Response to Draft Report Investigation of Pricing Practices

A public submission to the Queensland Competition Authority

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Gladstone Area Water Board

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Executive summary

This document sets out GAWB's responses to the Draft Report of the Authority (published on 12 April) concerning GAWB's pricing practices for the 2010 to 2015 regulatory control period. The Draft Report considered GAWB's submissions concerning its *Commercial Framework and Pricing Principles* (September 2009) and *Expenditure Proposals* (December 2009).

The draft recommendations of the Authority would, if accepted, result in a substantial reduction of regulatory endorsed expenditure. GAWB's expenditure proposals were the product of extensive (internal and external) due diligence and review before submission to the Authority. GAWB is an essential service provider – it is obliged to ensure that it delivers water supply services that are safe, secure and reliable, and is conscious of the enormous consequences of service shortfalls, including:

- major economic consequences to industrial customers (and indirectly to the state and nation)
- health consequences associated with personal use and consumption
- environmental damage to (and around) GAWB's area of operations and
- social injury to the local community.

GAWB is also acutely aware of the need to discharge its duties efficiently, given that it is customers that fund its operations. This is particularly important in an environment of upward pressure on prices, driven by increases in financing costs (which account for approximately one third of the price increase from 2005), other input costs and additional regulatory requirements across a range of functions. Ultimately, GAWB strives to seek the appropriate balance between cost minimisation and the consequences of shortfalls in service.

GAWB recognises that the challenges that confront it are not unique – water service providers (and more broadly essential service providers) across Australia are all experiencing substantial increases in their cost of operations and financial costs. Compliance with the National Water Initiative, agreed in 2004 by the Council of Australian Governments, requires these increased costs to be reflected in prices.

While these challenges are widespread in the water sector, GAWB's operating environment does have elements that are unique:

- Firstly, with $60b of potential investment for the next three to four years in the Gladstone region pending environmental approval, there is inherent uncertainty as to the impacts of such unprecedented investment upon GAWB. This uncertainty extends beyond demand, affecting the cost and availability of staff and other necessary operational inputs.

- Secondly, GAWB's form of economic regulation is unique – it is not part of broader industry oversight involving other water service providers. In addition to the ongoing regulatory review of its Contingent Supply Strategy (CSS), GAWB has been the subject of three price reset investigations by the Authority that have canvassed critical changes and/or developments in its commercial framework, a number of which remain unresolved. The impact of on-going 'flux' as the optimal framework is developed, underscores substantial uncertainty concerning the allocation of risk. This uncertainty is not present in more established regulatory environments.

GAWB does not operate in a stable environment that is capable of simple projection from the status quo nor does it have the benefit of a mature system of regulation. As a business with a relatively small balance sheet and operating base, GAWB has limited ability to absorb the risks arising from any shortcomings in its regulatory settings. The Authority's preliminary finding allocates substantial risk to GAWB and will encourage conduct that focuses unduly on short-term considerations, but which is not consistent with its efficient and sustainable operations over the longer term. GAWB contends that this does not advance the public interest.

GAWB considers that reductions in regulatory endorsed expenditure would damage the business and potentially give rise to adverse customer, safety and business risk outcomes. GAWB will be faced with the decision to either:

- implement expenditure reductions and potentially accept adverse customer, safety and risk outcomes; or
- incur expenditure, unfunded through tariffs, and accept an uneconomic return on investment.

GAWB's response to recommendations

The Authority has made 47 recommendations regarding GAWB's pricing practices for the 2010 to 2015 regulatory control period. GAWB accepts 26 of these recommendations either without further submissions or with minimal comment.

GAWB does not agree with (or does not agree with in their entirety) the Authority's remaining recommendations. GAWB's responses to those individual recommendations are set out in the body of this submission.

Throughout this response, GAWB seeks to clearly state its position in respect of each recommendation made by the Authority. In particular, where GAWB provides comment or disagrees with part or all of a recommendation, it seeks to set out its reasons, unambiguously.

Given the significant consequences that flow from the Authority's review, GAWB submits that, the Authority should:

- give sufficient weight to GAWB's proposal and its detailed submissions; applying an appropriately high threshold test of satisfaction to the modification of GAWB's forecasts; and
- not allocate risk to GAWB through the regulatory framework which GAWB is not able to manage.

In the remainder of this Executive Summary, we provide examples of situations where GAWB considers that the Authority has not given sufficient weight to GAWB's proposal or made recommendations that inappropriately allocate risk to GAWB.

We also provide examples of situations where GAWB accepts the Authority's recommendation in principle, but disputes the specific calculation included in the Draft Report.

Finally there is discussion of the Authority's recommendation for the opening RAB value. GAWB submits that it is not appropriate to adopt the Authority's summary-level valuation (with known errors) over a detailed DORC valuation, which all parties agree best reflects the value of GAWB's assets at 1 July 2005.

Additional review

In its Draft Report, the Authority noted that it intended to undertake an additional benchmarking review (following the publication of the Draft Report) of GAWB's operating costs, 'to provide a more up-to-date analysis and potentially a more informed basis for identifying efficient operating costs'.

This 'benchmarking' review is now underway. GAWB welcomes the additional review and endorses the Authority's decision to engage a second consultant to calibrate its Draft Report findings. GAWB would, however, note its concern that the limited time to complete this review has the potential to inhibit the quality and the robustness of the analyses.

Notwithstanding that the Authority is currently undertaking this second review of GAWB's operating expenditure levels, the Authority has based its Draft Report recommendations on the work undertaken by Davwil and its own analysis. The Draft Report recommends significantly less operational expenditure than GAWB considers necessary and prudent. GAWB considers that it is appropriate to respond in detail to those Draft Report recommendations. Accordingly, GAWB's response is based upon the published position of the Authority.

Insufficient weight given to GAWB's submissions

GAWB recognises that it is the Authority's role to assess GAWB's efficient expenditure. However, in the Draft Report it appears the Authority has not given sufficient weight to GAWB's expenditure submissions and supporting documentation, in many places disregarding and rejecting this information. GAWB's material was developed having regard to its operational and strategic plans, actual expenditure, expert analysis (review) and objective benchmarking.

GAWB believes its expenditure submissions are reasonable and should not be dismissed without cause – on the assumption that its position was overstated because it resulted in a substantial price increase.

GAWB submits that the Authority should consider GAWB's detailed expenditure forecasts for the following reasons:

- GAWB has no history of overstating expenditure forecasts.
- There is no basis to prefer Davwil's forecasts over GAWB's forecasts.
- There is regulatory precedent to support a high threshold for modifying a regulated service provider's proposals.
- The risks of supply failure outweigh the benefit of expenditure reductions.
- The regulatory framework is the preferred method of providing incentives for efficiencies.

Including the CSS investigation, this investigation is the Authority's fourth review of GAWB's pricing practices over almost a decade. GAWB has never misled the Authority (or any other regulator), 'gamed' the regulatory process or undertaken 'strategic forecasting'. The Authority should treat GAWB's proposals as good faith estimates of expected costs of supply.

Economic theory supports the contention that, in circumstances of uncertainty, economic regulators should err on the side of caution before amending proposed expenditure and demand forecasts. If forecasts of critical parameters turn out to favour the service provider and the return on investment is greater than anticipated, then the customer pays marginally more than the economic cost for the service. However, if the regulator under-funds the infrastructure provider, then investment incentives will be compromised, leading to increased risk of service failure, restricted access to the essential service, or poorer quality of supply.

In the face of the substantial uncertainties faced by GAWB, and particularly its history of not previously exploiting those uncertainties for its own gain, it is in the public interest to err on the side of the provision of the infrastructure service.

The Authority appears to have taken a contrary position. Notwithstanding that GAWB provided benchmarks showing that it is a low cost provider and very detailed operating and capital forecasts, the Authority would seem to have recommended significant reductions to GAWB's proposed expenditures on the basis of little evidence.

The reductions recommended by the Authority are likely to force GAWB to choose between undertaking unfunded work (and accepting an uneconomic return on investment) and deferring work that GAWB considers prudent to undertake in the next five years. Such reductions in GAWB's permitted expenditure will cause commensurate increases to its risks of operation. The consequences of these risks are disproportionate to the reduction of proposed expenditure.

The threshold test for modification of GAWB's forecasts should be high. A different opinion as to the appropriate level of expenditure obtained from a consultant should not, of itself, justify a reduction. GAWB submits that the Authority should require a higher level of satisfaction before concluding that GAWB's forecasts are deficient. In the absence of substantive explanation, GAWB believes the Authority should accept GAWB's proposed expenditures unless it is clearly demonstrated that:

- the proposed work is not required or
- the forecast cost of undertaking the proposed work is inefficient.

