should make the following change to its approach for estimating the DRP.

GAWB understands that the Authority has used an 'in house' methodology developed by PricewaterhouseCoopers (PwC) to estimate the DRP rather than rely on estimates produced by a third party provider such as the RBA.

The PwC methodology involves constructing a sample of bonds that meet certain pre-defined characteristics, and collecting the bonds' yields from Bloomberg and UBS (we note that the latter is only available to UBS clients). A curve or 'line of best fit' is then fitted to these yields using regression. The yield for the relevant term to maturity can then be determined from that curve.

The Authority's proposed in-house approach adds considerable complexity to the process, lacks transparency, and is not readily replicable by regulated businesses and stakeholders (presuming that all of the necessary data can be accessed). It is also different to the approach of other regulators. While the Authority has offered to engage PwC to provide this information to GAWB (which will ultimately come at a cost to GAWB and its customers) at the time of it resetting its WACC, this does not overcome the regulatory shortfalls that have been outlined above.

GAWB submits that the Authority should accept that GAWB use the RBA data series (a free publicly available, independent, credible and reliable data source) to estimate the DRP. Because the RBA estimates are currently produced for the last day of each month, there is a risk that this particular day was 'atypical' or influenced by a one-off event or perturbation in the market. GAWB will mitigate against an anomalous data point by taking an average of the most recent three month-ends. GAWB will also adjust the tenor of the RBA's estimates as discussed in GAWB's original submission.[15]

4.4 Summary

GAWB contends that it has proposed a reasonable benchmark WACC. However, to reduce the risk of the Authority incorrectly concluding that GAWB has abused its monopoly power, GAWB will adopt the WACC methodology that is recommended by the Authority in its final report.

For the purposes of developing indicative prices, GAWB has adopted the WACC recommendation and parameters outlined in the Authority's draft report. GAWB intends to reset the WACC parameters in June 2015 based upon the methodology

[14] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 75

[15] GAWB, *2015 Price Monitoring Investigation – Submission to the Queensland Competition Authority*, September 2014, Appendix K

recommended by the Authority in its final report. Because the WACC parameters may change between the Authority's final report and the setting of final prices, a sensitivity analysis in relation to movements in the risk free rate has also been included in Section 10.2.

5 Regulatory framework

This section sets out GAWB's response to regulatory framework issues.

5.1 Form of regulation (size of the deadband)

GAWB proposed a hybrid price/revenue cap with a 5% revenue deadband. The Authority has recommended a deadband of 10% of GAWB's total revenue. The Authority has, in part, selected this value based on reference to other regulatory decisions.

> we recommend a 10% deadband rather than the 5% proposed by GAWB as:
>
> … this more closely aligns with the deadband ranges applied by other jurisdictions, most notably IPART.[16]

GAWB submits that the Authority has incorrectly compared deadbands based on ***water sales volumes*** with deadbands based on ***total revenue***.

NSW's Independent Pricing and Regulatory Tribunal (IPART) has recently set a deadband for Sydney Water (2012) and Hunter Water (2013) of 10% of ***water sales volumes***. The equivalent revenue impact was not stated as (like GAWB) Sydney Water and Hunter Water have price structures that include fixed charges. The equivalent revenue deadband will be much less than 10%.

A typical Sydney Water customer (consuming 200 kL p.a.) would pay a total water and wastewater bill of approximately $1,100, with approximately 65% of that being fixed charges. Assuming an equivalent fixed to variable ratio across all customers, a 10% change in water sales volumes would give rise to a change in total revenue of less than 4%.

A similar analysis for Hunter Water also gives a total revenue deadband of less than 4%.

In its 2014 draft decision the Industry Panel reviewing the 2013 regulatory decision by the ACT's Independent Competition and Regulatory Commission (ICRC) for ACTEW/Icon Water set a deadband of 7% of ***variable water sales revenue***. Because ACTEW/Icon Water has price structures that include fixed charges the equivalent total revenue deadband is much less than 7%. GAWB's analysis from publicly available data similarly shows that a 7% change in water sales revenue would give rise to a change in total revenue of approximately 4%.

GAWB therefore submits that its original proposal of 5% of total revenue is more consistent with other jurisdictions than the Authority's recommendation.