GAWB acknowledges that it is the role of an economic regulator to drive efficiencies in the absence of normal competitive pressure. However, the regulatory regime itself provides incentives for making efficiencies because GAWB captures the value of cost savings made for a limited period of time (less than five years). These efficiencies are then passed to customers in the form of lower prices at the next regulatory review. There should be a reliance on the regulatory regime to deliver efficiencies rather than the imposition of speculative reductions to expenditure forecasts.

GAWB submits that the Authority should adopt GAWB's expenditure proposals except where it is clearly demonstrated that some other arrangement is in the best interests of customers.

Example of disagreement regarding GAWB's submissions

One example in which GAWB disagrees with the approach adopted by the Authority relates to GAWB's submissions about appropriate staffing levels. As part of Recommendation 42, the Authority advocates substantial reduction of staff (10% to 15%), however, this was not supported by sufficiently detailed analysis in either the Authority's Draft Report or Davwil's report. Such a reduction in staff will have long-term implications for GAWB's ability to perform its essential services.

GAWB presented benchmarking information that demonstrated that its operating costs are materially lower than its peers. It also submitted an expert report from GHD analysing GAWB's staffing levels in detail, and recommending increases in staffing levels in certain areas to enable GAWB to develop appropriate internal competencies and work practices.

For example, the former Hobart Water was a similar organisation to GAWB. Hobart Water supplied bulk water to council-owned retailers in the southern region of Tasmania and some bulk customers. The scale of the businesses is similar; Hobart Water delivered 47,000ML of water in 2007/08 from assets with a DORC value of $325m. GAWB will deliver approximately 50,000ML of water in 2010/11 from assets with a DORC value of $462m. In 2007/08 Hobart Water employed 90 FTEs. GAWB proposes to increase from 55 FTEs to 58 FTEs over the next regulatory control period. That is, even after recent in-sourcing and the proposed staff increases, GAWB will employ less than two-thirds of the staff of the former Hobart Water.

In concluding that substantial staff reductions are appropriate, the Authority has relied on advice from Davwil. In many areas of staffing, Davwil would appear to be making assessment beyond its scope of recognised expertise. Moreover, Davwil and the Authority only provide a superficial analysis or reasoning in support of the proposed reductions – preventing any scrutiny of the basis upon which the recommendation has been determined. As such, GAWB submits that this approach (combining non-expert assessment and failure to justify reductions) does not provide a sufficiently reliable platform to justify the reduction of expenditure proposed by the Authority.

Neither Davwil nor the Authority has demonstrated that any of the recommended staff reductions are achievable, prudent or efficient. Davwil has not provided information indicating that GAWB's proposals are inefficient (such as evidence that a similar functionality is performed at lower cost in a comparable organisation).

GAWB submits that the Authority should adopt GAWB's proposed staffing levels, which are efficient and prudent.

Unnecessary regulatory risk

GAWB does not consider that the Authority has given sufficient regard to GAWB's unique operating environment (with uncertain future demand) and relatively small balance sheet and operating base, with respect to recommendations regarding regulatory risk allocation.

The operating environment in Gladstone is likely always to be characterised by substantial uncertainty over new industrial customer developments and the associated impacts upon the local community. As discussed above, GAWB's regulatory regime is unique and evolving. GAWB submits that the Authority's draft recommendations would exacerbate this uncertainty by preventing the regulatory regime from evolving in a way that accommodates and reduces regulatory risk where possible.

Example 1: Contingent Supply Strategy (CSS)

The approach taken by the Authority regarding GAWB's expenditure upon the CSS highlights the substantial risk that is allocated to GAWB, in part attributable to the evolving regulatory environment in which it operates.

Davwil was requested to review GAWB's CSS expenditure to determine the amount that should be added to the RAB for the 2010 to 2015 regulatory control period. Davwil provided four options for potential treatment, but did not make a recommendation. Davwil concluded that '*in the end, there is no clear 'right answer' and that selecting the appropriate treatment was a decision for the Authority*.'

Davwil's statement that '*in the end, there is no clear right answer*' is particularly concerning. One purpose of the QCA Ministers' referral of GAWB's proposed CSS to the Authority was to obtain reasonable certainty over the regulatory treatment of costs. Clearly, no certainty was achieved.

Davwil's options for treatment of expenditures had a range from $37.3m (capitalised value of $33.3m expenditure) to $22.3m. The Authority recommended inclusion of $10.7m, calculated inconsistently with any of the options presented by Davwil.

GAWB submits that:

- a plain reading of the Authority's CSS Part (a) report, supports GAWB's submission that the entire $37.3m expenditure should be included and
- even if the Authority continues to recommend that the allowed expenditure should be calculated as if the project had been suspended after the February 2008 inflows, a proper quantification of that amount is $18.35m.

The Authority's CSS Part (a) report supported the CSS:

> *'A contingent supply strategy is a prudent response to the demand and supply risks facing GAWB.'*

The inflows of February 2008 could not affect the prudence of the strategy itself. The strategy is not predicated upon prevailing circumstances. Rather, these inflows could (and did) alter GAWB's assessment of the earliest trigger for the implementation of that strategy. The inflows into Awoonga Dam of February 2008 were substantially improved from those received in the three immediately preceding years (ie. 2004-2007). These inflows resulted in the deferral of the earliest possible implementation of the CSS by about two years. GAWB accepts this is relevant to an assessment of the prudence of some items of expenditure as distinct from the strategy itself.

As articulated the Referral Notice for the Authority's CSS review, GAWB proposed to:

> *'undertake preparatory expenditure to provide reasonable certainty that water can be sourced from the Fitzroy River within 24 months of agreed events (either drought or demand led) that might trigger an augmentation.'*

The Authority supported the concept of a CSS. GAWB has undertaken preparatory expenditure consistent with the above definition. Both Harrington's review for GAWB and Davwil's review for the Authority concluded that the capability was efficiently procured. On that basis, GAWB's entire expenditure should be added to the RAB.

However, in its Draft Report, the Authority now seeks to reformulate the test articulated in the CSS Part (a) report (related to efficiency of procurement) and impose a further threshold test as to the necessity of the CSS. The Authority stated (p70):

> *'In principle, it is proposed to include only expenditure incurred as at February 2008 plus previously committed expenditure incurred after that date. In addition, completion of investigations into desalination is warranted as recommended in the Authority's Part (a) report. It is also considered that expenditure on approvals processes to 2009-10 should also be completed to maximise the benefit of the remaining investment in preparatory works.'*

Moreover GAWB does not agree with the amount the Authority calculates that satisfies this new test. In particular, the Authority appears to have excluded expenditure related to:

- obtaining a supply from the Lower Fitzroy River and
- regulatory submissions.

The Authority recommended in its CSS Part (a) report that GAWB should pursue a right of access to supplies of water from the Lower Fitzroy River.

> *'GAWB should ensure that the necessary arrangements have been entered into to ensure a right of access to supplies of water from the Fitzroy River (LFRIP) from mid-2012 should they be required.'*

Without a right to water, construction of the balance of the infrastructure would have no value. Therefore, GAWB submits that expenditure of $8.49m on the Lower Fitzroy River Infrastructure (LRFI) project (to secure critical Commonwealth and State approvals) satisfies the above test.

No allowance seems to have been made for CSS-related regulatory submissions beyond 30 June 2009 or for the development of the 'decision tool' to compare all options, including investment in demand reduction investments, prior to any final decision to augment. This would result in the exclusion of expenditure related to Part (c) of the CSS Referral Notice. GAWB submits that additional expenditure of $0.72m also satisfies the above test.

Further, both the LFRI and Gladstone to Fitzroy Pipeline (GFP) projects are being developed under the *Program of Works, Statewide Water Grid Regional Water Infrastructure Projects* (POW). The POW <u>requires</u> GAWB to undertake business case feasibility investigations, including environmental assessment and approvals; cultural heritage; engineering and design; geotechnical investigations; hydrological studies and property acquisition.

The requirement upon GAWB to complete and submit business cases for the LFRI and GFP underpins and is consistent with the activities and associated expenditure undertaken through the CSS to retain and maximise value for future use at an uncertain future date. GAWB submits that the Authority should not disallow roll-in of expenditure that GAWB is required to undertake by the POW.

Going forward, the Authority has accepted Davwil's recommendation that only $0.8m of capital expenditure should be allowed for the 2010 to 2015 regulatory control period. By contrast, GAWB's proposed capital expenditure of $3.4m over the 2010 to 2015 regulatory control period was based on detailed advice of the cost of specific maintenance activities.