Table 3: Comparison of deadbands set by Australian regulators

	ACTEW 2008	Sydney Water 2012	Hunter Water 2013	Icon Water 2014	GAWB 2015
% of Total revenue	~ 2%	~ 4%	~ 4%	Draft Decision ~ 4%	Proposed 5% Draft Decision 10%
% of Water revenue from variable tariff components	3%			Draft Decision 7%	
% of Sales volume		10%	10%		

In its draft decision, the Industry Panel reviewing ICRC's 2013 regulatory decision for ACTEW/Icon Water set the deadband threshold based on maintaining the financial viability metrics at the minimum revenue level. GAWB supports this approach.

[16] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 47

It is emerging practice for Australian regulators to use four indicators of financeability in considering financial viability, which are based on measures used by Moody's Investors Service in assessing the credit rating of regulated utilities. Table 4 sets out the indicators used by IPART, Victoria's Essential Services Commission (ESC) and the Industry Panel.

Table 4: Target values of financeability ratios used by Australian regulators

	ESC (Vic)	IPART (NSW)	Industry Panel (ACT)
Target credit rating	Not Stated	Baa2	Ba
FFO[17] interest cover	>1.5	1.7–2.5	>1.8
Net debt gearing ratio	<70%	60% to 91%	<85%
FFO to net debt	>10%	6% to 10%	>6%
Retained cash flow to capital expenditure	>0.35	Not Stated	>0.5

Table 5 shows GAWB's financeability ratios based on the regulatory framework assumptions (constant 50% debt) and GAWB recovering its forecast revenue. Note that GAWB does not achieve target levels of FFO to net debt. The FFO interest cover is achieved because interest rates are currently very low. At other times in the interest rate cycle, the Authority's regulatory framework would result in lower FFO interest cover and higher FFO to net debt. GAWB notes that this 'Ba' rating is lower than the assumed 'BBB' rating previously applied by the Authority.

Table 5: GAWB financeability ratios based on forecast revenue

	Target for Ba Rating	2016	2017	2018	2019	2020
FFO interest cover	>1.8	2.21	2.19	2.12	2.17	2.16
Net debt to RAB	<85%	50%	50%	50%	50%	50%
FFO to net debt	>6%	**5.7%**	**5.6%**	**5.6%**	**5.8%**	**5.7%**
Retained cash flow to CAPEX	>0.5	**0.31**	**0.30**	2.18	0.95	0.88

Table 6 shows that its FFO interest cover ratio and FFO to net debt ratio would both fall below the accepted 'Ba' minima if revenue is reduced by 10%.

Table 6: GAWB financeability ratios based on 90% of forecast revenue

	Target for Ba Rating	2016	2017	2018	2019	2020
FFO interest cover	>1.8	1.88	1.83	**1.76**	**1.80**	**1.75**
Net debt to RAB	<85%	51%	52%	53%	54%	55%
FFO to net debt	>6%	**4.2%**	**3.9%**	**3.8%**	**3.9%**	**3.7%**
Retained cash flow to CAPEX	>0.5	**0.23**	**0.22**	1.56	0.69	0.62

The Industry Panel approach and regulatory precedent both point to a revenue deadband of significantly less than 10%. GAWB therefore requests that the Authority reconsider its recommendation and accept GAWB's proposed 5% deadband (which is still wider than deadbands set for other water businesses).

5.2 Form of regulation (temporary revenue cap)

GAWB proposed three measures to protect customers during transition to MDQ-based delivery charges: no overrun charges, ability to restate MDQ, and a grandfathered volume-based tariff. One further measure, the temporary revenue cap on delivery services for existing customers, protects both GAWB and customers.

[17] Funds from operations

The Authority recommended that a 5% revenue deadband be applied to the revenue cap on delivery services.[18] GAWB respectfully requests that the Authority reconsider this recommendation.

Firstly, it is not in customers' interests to remove the pure revenue cap protection. Customers may benefit directly from refund of windfall gains (if customers find that they must increase contract MDQs). Moreover, the temporary revenue cap allows GAWB to offer the other transition measures. That is, it is because GAWB's overall revenue is protected that GAWB can offer complete flexibility to customers to adjust their contracted MDQ over the next regulatory period.

Secondly, it is not reasonable for the Authority to only accept transition measures that unambiguously favour customers without accepting the measure that allocates risk between GAWB and the customers.