This expenditure represents the minimum efficient and prudent holding costs for the project, necessary to:

- retain the value of the work performed to date and
- maintain the defined state of preparedness.

The approach taken by the Authority is inconsistent with the purpose of the CSS and preservation of the state of preparedness for the benefit of GAWB's customers. This 'mothballing' approach proposed by Davwil and accepted by the Authority would neither retain value nor maintain the state of preparedness. There doesn't appear to be any consideration of the objectives of the CSS in arriving at this conclusion. Davwil has also provided no detail to support its forecast expenditure of $0.8m.

GAWB therefore contends that the CSS expenditure of $3.4m over the 2010 to 2015 regulatory control period should be allowed.

Finally, the Authority has not allowed *any* expenditure to maintain the CSS capability beyond 2015. This would seem to represent a substantial inconsistency in the approach taken by the Authority in its Draft Report. GAWB maintains its submission that its CSS expenditure forecast of $12m over the period 2015-2030 be included to maintain (or preserve) the capability that has been developed. Of course, this will be moot if an augmentation trigger occurs in the intervening period.

In summary, despite a specific investigation from the Authority designed (at least in part) to provide GAWB with certainty regarding the future regulatory treatment of CSS expenditure, the Authority's decision to disallow much of that expenditure (which all parties agree was efficiently incurred) and the Authority's consultants view '*in the end, there is no clear right answer*' demonstrate that there is an inappropriate uncertainty regarding investment. This uncertainty provides a significant disincentive to invest – to the potential detriment of GAWB's customers and the Gladstone region.

Example 2: Revenue cap proposal

The Authority's response to GAWB's submissions concerning the revenue cap and associated approach to the formulation of the demand forecast for the regulatory period is a further example of exacerbating the risks to GAWB' sustainability. This approach fails to properly align GAWB's regulatory settings to GAWB's environment.

The Authority has mischaracterised the choice between a price and a revenue cap. Even if the principle that GAWB should assume the risk and cost of new capacity were to be accepted (which is not accepted by GAWB), it is incorrect to assert that a price cap will achieve this objective whereas a revenue cap will not.

Similarly, the allocation of costs of efficient supply capacity between current and future customers is achieved through the 20-year price-averaging period. It is not affected by choice of price cap or revenue cap form of regulation.

The choice between a price and a revenue cap relates to the risk of uptake of new (currently un-contracted) demand during the five-year regulatory control period. GAWB cannot influence this demand uptake.

Of particular relevance to this risk, the Authority altered GAWB's best estimate of contracted demand for the 2010 to 2015 regulatory period to include forecast new demand that is not contracted. The effect of this aspect of the Authority's draft recommendation is to impose a form of regulatory risk on GAWB without regard to due process, and which it has no ability to manage. Moreover, experience of customers' past forecasts of additional demand is that they are consistently optimistic (customers have a clear incentive to over-state rather than under-state their likely future demand). The Authority-imposed risk is biased against GAWB recovering its target revenue.

GAWB is being asked to accept lower prices on the basis of an altered demand forecast that it is not meaningfully able to respond to, and to accept the entire risk that such demand may not materialise. GAWB submits that the Authority should reconsider this approach, either by adopting a more reasonable forecast or, preferably, accepting its proposal to operate under a revenue cap.

Example 3: IFR pricing

The Authority did not recommend introduction of instantaneous flow rate (IFR) pricing for the delivery network from 1 July 2015. Instead the Authority recommended further study and consultation before **possible** implementation in 2015. The Authority appeared to place weight on Davwil's arguments that:

- there is no imperative for IFR introduction (that is, are no imminent capacity constraints that could be relieved by changes in customers' demand characteristics)
- IFR pricing is unnecessarily complex and
- many customers cannot respond to the price signal or cannot modify their consumption characteristics as cheaply as GAWB can build additional capacity.

GAWB puts forward its own counter-arguments in the body of this submission.

The Authority recommends further investigations before the next price review. Because there is no process for the Authority to approve changes in pricing practices between reviews, GAWB and its customers would need to wait until early 2015 to know whether IFR pricing was to be implemented in mid 2015.

Customers require certainty over future pricing arrangements. Customers base investment decisions on their expectations of future cost of water. To optimise their financial position under IFR pricing, customers require a reasonable lead-time to make changes to their processes and on-site storage arrangements.

The Authority's recommendation of further pre-implementation study will not provide useful information and creates pricing uncertainty. GAWB therefore requests that the Authority avoids this uncertainty by explicitly:

- approving GAWB's proposed pricing methodology or alternatively setting out its recommended methodology for implementing IFR
- approving or rejecting the introduction of IFR at 1 July 2015 and
- if the 1 July 2015 introduction is rejected, recommend criteria for triggering introduction of IFR.

Calculation errors

There are several areas where GAWB accepts the principle espoused in the Authority's recommendations but submits that the specific calculation made in the Draft Report contained errors:

- One example of such a calculation is the inter-period cash flow adjustment (Recommendation 47). GAWB and the Authority agree that this adjustment is necessary and agree on the basis for its calculation. However the Authority calculated an adjustment that is some $20m less than that calculated by GAWB. We understand that the Authority now accepts that its calculation should be revisited. Because the principles of the calculation are agreed by all parties, GAWB suggests that the quantification be resolved through an officer-level working group.
- A similar difference occurred in the calculation of electricity costs (part of Recommendation 42). The Authority accepted GAWB's electricity per unit cost proposals and also recommended that prices be calculated using a higher forecast demand. A higher demand (requiring more pumping) necessarily requires a higher electricity cost. However the total electricity cost recommended by the Authority is lower than that proposed by GAWB. Again, because the principles of the calculation are agreed by all parties, GAWB suggests that the quantification be resolved through an officer-level working group.

Opening RAB

GAWB submits that it is neither desirable nor practical to implement the Authority's recommendation regarding the opening RAB.

GAWB agrees with the Authority that the 2010 RAB should be based on a roll-forward of the 2005 RAB. However, the Authority recommends a particular 1 July 2005 asset value based on an update of a 2004 valuation.

The Authority has advised that it has no detailed records as to what made up the 2005 valuation. Neither the Authority nor its valuation consultant, SMEC, can provide a valuation that is capable of being rolled forward at an individual asset level which sums to the recommended opening value. Adopting the Authority's summary level valuation would create perpetual uncertainty as to valuation of individual assets in the asset base.

Because the Authority is not able to provide a valuation capable of being rolled forward, GAWB proposes to use an asset-by-asset DORC valuation, calculated for the same starting date (1 July 2005), undertaken by the Authority's valuation consultant, SMEC. The Authority's consultant for the current review, Davwil, acknowledged that this valuation was the most accurate available (the 2004 valuation contains known errors).

The Authority recommends that a 1 July 2005 DORC valuation be used to establish the RAB, and that the RAB be rolled forward. GAWB supports these recommendations. Adopting SMEC's 1 July 2005 valuation is consistent with this approach. Adopting the Authority's recommended opening asset value is not consistent with that approach (it does not reflect the 1 July 2005 DORC and cannot be rolled forward).

Conclusion

Each issue canvassed above is dealt with in greater detail throughout the body of this document. Moreover, GAWB has sought to respond to all issues presented by the Authority in the Draft Report, including many not touched upon in this summary.

At the conclusion of this document GAWB has tabularised each recommendation made by the Authority in the Draft Report and GAWB's response, in the interests of simplicity and clarity.

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1 Introduction

1.1 Background

This document sets out GAWB's response to the Authority's *"Draft Report, Gladstone Area Water Board: Investigation of Pricing Practices"* dated March 2010 (the Authority's Draft Report).

The document should be read in conjunction with GAWB's earlier submissions: '*Commercial Framework and Pricing Principles'* dated September 2009 (GAWB's Commercial Framework submission) and '*Expenditure Proposals'* dated December 2009 (GAWB's Expenditure Proposals submission).

1.2 Structure of this document

For ease of reference, this document follows the format of the Authority's Draft Report. That is, GAWB's response to each of the Authority's recommendations is presented in the same order as the recommendations appear in the Draft Report.

For quick reference, Appendix 1 contains a list of each of the Authority's draft recommendations, a brief statement as to whether or not GAWB accepts the recommendation and a cross-reference to the section of this document that contains GAWB's detailed response.

1.3 The Authority's approach to the review

The Authority has recommended significant reductions in GAWB's proposed capital expenditure and operating expenditure proposals.