Thirdly, it is important to recognise that GAWB does not benefit financially from the move to MDQ-based delivery pricing. Customers benefit from fairer pricing and, over time, lower tariffs because MDQ-based delivery pricing is expected to drive better asset utilisation. It is not appropriate that GAWB is exposed to revenue risk during a transition regime that doesn't financially benefit GAWB but does benefit customers.

Finally, the Authority stated that:

> A pure revenue cap does not provide GAWB with an incentive to negotiate higher MDQs and to find new customers.[19]

GAWB contends that its proposal does provide an appropriate incentive as the temporary delivery revenue cap only applies to those customers transitioning to MDQ-based pricing. For clarity, new customers will not be subject to the proposed transitional arrangements and additional revenue (i.e. from overall higher MDQs) will be subject to the hybrid revenue cap deadbands. GAWB's proposal does therefore *provide GAWB with an incentive* to find new customers.

5.3 Short-duration contract surcharge

In its original submission to the Authority, GAWB requested that the Authority clarify the basis for charging short-duration contract surcharges. The Authority recommended charging surcharges only where a customer entered into short-duration contracts for all connections.[20] GAWB accepts this recommendation. The Authority has previously recommended that short-duration contract revenues should be refunded to customers net of any costs imposed on GAWB.[21] GAWB supports this approach.

However, some of the Authority's statements in the draft report on short-duration contract surcharge introduce some ambiguity into the recommended process for rebating surcharges to customers. GAWB proposes changes to the Authority's drafting to remove the ambiguity.

In its draft report, the Authority states:

> Revenue from surcharges is to be included in the revenue cap and offset against the administration charge.[22]

GAWB does not operate under a revenue cap unless the deadband thresholds are breached. Even if GAWB did operate under a revenue cap (or the revenue cap is triggered by a deadband breach), the short-duration contract surcharge should remain outside of the revenue cap. That is, surcharge revenue (net of GAWB's costs) belongs to customers.

[18] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 48
[19] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 48
[20] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 62
[21] QCA, *Final Report – Gladstone Area Water Board: Investigation of Pricing Practices*, June 2010, page 53
[22] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 62

GAWB submits that the above statement should be modified in the following manner:

> Revenue from surcharges ***(net of GAWB's costs) should be refunded to customers in the next regulatory period. Refunded surcharges should be*** offset against the administration charge.

The indicative prices presented in Section 10 adopt the Authority's recommendation of refunding the short-duration contract surcharge by offsetting the administration charge.

5.4 Over-run charges

The Authority also recommends that over-run charge revenue (net of costs) be rebated to customers. In its draft report, the Authority states:

> In addition to short-duration contract surcharges GAWB may also receive revenue from over-run charges. We find that these should also be included as a deduction in the inter-period carry forward – except where the customer over-run has caused a material increases (sic) in GAWB's costs. In this case, the revenue cap may be increased by the additional cost.[23]

GAWB accepts the principle recommended by the Authority. However, GAWB does not operate under a revenue cap unless the deadband thresholds are breached. To avoid ambiguity, GAWB submits that the Authority's statement should be modified in the following manner:

> In addition to short-duration contract surcharges GAWB may also receive revenue from over-run charges. We find that these should also be included as a deduction in the inter-period carry forward – except where the customer over-run has caused a material ***increase*** in GAWB's costs. In this case, ***the amount refunded to customers should be reduced by the amount of*** the additional cost.

The Authority also has concerns regarding structure of delivery system over-run charges but notes that GAWB has undertaken not to charge for over-runs in the next five years.[24] GAWB agrees that the matter can be considered again in a future review.

5.5 "Grandfathering" of volume-based tariffs

As a transition measure, GAWB proposes to charge customers the lesser of the MDQ-based delivery charge and the "grandfathered" annual volume-based delivery charge.

GAWB proposes to increase the volume-based delivery tariff over time. The rate of increase limits the annual price increase seen by a customer over the transition period.

The Authority recommended a slower rate of increase for the volume-based tariff than was proposed by GAWB.[25] GAWB accepts this recommendation and the indicative prices presented in Section 10 reflect the Authority's recommended volume-based delivery price path.

5.6 Connections where GAWB controls the flow rate

GAWB proposed that connections with flow under GAWB's control should see a price based on maximum 3-day flows.