To the extent possible, we discuss the merits of individual reductions in Sections 6 and 9 of this document. However, it is difficult to respond to specific recommendations where justifications for reductions are extremely limited. This is a particular problem with respect to the Authority's recommendations in relation to operating expenditure.

More generally, GAWB is concerned that the Authority has not given sufficient weight to GAWB's expenditure submissions and supporting documentation. GAWB is concerned that the Authority may have assumed that GAWB's expenditure proposals are overstated because they would result in significant price increases.

GAWB submits that its detailed expenditure forecasts are appropriate for the following reasons:

- GAWB has no history of overstating expenditure forecasts.
- There is no basis to prefer Davwil's forecasts over GAWB's.
- There is regulatory precedent to support a high threshold for modifying a regulated service provider's proposals.
- The risks of supply failure outweigh the benefit of expenditure reductions.
- The regulatory framework is the preferred method of providing incentives for efficiencies.

1.3.1 No history of overstating expenditure forecasts

Including the Contingent Supply Strategy (CSS) investigation, the 2010 price review investigation will be the Authority's fourth review of GAWB's pricing practices over a period of almost a decade.

GAWB has never misled the Authority (or any other regulator), 'gamed' the regulatory process or undertaken 'strategic forecasting'. The Authority should treat GAWB's proposals as good faith estimates of expected costs of prudently operating the business.

1.3.2 Benefit of doubt

Economic theory supports the contention that in circumstances of uncertainty, regulators should err on the side of allowing higher revenues.[1] If the regulator allows too high a return on investment then the community pays marginally more than the economic cost for the service. However, if the regulator under-funds the infrastructure provider, then the provider will be unwilling to invest. It is better for society to pay marginally too much for an infrastructure service than risk not having access to that service.

The Authority appears to have taken a contrary position. GAWB has provided benchmarks showing that it is a low cost provider, and very detailed operating and capital forecasts, however the Authority has recommended significant reductions to GAWB's proposed expenditures.

1.3.3 Davwil's forecasts should not be preferred to GAWB's forecasts

The Authority engaged Davwil to review GAWB's expenditure forecasts, and comment on the efficiency of the CSS expenditure and the introduction of IFR pricing. It is usual for economic regulators to engage an engineering consultant to undertake an expenditure review. Consultants have only a limited time and budget to review the expenditure forecasts. The scope of such reviews is necessarily high-level: designed only to identify significant or systematic inefficiencies rather than develop a complete set of alternative expenditure forecasts.

As might be expected in a constrained high-level review, Davwil appears to have made numerous errors, made incorrect assumptions and misunderstood some of the presented information. This is demonstrated through the following examples:

- misquoting GHD's conclusion in relation to GAWB's staffing levels – refer section 9.10
- incorrect assignment of FTE proportions to GAWB's staff – refer section 9.10.2
- providing recommendations in relation to reducing staffing levels with a limited understanding of the tasks performed – refer section 9.10.1
- discounting GAWB's benchmarking due to a lack of knowledge of the dataset used by GAWB in the benchmarking study – refer section 9.4
- making inferences regarding GAWB's performance in the benchmarking without appropriate normalisation of data – refer section 9.4
- quoting the reason for a reduction in capital expenditure that does not match the purpose for the expenditure – refer section 6.1.6
- suggesting reductions in expenditure where the quantum is principally out of GAWB's control – refer section 9.3.

GAWB submits that the Authority should not automatically favor Davwil's high-level sense-check over GAWB's fully developed and peer-reviewed proposals. The adoption of Davwil's forecast over GAWB's forecast must be accompanied by appropriate justifications that set out the deficiency of GAWB's detailed proposals.

1.3.4 Threshold for modifying GAWB's proposals

There is regulatory precedent for adopting a high threshold test for modifying a service provider's proposals. For example, a high threshold for disallowing a proposal is required by the National Electricity Rules (NER). The NER sets out provisions governing the operating expenditure criteria that must be applied by the AER in determining whether or not it is satisfied that the operating expenditure forecasts submitted by a service provider are reasonable:[2]

1 For example at p 71 of its 2001 *Review of the National Access Regime*, the Productivity Commission concluded: 'Given the asymmetry in the costs of under and overcompensation of facility owners, together with informational uncertainties facing regulators, there is a strong in principle case to 'err' on the side of investors.' See also p 8 of Prof Lally's 2004 *The Cost of Capital for Regulated Entities* prepared for the Authority, 'Any decisions in this area can give rise to revenues that are overstated or understated, and the latter is the more serious error because it gives rise to the problem of underinvestment. So, in the presence of significant doubt, one should err on the side of higher revenues'.

2 *National Electricity Rules* (NER) NER 6.5.6(c)

'The AER must accept the forecast of required operating expenditure of a Distribution Network Service Provider that is included in a building block proposal if the AER is satisfied that the total of the forecast operating expenditure for the regulatory control period reasonably reflects:

(1) the efficient costs of achieving the operating expenditure objectives; and
(2) the costs that a prudent operator in the circumstances of the relevant Distribution Network Service Provider would require to achieve the operating expenditure objectives; and
(3) a realistic expectation of the demand forecast and cost inputs required to achieve the operating expenditure objectives.'

The *operating expenditure objectives* are set out in the NER as:[3]

'A building block proposal must include the total forecast operating expenditure for the relevant regulatory control period which the Distribution Network Service Provider considers is required in order to achieve each of the following (the operating expenditure objectives):

(1) meet or manage the expected demand for standard control services over that period;
(2) comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;
(3) maintain the quality, reliability and security of supply of standard control services;
(4) maintain the reliability, safety and security of the distribution system through the supply of standard control services.'

The NER provides a similarly high threshold test for modifying capital expenditure forecasts.

The threshold test for modification of GAWB's forecasts should be similarly high. A different opinion as to the appropriate level of expenditure obtained from a consultant should not, of itself, justify a reduction. GAWB submits that the Authority must demonstrate that GAWB's forecasts are deficient.

1.3.5 The risks of supply failure outweigh the benefit of expenditure reductions

GAWB is an essential service provider – it is obliged to ensure that its services are delivered reliably and safely, and is conscious of the enormous consequences of failure, including:

- major economic consequences to industrial customers (and indirectly to the state and nation)
- health consequences associated with personal use and consumption
- environmental damage to (and around) GAWB's area of operations and
- social impact on the local community.

GAWB's expenditure proposals are based on a systemic risk assessment. GAWB submits that the Authority should similarly carefully consider the risk implications of its recommended expenditure reductions. GAWB is confident that a comprehensive evaluation would conclude that the additional risks of supply failure outweigh the benefit of expenditure reductions.

1.3.6 The regulatory framework provides incentives for efficiency

GAWB acknowledges that making cost efficiencies is always possible and it is appropriate for an economic regulator to attempt to drive efficiencies in the absence of normal competitive pressure. However, the regulatory regime itself provides incentives for making efficiencies because GAWB captures the value of cost savings made for a limited period of time (less than five years). These efficiencies are then passed to customers in the form of lower prices at the next regulatory review. GAWB submits that the regulatory regime should be relied on to deliver efficiencies rather than the imposition of speculative reductions to expenditure forecasts.

3 NER 6.5.6(a)

1.3.7 Summary

If accepted, the Authority's recommended reductions will force GAWB to choose between undertaking unfunded work (and accepting an uneconomic return on investment) and deferring work that GAWB considers prudent to undertake in the next five years. Inappropriate reductions in GAWB's permitted expenditure will cause commensurate increases to its risks of operation. The consequences of these risks are disproportionate to the reduction of proposed expenditure.

Without sound justifications to reduce GAWB's expenditure forecasts, GAWB submits that its proposals should be accepted by the Authority.

GAWB submits that the Authority should accept GAWB's proposed expenditures unless it can be clearly demonstrated that the proposed work is not required or the forecast cost of undertaking the proposed work is inefficient.

1.4 Definitions

GAWB's current regulatory control period is the five-year period 1 July 2005 to 30 June 2010. This is referred to in the document as the 2005 to 2010 regulatory control period.

GAWB's next regulatory control period is the five-year period 1 July 2010 to 30 June 2015. This has been referred to in the document as the 2010 to 2015 regulatory control period.

GAWB's planning period is the 20-year period that commences at the beginning of each regulatory control period. The balance of the 15-year planning period that extends beyond the next regulatory control period is referred to in the document as the 2015 to 2030 planning period.

2 Regulatory Framework

2.1 Form of regulation

At Recommendation 1, the Authority states:

> *The Authority recommends that price cap regulation be maintained for GAWB with appropriate mechanisms to manage GAWB's exposure to downside revenue risk.*

The most important themes in the Authority's analysis of the form of regulation in its Draft Report appear to be its view that GAWB should bear the risk/cost of spare capacity, that it should be discouraged from providing additional capacity for uncontracted demand, and further that a price cap will achieve this objective (whereas, a revenue cap would not). In opening the discussion of its 'Analysis' of the form of regulation the Authority states in its Draft Report as support for the price cap alternative that:[4]

> *'The Authority notes that the revenue cap proposed by GAWB would pass on to existing customers the cost of current excess capacity resulting from an augmentation commencing in 2000, prior to the commencement of regulatory oversight.'*

The Authority then clarifies that it:[5]

> *'….has continuously argued that, given the lumpiness of supply and demand for GAWB's water, augmentation should be based on long term contracted demand and that, where GAWB wishes to provide for additional capacity for uncontracted new demand, it must assume the risk of doing so.'*

And further that:[6]

> *'….GAWB, not existing customers, should carry the cost of those potential customers not taking up the spare capacity created by the augmentation.'*

GAWB is concerned that, in making these statements, the Authority has mischaracterised the choice between a price and a revenue cap. Even if the principle that GAWB should assume the risk and cost of new capacity were to be accepted (which, as discussed below, is not accepted), it is incorrect to assert that a price cap will achieve this objective whereas a revenue cap will not.

On the question of principle as to who should assume which costs and risks, GAWB's view is that the Authority's approach does not take sufficient account of the unique circumstances that arise from its role as a supplier of very large volumes of water under long-term contract, to a relatively small number of customers. While the Authority appears to acknowledge these circumstances, their implications do not flow though into its draft recommendation.

GAWB's principal motivation in proposing to move from the price cap form of regulation that applies in the current regulatory period to a revenue cap from 1 July 2010 is to address the considerable uncertainty that arises in relation to the number, scale and timing of new customers that will take water over the next five years.

GAWB accepts that, in other circumstances, it may be quite appropriate to apply a price cap in order to ensure that a water supplier is incentivised to manage the short term risk of demand fluctuations arising from drought or changes in the

4 *Draft Report GAWB: Investigation of Pricing Practices* (QCA, March 2010) (*QCA Draft Report*), p 10
5 ibid
6 ibid, p 11

consumption patterns of existing customers (whether household or business). However, in GAWB's situation, such risks are better managed by means of the existing tariff structure and long-term contractual arrangements. GAWB therefore argues that other policy settings support long-term contracting (as discussed in Section 3.9 below).

GAWB's tariffs have been structured by reference to long-run marginal cost principles with the result being that the large majority of its revenue is recovered by means of fixed access charges, with the volume-dependent component of tariffs primarily reflecting the variable cost of additional water supply. The Authority acknowledges (correctly) that this reflects the fact that most of GAWB's costs are fixed for the foreseeable future. An important benefit of having in place a tariff structure that closely reflects GAWB's largely fixed cost structure is that, in the case of variations in demand over the next regulatory period from current customers' existing demand, the choice between applying a price or a revenue cap is of limited consequence for GAWB. Indeed, GAWB acknowledges that, were variations in demand from existing customers the principal relevant consideration, a price cap may well be the preferred regulatory mechanism.

However, the much more important uncertainty that needs to be taken into consideration is the risks arising from the precise timing and scale of new demand. There are two important dimensions to this risk. First, GAWB has little or no control over the timing and scale of any of the major new industrial projects that may be developed in its region over the next five years. GAWB submits that it is far fetched even to contemplate that the timing or the economics of those projects are likely to be substantially affected by decisions that GAWB might take in relation to the making available of water supplies. Rather, in GAWB's experience, the decision as to the timing and the extent to which new large projects get underway in GAWB's supply region will be made by reference to macro-economic and other market variables that are well outside GAWB's control.

Second, the availability of existing capacity and the regulatory arrangements that are already in place for spreading the cost of that capacity over existing and new, or current and future customers are decisions that, in GAWB's case, have already been considered and duly made. GAWB rejects the implication in the Authority's draft report that it may have invested in uneconomic surplus capacity and that GAWB should somehow be required to pay for this – presumably in the form of reduced returns – until the relevant demand materialises.

Such an interpretation does not fit with the facts. Rather, it has already been established by the Authority in previous reviews that the full value of Awoonga Dam should be included in GAWB's asset base, notwithstanding that this dam has a permitted yield that exceeds GAWB's current total demand. The basic reason for the Authority's previous decisions in relation to Awoonga Dam is that sizing the most recent augmentation to cater for future growth in water demand was efficient from the perspective of both current and prospective customers. In other words, the cost to all customers was expected to be minimised by allowing for future demand growth, rather than by undertaking a series of smaller scale inefficient augmentations.

This wider perspective is critical to the decision the Authority now needs to make on whether a price or revenue cap is more appropriate for GAWB. The Authority chose to address the inter-temporal question of how to allocate the cost of GAWB's temporarily surplus capacity between existing and future customers by deriving prices over a 20-year price-averaging period, rather than the standard five-year regulatory control period. By this means the Authority has already put in place arrangements to allocate to future customers the cost of capacity that exceeds GAWB's short-term contracted demand. It is incorrect to state that this decision can now be affected by the choice between price and revenue cap forms of control for the next five-year regulatory control period. Neither form of regulation will have the effect of allocating the cost of GAWB's current excess capacity in a materially different way.

Rather the most important consequence of the choice as to the form of regulation is to minimise the consequences for both GAWB and its customers of the difficult task of forecasting the precise timing and extent of new large customer demands. GAWB notes that the Authority acknowledges this point in its observation that:[7]

7 *QCA Draft Report* p 12

'a price cap places particular emphasis on the need to get volume estimates correct, a task which is particularly difficult for GAWB, given the lumpiness of demand increments in both volumes and timing'.

GAWB concurs strongly with this sentiment. It submits that, given its highly specific customer base and the related level of demand uncertainty, the most important consideration in the deciding on the form of regulation is to reduce the extent of this risk to GAWB. This is because GAWB has no meaningful ability to take action to address the resulting risks. Consistent with this, it has already been decided that the risk of differences in the average unit cost of supply given the decision to provide for future growth in demand at the time of the most recent augmentation of Awoonga should be borne by customers. This is because customers benefit from avoiding the much higher future costs of a different, smaller scale form of capacity expansion.

The priority should therefore be to put in place a form of regulation that is consistent with the medium term demand forecast risk allocation decision that has already been made, while also minimising the near term risks arising from the uncertain timing and nature of significant new demand. Of particular relevance to these near term risks is that the Authority has altered GAWB's best estimate of contracted demand for the 2010 to 2015 regulatory control period to include forecast new demand that is not contracted, which is greater than GAWB proposed, and the basis for which has been withheld from GAWB. The effect of this aspect of the Authority's draft recommendation is to impose a form of regulatory risk on GAWB without regard to due process, and which it has no ability to manage.

GAWB's position is supported by advice from Greg Houston of NERA, which is included as Appendix 2. Mr Houston states:

'To conclude, in my opinion the analysis and reasoning set out in QCA's Draft Report do not support its conclusion that a price cap form of control should be retained for GAWB in the forthcoming regulatory period. QCA appears to give disproportionate emphasis to the perceived need to provide incentives for GAWB to respond to short term fluctuations in demand, when that need is largely already addressed by means of its existing tariff structure. By contrast, QCA's analysis appears not to give sufficient weight to the considerable risks arising from the demand uncertainty that GAWB faces or that GAWB has no meaningful ability to mitigate those risks.'

The Authority's economic consultant, Frontier Economics, also linked their support for a price cap with a conservative demand forecast:[8]

'In relation to demand, GAWB's proposal to develop 'base level' forecasts on contractual volumes, and to adopt a contingent planning framework for 'upper bound' will effectively counter the bulk of demand risk faced by the business…

We note that the proposed demand forecasting arrangements would effectively address most if not all the demand side risk faced by GAWB. We also note that the existence of take or pay arrangements coupled with the relative stability of GAWB's existing customer base indicate that level of risk faced by GAWB should be manageable under a price cap.'

Frontier Economics points out that its recommendations must be considered together. [9]

'We also note that no single element of the regulatory framework can be considered in isolation, but must be addressed as part of the whole. Accordingly we have made integrated recommendations across all four regulatory mechanisms.'

However, the Authority's recommendations do not deal with volume risk by adopting Frontier Economics's or GAWB's integrated recommendations.

8 Frontier Economics, *Review of risk allocation and management, implications for pricing*, February 2010, p 67.
9 Frontier Economics, p 66.