The Authority recommended that monthly average flows should be used.[26]

[23] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 49

[24] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 59

[25] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 61

[26] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 63

GAWB continues to prefer 3-day flows as a measure of customer "peakiness". This is because while GAWB controls the flow over short periods (less than a few days), the medium-run flow is still a function of customer consumption characteristics. However, GAWB has no new arguments to present to the Authority and therefore accepts the draft decision.

The MDQ demands for connections where GAWB controls the flow rate have been modified to reflect maximum monthly flows. The indicative prices presented in Section 10 reflect the revised forecast MDQs.

6 Contingent Supply Strategy

The Authority rejected GAWB's arguments regarding immediate roll-in of previously deferred CSS costs.[27]

The Authority's position is now that the CSS expenditure would have retained value if the project was shut down soon after the 2008 rain events. GAWB does not accept that this is the case. Respectfully, it is implausible to suggest that a design team can stop work at some arbitrary point and retain the ability to recommence these design works at some unknown future point without substantial impairment in value. GAWB advanced these arguments, supported by expert opinion,[28] in the 2010 pricing investigation but the Authority generally dismissed GAWB's argument without expressing a specific finding on this issue.[29]

GAWB has no new information to present to the Authority.

If the Authority remains unwilling to accept the position submitted by GAWB that it is appropriate as a matter of principle to roll-into current prices those previously deferred CSS costs, GAWB recognises that the Authority has twice considered the matter and, with some reluctance, would defer to the Authority's assessment. This approach is reflected in the indicative prices presented in Section 10.

[27] QCA, *Draft Report – Gladstone Area Water Board: Price Monitoring 2015–2020*, February 2015, page 37

[28] Harrington Construction Consultants, *Gladstone Area Water Board: Expert Report*, December 2009, page 18

[29] QCA, *Final Report – Gladstone Area Water Board: Investigation of Pricing Practices*, June 2010, pages 91–92

7 Procurement

In the draft report, the Authority has referenced a number of comments made by Jacobs in relation to GAWB's procurement policies and practices. GAWB notes that Jacobs did not undertake a systematic review of GAWB's procurement policies and practices, nor did it request any such documents from GAWB. Accordingly, GAWB is compelled to describe these comments as uninformed.

GAWB complies with all aspects of the Queensland Procurement Policy, which details a number of core processes and principles. The primary principle of the policy is ensuring that value for money is achieved.

GAWB achieves this value for money principle through a number of documented procurement mechanisms including supplier quotations, tenders, invitations to offer (limited tender) and standing offer arrangements. The appropriate procurement mechanism to be deployed is dependent upon the circumstances of the case (e.g. a need for specialist skills where there is a limited market, knowledge of GAWB's assets, capability to perform tasks etc.) to ensure the value for money principle is achieved.

For clarity, notwithstanding the exclusions expressed, Jacobs did not find any of GAWB's expenditure inefficient due to its procurement practices.

8 North Industrial Potable zone capacity upgrade

As foreshadowed in GAWB's initial submission, customers served by the YWTP have indicated an intention to contract for demands that, in aggregate, exceed the plant's capacity.

Consequently, GAWB is pursuing options to augment the potable water supply in the area. GAWB's standard contracts require GAWB to consult with customers before committing to a delivery system augmentation.

Based on initial analysis of augmentation options and customer demands, the currently preferred upgrade option is:

- to convert the remaining section of the Hansen Rd pipeline to potable use and supply additional potable water to the North Industrial area from spare capacity at GWTP; and
- construct new raw water spurs from the Mt Miller pipeline to customers currently taking raw water from the Hansen Rd pipeline.

For the purposes of calculating indicative tariffs presented in Section 10, GAWB has added $6.6 million capital expenditure to the North Industrial Potable zone, with expected commissioning at 1 July 2016.

Table 7 shows the indicative price impact of the augmentation for affected zones considering only the capital cost increase. However, when taking into account the fact that the augmentation is driven by significant additional contracted volume, GAWB expects the delivered prices in $/ML to fall (see Section 10.1).