GAWB is being asked to accept lower prices on the basis of an altered demand forecast that it is not meaningfully able to respond to, and to accept the entire risk that such demand may not materialise. GAWB urges the Authority to reconsider its approach, either by adopting GAWB's demand forecast or, preferably, accepting its proposal to operate under a revenue cap.

Finally, GAWB notes that one further option to address the challenge of highly uncertain near term demand forecast would be to implement a hybrid form of price/revenue cap. Such an arrangement could operate by applying a revenue cap to the access component of GAWB's tariffs, and a price cap to the volumetric element. A form of regulation designed in this way would have the benefit of removing the substantial proportion of short term demand forecasting risk, while still leaving GAWB exposed to the revenue risk of not meeting the volumetric element of changes in demand for both new and existing customers.

The supply of new customers will usually involve construction of new delivery infrastructure. GAWB proposes that any hybrid arrangement should recognise additional costs of un-forecast additional demand, where this is significantly greater than the incremental volumetric revenue recovered.

GAWB would welcome the opportunity to engage further with the Authority on the detailed elements of how such a hybrid arrangement might be put in place.

> GAWB submits that the Authority should either adopt GAWB's demand forecast or, preferably, accept GAWB's proposal to operate under a revenue cap.
>
> If neither of these options is unacceptable, the Authority should work with GAWB to develop a mutually acceptable hybrid form of regulation.

2.2 Price averaging period

At Recommendation 2, the Authority states:

> *The Authority recommends that a 20-year planning period is appropriate for GAWB.*

The Authority's reports use the term 'planning period' or 'planning horizon' to mean the period over which expected revenue recovers economic costs or, more simply, the period over which prices are averaged. The Authority considers that prices should be averaged over 20 years. GAWB continues to believe that its proposed five-year price-averaging period is appropriate.

We note that the Authority's own economic advisor Frontier Economics also recommended a change to a five-year price-averaging period.

GAWB however accepts the Authority's recommended 20-year price-averaging period, provided that the inter-period cash flow adjustment (see Recommendation 47) is calculated in a way that ensures that the net present value of any planned under-recovery of five-year regulatory control period revenue is recovered in future regulatory control periods.

2.3 Regulatory control period

At Recommendation 3, the Authority states:

> *The Authority recommends that a five-year regulatory period apply to GAWB.*

GAWB supports this recommendation.

3 Pricing Framework

3.1 Long-run marginal cost and two-part tariffs

At Recommendation 4, the Authority states:

> *The Authority recommends no change to the current pricing practices, that:*
>
> *(a) prices should reflect LRMC;*
> *(b) LRMC be estimated using the Average Incremental Cost (AIC) method; and*
> *(c) GAWB should apply a two-part tariff for each of storage and delivery services, with the components of the structure held constant over the regulatory period.*

GAWB supports this recommendation.

3.2 Storage volumetric charge

At Recommendation 5, the Authority states:

> *The Authority recommends no change to the current pricing practices, that:*
>
> *(a) the storage volumetric charge be based on LRMC, and applied to volumes sourced from Awoonga Dam;*
> *(b) the storage access charge be based on contracted demand and constitute the residual amount not recovered through the LRMC-based usage charge; and*
> *(c) where LRMC exceeds the current cost of storage services, surplus revenues may be rebated to customers at a later date through a form unrelated to volumetric charges, or may be used as a contribution to future capital costs and offset against future charges.*

GAWB accepts that paragraphs (a) and (b) represent no change to current pricing practices, and these recommendations are accepted.

However, GAWB does not believe that paragraph (c) describes a practice that has previously been articulated. The Authority recommends that where LRMC of storage capacity is higher than the current cost:

- access charge be set to zero, and variable charge set to the LRMC of storage capacity and
- excess revenues be used to fund future capital costs (presumably new storage assets).

That is, the Authority is effectively recommending that GAWB signal the LRMC of storage capacity in prices and use the revenue as pre-payment for the augmentation. GAWB does not support this recommendation.

In the Commercial Framework submission to this investigation GAWB stated[10]:

> *'Source augmentation costs or other demand management measures (other than efficient preparatory expenditure) should not be included in customer prices until such time as the augmentation or other measure is certain. The benefit of this approach is that customers are not paying for the costs of source augmentation or other measures in current prices, and it allows a 'pure' price signal to be provided to customers at the time an augmentation decision is required.'*

10 GAWB Commercial Framework submission (September 2009), p 6

The Authority's recommendation is consistent with general regulatory practice where price is the only mechanism for communicating with a mass-market of thousands of retail customers. However, GAWB's circumstances are different. GAWB has a small number of customers. GAWB contracts directly with each customer, with contracts setting out an augmentation process. GAWB has one-on-one meetings regarding future demand for water, supply security requirements, price implications of source augmentation, possible demand management opportunities, etc. Price is not the primary form of communication with customers; we can have a much more sophisticated conversation.

GAWB's proposed process for source augmentation involves dealing directly with each customer regarding the price impacts of various augmentation scenarios. GAWB submits that the most efficient response to imminent source augmentation is to signal to customers the step change in price that would occur if an augmentation was triggered.

Customers can then base their actions (adjust contract quantities, offer to 'sell back' contracted demand, investigate alternative supply sources, etc) based on a thorough understanding of the likely costs under various supply scenarios.

GAWB's position is consistent with the statement made by Frontier Economics that 'smoothing prices over the very long term may potentially constrain the efficient signalling of costs'.[11]

Under GAWB's proposed approach, the situation envisaged by the Authority's recommendation 5(c) should never arise. If the augmentation is not certain the costs should not be included in prices. Once GAWB is committed to an augmentation, the cost of that augmentation is not a volume-dependent incremental cost.

GAWB proposes that Recommendation 5(c) be modified as follows:

> *Source augmentation costs or other demand management measures (other than efficient preparatory expenditure) should not be included in customer prices until such time as the augmentation or other measure is certain.*

3.3 Instantaneous flow rate (IFR) pricing for delivery services

At Recommendation 6, the Authority stated:

> *For the current review, the Authority recommends that GAWB's maximum indicative prices continue to be based on contracted volumes for delivery purposes.*
>
> *The Authority also recommends that GAWB should undertake data collection and further investigations on the merits of IFR pricing, including implications for individual customers well before the next review, in order that the proposals can be implemented as from the next review.*

GAWB accepts the first paragraph of the recommendation. This recommendation is consistent with GAWB's proposals for the 2010 to 2015 regulatory control period.

However, GAWB cannot accept the Authority's second paragraph. The Authority recommends further investigations before the next price review. Because there is no process for the Authority to approve changes in pricing practices between reviews, GAWB and its customers would need to wait until early 2015 to know whether IFR pricing was to be implemented in mid 2015.

Customers require certainty over future pricing arrangements. Customers base investment decisions on their expectations of future cost of water. To optimise their financial position under IFR pricing, customers require a reasonable lead-time to make changes to their processes and on-site storage arrangements.

11 Frontier Economics, p 58

To provide the certainty that customers require and deserve, GAWB proposed a specific methodology for implementing IFR pricing and a definite commencement date.

GAWB submits that further investigations are not necessary and that the current investigation is the appropriate forum for discussing the costs and benefits of IFR pricing, and obtaining certainty over future pricing structures.

GAWB's proposal for implementing IFR can be broken up into two parts:

- a specific pricing methodology for implementing IFR and
- a proposed timetable for the introduction of IFR pricing (ie. to commence at 1 July 2015, following consultation with customers over the 2010 to 2015 regulatory control period).

GAWB requests that the Authority explicitly:

- approve GAWB's proposed pricing methodology or alternatively set out its recommended methodology for implementing IFR
- approve or reject the introduction of IFR at 1 July 2015 and
- if the 1 July 2015 introduction is rejected, recommend criteria for triggering introduction of IFR.

3.3.1 IFR already approved in principle

In 2005, the Authority stated:[12]

> *'The Authority is aware that peak flow rate pricing will emerge as an increasing focus in the water industry. Appropriately applied, such arrangements have the potential to provide substantial benefits. Accordingly, the Authority accepts that GAWB's proposal for charges to be based on maximum instantaneous flow rates has merit, but that it is a matter for GAWB to assess the net benefits.'*

In response to a query from GAWB, the Authority confirmed that the net benefits were related to, on one hand, the cost of installing and operating IFR-capable metering and, on the other hand, the benefits of deferred augmentation.[13]

> *'GAWB sought clarification on the Authority's position in relation to pricing on the basis of peak instantaneous flow demands. As these arrangements may require additional metering and monitoring, the costs of implementing such arrangements should be assessed against the benefits. Typically, benefits take the form of deferred augmentation, so that pricing signals on the basis of peak flow rates may only be justified where pipeline or pumping capacity emerges as a constraint. In general, however, the main constraint on using peak flow rates is the availability and cost of time-of-day or time-of week metering.'*

GAWB interprets this statement to mean that:

- the Authority supports IFR pricing in principle and
- it was up to GAWB to show that any costs required to implement IFR pricing provide a net benefit before those costs could be included in prices.

During the current regulatory period, GAWB installed IFR capable meters at all customer sites and at other points in the network. This investment was justified on the basis of leak management and was found to be efficient by the Authority.

With the appropriate metering in place, the incremental costs of implementing IFR are very small (principally consultation with customers and some billing system changes). The "main constraint" to implementing IFR has been removed.

12 *Final Report GAWB: Investigation of Pricing Practices* (QCA, March 2005) (*QCA Final Report 2005*), p 47
13 Ibid

Because the Authority had approved IFR pricing in principle in 2005 and because the lack of incremental costs made the net benefit self evident, GAWB did not attempt to 'make the case' for IFR pricing in its submissions to the 2010 price review.

3.3.2 Further investigations will not assist the Authority in making a decision

The Authority proposes that GAWB undertake a further review of IFR pricing over the next three years:[14]

> *'Over the coming regulatory period, the Authority recommends that GAWB should collect information in regard to customers' peak period and seasonal demands, and undertake further assessment of the merits of IFR pricing. Furthermore, in order to enable IFR pricing to be introduced from 1 July 2015 if it is deemed appropriate, the assessment needs to be completed within the next 3 years, and the earlier the better.'*

Further analysis will show that:

- the costs of implementation of IFR are small
- the economic benefits of implementation are highly dependent on whether customers change behaviour (but whether customers will change or not cannot be known until after implementation) and
- in the absence of any changes in consumption pattern, some customers will be worse off and other customers will be better off.

The extent to which customers will be better off or worse off cannot be known until a detailed pricing methodology is established and GAWB begins discussions with customers regarding the extent to which customers can modify their consumption profile.

The Authority will have the opportunity to assess the level of prices and price changes in 2015 and recommend transitional arrangements if the Authority considers them appropriate.

IFR pricing is fairer and more likely to lead to efficient outcomes than the status quo and therefore should be supported by the Authority. GAWB agrees that there remains uncertainty over price outcomes for particular customers but:

- the uncertainty should not affect the recommendation to implement IFR and
- undesirable price change outcomes can be mitigated through transition and other mechanisms in 2015.

3.3.3 GAWB's proposed methodology for implementing IFR pricing

GAWB requests the Authority's endorsement of an IFR pricing methodology to begin the customer consultation exercise proposed by GAWB and described as appropriate by Dawwil.

Indeed, even if the Authority confirms its draft recommendation that GAWB must undertake further analysis of the implications of IFR pricing on customer bills, this analysis requires GAWB to adopt a specific methodology.

Given the wording of the Authority's 2005 recommendation ('**Appropriately applied**, such arrangements have the potential to provide substantial benefits', emphasis added), GAWB requests that the Authority confirms that GAWB's proposed methodology is consistent with the Authority's view of appropriate application.

3.3.4 Timetable for introducing IFR pricing

Largely consistent with advice from Dawwil, the Authority argued that GAWB had not made the case for the introduction of IFR pricing. The Authority's arguments can be summarised as:

14 *QCA Draft Report*, p 24

- there is no imperative for IFR introduction (that is, there are no imminent capacity constraints that could be relieved by changes in customers' demand characteristics)
- IFR pricing is unnecessarily complex and
- many customers cannot respond to the price signal or cannot modify their consumption characteristics as cheaply as GAWB can build additional capacity.

Each of these criticisms is discussed below.

3.3.4.1 No imperative

GAWB submits that the argument that GAWB should delay implementation of IFR until capacity constraints emerge is without merit.

Traditional utility pricing design recognises that customers can respond to price signals in two ways: by changing their day-to-day behaviour (eg. not switching on the clothes dryer until after 10pm) and by their appliance purchase decisions (eg. purchasing a night-store heater rather than a device that uses a large amount of energy at a peak time). In GAWB's circumstances, the 'appliance purchase' phenomenon is likely to dominate and, rather than purchasing a low water use washing machine, GAWB's customers might modify their industrial process or construct on-site storage.

Customers make major modifications to their plant and processes infrequently. The impact of IFR pricing may take many years to influence customer investment decisions. If GAWB waits until capacity constraints are imminent to implement IFR pricing, it is likely to be too late to allow a customer response to defer augmentation.

Secondly, GAWB submits that there are emergent capacity constraints in the delivery network. An example of an emergent capacity constraint is the Mt Miller pipeline. The Mt Miller pipeline has capacity of 815L/s. At higher flow rates GAWB cannot meet contract minimum pressure standards for downstream customers.

The Authority's demand forecast includes new raw water customers in the North Industrial region, with demand rising from 5,757 megalitre (ML) p.a. in 2010/11 to 29,762ML in 2029/30.

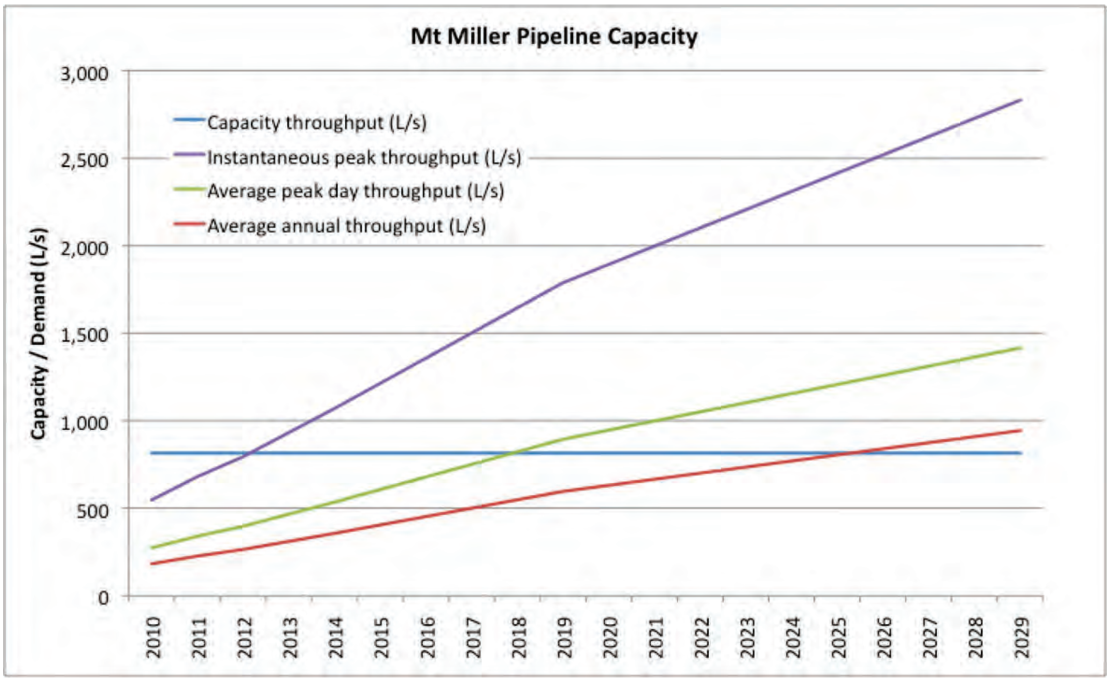
If this new demand has similar characteristics to the current load in this area (peak day average flows 1.5 times average annual flows and absolute peak flows 3.0 times average annual flows), then the Mt Miller pipeline could be capacity constrained by 2012/13. **Figure 1** shows the forecast maximum flow rates, extrapolating current customer flow characteristics.

Within five years, customers could be experiencing significant periods of below-specification pressure if the Authority's forecast is accurate and no augmentation is undertaken by GAWB or customers.

This analysis is highly simplified: the chart does not allow for any inter-customer diversity. However, the peaking factor of 3.0 is quite conservative, so the results are broadly representative of possible future flows. Moreover, even if the peaking factor fell to 2.0 as a result of increased diversity among new customers, augmentation would still be required within the next regulatory control period.

However, if customers limited their maximum flow to their average peak-day flow (for example, by installing one day's storage), then GAWB could defer augmentation by approximately five years. If customers limited their maximum flow to their average annual flow (requiring large storages, which is unlikely to be economic), GAWB could defer augmentation by approximately 12 years.