Table 7: Indicative 2016 price impact of the North Industrial Potable zone capacity augmentation

	Price Impact of Augmentation	
	$/ML	%
North Industrial Potable	158	7%
Fisherman's Landing Potable	158	3%
Boat Creek to East End	158	2%

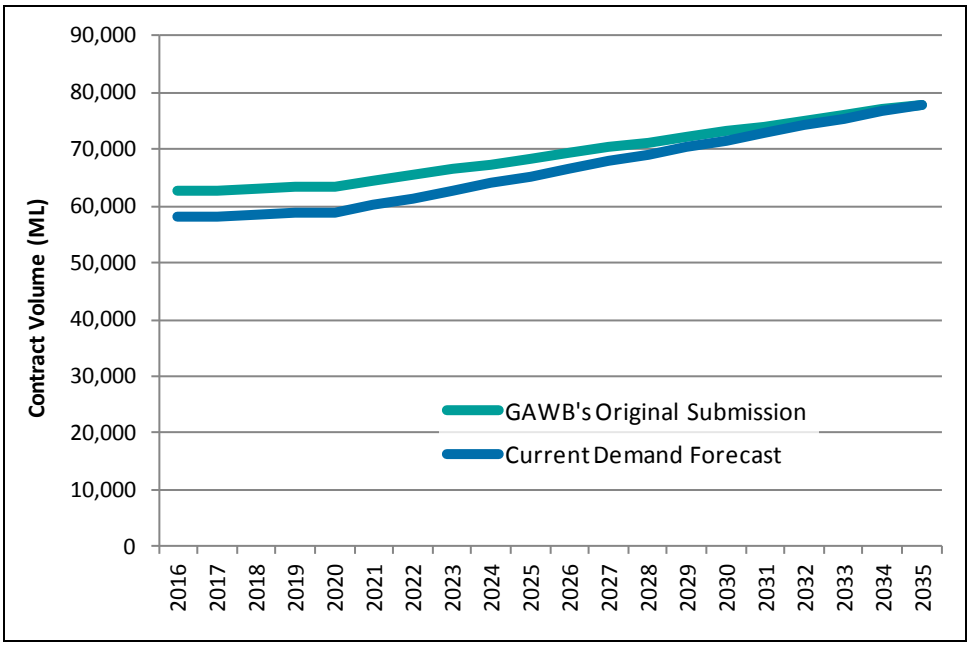
Final tariffs notified to customers will include capital expenditure based on the preferred augmentation solution at that time having regard to the outcome of consultation with customers, final demand commitments and refined cost estimates.

9 Demand

The Authority has accepted GAWB's demand forecasting methodology. Whilst the forecast methodology is now set some changes to the forecast have been made to reflect the latest demand information.

Figure 1 illustrates that, overall, contracted volumes are expected to be lower than was previously forecast. But in some zones, particularly in zones downstream of the YWTP, demand has increased.

Figure 1: Forecast aggregate contract volume



The price impacts are discussed in in Section 10 below.

We note that the demand forecast used to set prices will be finalised prior to 30 June 2015.

10 Indicative prices

This section sets out indicative 2016 prices.

These prices are labelled 'indicative' because several factors could change the level of prices before final prices are struck:

- recommendations by the Authority that are different from those used to set these indicative prices;
- finalisations of demand for pricing purposes; and
- financial market parameters used as inputs for setting the WACC.

The indicative prices set out in Table 8 are based on the following assumptions:

- the Authority's recommendations for electricity cost escalators (but no other changes to electricity costs);
- no changes in staffing costs from GAWB's original proposal;
- GAWB's proposed offline storage and repump station (although the alternative pontoon pump station would make almost no difference to price);
- the Authority's recommended reduction in the scale of the Boat Creek reservoir augmentation
- the WACC recommended by the Authority in its draft report;
- the Authority's recommendations for rebating short-duration contract surcharges;
- the Authority's recommendations for the grandfathered volume-based delivery tariff escalation rates;
- the Authority's recommendations charge based on maximum monthly flows where GAWB controls the flow rate at a connection;
- the Authority's recommendations for the continued deferral of roll-in of the unrecovered portion of CSS costs;
- an augmentation of the North Industrial potable water supply capacity; and
- updated demand forecasts.

10.1 Comparison of prices to GAWB's previous indicative prices

Table 8 compares GAWB's indicative total cost of delivered water (2016) with current prices.[30] For ease of comparison with existing prices, delivery prices are expressed in $/ML of annual volume reservation.

Table 8: Indicative 2016 water prices by pricing zone

Pricing zone	2011 Prices indexed to 2016 $/ML	Indicative 2016 prices $/ML	Difference $/ML	Difference %
Awoonga	532	392	–140	–26%
Boyne Raw	1,152	1,000	–152	–13%
Central/Mt Miller Pipeline/Hanson Rd Pipeline	1,026	825	–201	–20%
QAL	962	791	–171	–18%
Fisherman's Landing Raw	1,964	1,284	–680	–35%
Gladstone City*	1,627	1,468	–159	–10%
GWTP to South Gladstone*	1,624	1,492	–132	–8%
Calliope*	2,380	1,936	–444	–19%
South Gladstone to Toolooa	1,933	1,709	–224	–12%
Boyne Potable*	2,263	2,005	–258	–11%
Benaraby*	3,049	2,745	–304	–10%
North Industrial Potable	2,672	2,331	–341	–13%
Fisherman's Landing Potable*	7,666	6,067	–1,599	–21%
Boat Creek to East End*	8,358	7,794	–564	–7%

* GRC has off-takes in each of these seven pricing zones. The average indicative 2016 price for water supplied to GRC is approximately 9% lower than the current average price.

The higher Awoonga Dam price is primarily caused by the reduction in contract volume discussed in Section 9.

Similarly, the lower price for the North Industrial Potable zone and downstream zones reflects significantly higher contract volumes in those zones.

10.2 Sensitivity of prices to changes in the risk-free rate

Consistent with the Authority's recommendations and as discussed in Section 4, GAWB intends to set the rate of return on investment parameters in June 2015 based upon the WACC methodology recommended by the Authority in its final report.

WACC parameters may change significantly before final prices are set. Table 9 indicates the change in price that would occur if the risk free rate changes by 50 basis points.

[30] GAWB, *2015 Price Monitoring Investigation – Submission to the Queensland Competition Authority*, September 2014, page 28

Table 9: Sensitivity of Prices to Changes in the Risk-Free Rate

Pricing zone	QCA WACC –50bp		QCA WACC	QCA WACC +50bp	
	Difference $/ML	Difference %	Total Indicative Water Price 2016 $/ML	Difference $/ML	Difference %
Awoonga	–13	–3%	392	13	3%
Boyne Raw	–31	–3%	1,000	31	3%
Central/Mt Miller Pipeline/Hanson Rd Pipeline	–24	–3%	825	24	3%
QAL	–22	–3%	791	22	3%
Fisherman's Landing Raw	–37	–3%	1,284	37	3%
Gladstone City	–27	–2%	1,468	28	2%
GWTP to South Gladstone	–29	–2%	1,492	29	2%
Calliope	–40	–2%	1,936	40	2%
South Gladstone to Toolooa	–33	–2%	1,709	33	2%
Boyne Potable	–39	–2%	2,005	40	2%
Benaraby	–54	–2%	2,745	54	2%
North Industrial Potable	–48	–2%	2,331	49	2%
Fisherman's Landing Potable	–100	–2%	6,067	101	2%
Boat Creek to East End	–171	–2%	7,794	172	2%

10.3 Comparison of prices to the QCA draft report indicative prices

Table 10 compares GAWB's indicative total cost of delivered water (2016) shown in Table 8 above with the indicative prices published in the QCA's draft report.

Table 10: Comparison of GAWB's indicative tariffs with those published by the QCA

Pricing zone	Total Indicative Water Price 2016			
	QCA Draft Report $/ML	GAWB Response $/ML	Difference $/ML	Difference %
Awoonga	376	392	16	4%
Boyne Raw	992	1,000	8	1%
Central/Mt Miller Pipeline/Hanson Rd Pipeline	831	825	–6	–1%
QAL	783	791	8	1%
Fisherman's Landing Raw	1,288	1,284	–4	0%
Gladstone City	1,458	1,468	10	1%
GWTP to South Gladstone	1,482	1,492	10	1%
Calliope	1,925	1,936	11	1%
South Gladstone to Toolooa	1,698	1,709	11	1%
Boyne Potable	1,993	2,005	12	1%
Benaraby	2,728	2,745	17	1%
North Industrial Potable	2,484	2,331	–153	–6%
Fisherman's Landing Potable	6,178	6,067	–111	–2%
Boat Creek to East End	7,926	7,794	–132	–2%

11 Curtis Island [Confidential]

In December 2014 the Authority approved GAWB's claim that its submission on the Curtis Island Pipeline was confidential. Accordingly, this chapter has been provided on a confidential basis only to the Authority and the LNG proponents.

Gladstone Area
Water Board