Figure 1 - Mt Miller capacity



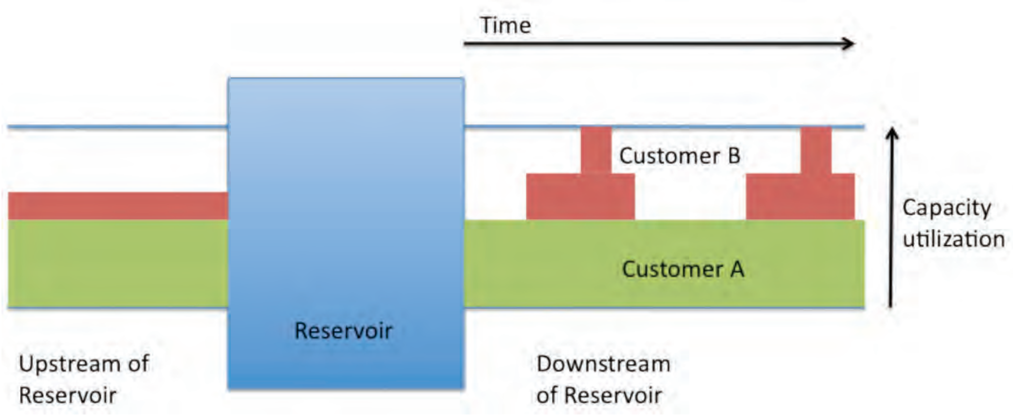
Thirdly, the fact that some or many customers may not be able to respond or modify their consumption characteristics as cheaply as GAWB is able to provide the additional capacity does not itself mean that IFR pricing proposal is not warranted. The principles of efficient pricing emphasise that it behavioural change by the marginal customer that is important, and so providing *some* customers are able to modify their behaviour in response to such a prices signal, then efficiency gains will arise. Further, even if very few customers are able to alter their consumption patterns, the fact that those few are given the opportunity to do so represents an efficiency gain.

Finally, GAWB submits that there are equity as well as efficiency grounds for introducing IFR pricing. Even if the Authority accepts Davwil's argument that the economic benefits of introduction of IFR are likely to be small until 2025 (arguments that GAWB submits are not well founded), the Authority should still recommend introduction of IFR pricing on equity grounds.

Two customers with the same annual demand but different instantaneous peak demand currently pay the same price notwithstanding that they consume different amounts of network capacity. Similarly two customers that tie up the same amount of delivery capacity may pay very different delivery prices at present.

Consider two customers with MIFR of 33 Ls^{-1}. Customer A has constant water demand and therefore uses 1,040ML p.a. Customer B operates a five-day per week process. Customer B pumps at 50% of its maximum demand for nine hours per day and at peak demand for three hours per day. Customer B draws 280ML p.a. (Refer **Figure 2**).

Figure 2 – Use of pipeline capacity



Under current pricing, Customer A pays an annual charge of more than three times Customer B's charge, even though both customers require the same amount of downstream pipeline capacity. Under IFR pricing both customers would pay the same delivery bill. By providing such a price signal, Customer B might efficiently moderate its flow rate through on site-storage arrangements thereby using less of the delivery network capacity. Such incentives drive overall efficient behaviour and can assist in optimising network utilisation and deferring augmentation until necessary.

In summary, GAWB submits that it is not desirable to delay introduction of a fairer pricing arrangement that is likely to lead to more efficient investment outcomes.

3.3.4.2 Complexity

Davwil considered that IFR pricing involved an increase in pricing complexity and that this increase was a disadvantage.

GAWB submits that the proposed arrangements are not more complex than the status quo; are not more complex than other utility arrangements; are necessary to signal the economic costs of supply; and are appropriate for the scale and sophistication of our customers.

GAWB's proposed pricing arrangements comprise:

- a storage access charge ($/ML, based on contracted annual water requirements)
- a storage volumetric charge ($/ML, based on the quantity of water metered in a month)
- a delivery access charge ($/Ls^{-1}, based on contracted maximum flow rates);
- a delivery demand charge ($/Ls^{-1}, based on maximum flow rates metered in a month)
- an administration cost recovery charge
- over-run charges where a customers exceed their contracted annual volume or contracted maximum instantaneous flow and
- a surcharge for contracts of less than 20 years duration.

GAWB is effectively a wholesaler of water to large customers. Customers' annual bills range from a few tens of thousands of dollars to a few million of dollars. These are sophisticated customers with considerable in-house analytical capability.

GAWB submits that the proposed pricing is less complex than a typical mobile phone bill. The proposed pricing is very much more simple than wholesale electricity arrangements and similar in complexity to the retail tariffs offered to large gas and electricity customers.

Finally, the proposed IFR pricing is no more complex than the current delivery pricing arrangements. GAWB proposes to retain the two-part delivery tariff: it is simply replacing an accumulation measure (ML per month) with a maximum rate measure (maximum flow in litres per second).

3.3.4.3 Ability to respond, small savings

Davwil argues that the inability to meter IFR of retail customers is somehow a disadvantage of IFR pricing at the wholesale level.

We note that the electricity transmission charges are based on instantaneous maximum demand and gas transmission charges are generally based on peak-day or peak-hour rates. These signals cannot be directly passed on to mass-market customers because end users do not have appropriate metering. However, this metering asymmetry is not used to justify less cost reflective pricing where metering is available.

Electricity and gas retailers use other mechanisms (control of air conditioners or water heaters, education campaigns, etc) to influence their customers' behaviour to minimise their costs.

GAWB seeks only to price its products and services in an efficient and equitable manner. It is up to our customers to respond to those signals in the way they see fit.

Davwil also argues that expected savings may be small:[15]

> *'that expected savings may not eventuate, may occur only for short periods or may be relatively small, as they may be limited to reductions in some operating costs which are a small proportion of total capital and operating costs.'*

GAWB notes that the purpose of cost-reflective pricing is not for the utility to make savings *per se*. The purpose of setting prices to reflect economic costs is to encourage customers to make efficient consumption and conservation decisions, and to contribute appropriately where they are not able to make efficiency-enhancing changes.

To the extent that the LRMC of network capacity is low, then the purpose of setting cost reflective prices is to equitably recover the target revenue without distorting investment decisions. GAWB argues above (and has argued in previous submissions) that IFR pricing provides more equitable recovery of sunk costs.

Later, Davwil is quoted as stating:[16]

> *'customers are unlikely to invest in peak flow reduction works if the cost of their investment is likely to be greater than the IFR price saving.'*

GAWB notes that this is precisely the objective of setting the variable price equal to the LRMC of supply. To the extent that customers can invest in peak flow reduction at a lower cost than GAWB, the pricing arrangements should support this efficient outcome. If GAWB can invest at a price lower than customers' willingness to pay for additional capacity, then GAWB should build the capacity.

The 'disadvantage' that Davwil cites is precisely the outcome that the Authority is required to pursue.

3.3.5 GAWB's proposal is unambiguously superior to the status quo

The current approach to pricing in the water industry is based on annual volumes. This approach exists not because it is cost reflective or fair, but because of historical metering technology constraints.

15 *QCA Draft Report*, p 22
16 Ibid

It would be impossible today to make a case for the introduction of delivery charges based on annual volumes. Any regulator applying normal principles promoting economic efficiency and cost reflectivity would require a pricing approach based on maximum flow rates.

It is possible to argue that prices should be based on flow rates over some other timeframe. GAWB's raw water delivery network contains reservoirs that provide a 12 to 16 hour supply buffer at some places in the system. The network upstream of such reservoirs must therefore be sized to meet the peak-day flow. Downstream of such reservoirs, the network must be sized to meet the instantaneous demand of customers. That is, it would be possible to argue that delivery prices should be based on a customer's highest 12 hour flows or 24 hour flows or some combination of peak-day and instantaneous flows.

It is not possible to argue that the status quo is superior to arrangements based on maximum flow rates.

Because flow rate based pricing is superior to the status quo based on both economic efficiency and equity criteria, and because customers require pricing certainty, GAWB contends that the Authority should:

- confirm its 2005 recommendation that IFR has merit or recommend some other structure for the delivery network
- confirm that GAWB's proposed implementation of IFR pricing is appropriate or recommend some other methodology and
- confirm that GAWB's proposed 2015 introduction is appropriate or recommend some other date or trigger criteria.

GAWB requests that the Authority explicitly:

- approve GAWB's proposed pricing methodology or alternatively set out its recommended methodology for implementing IFR
- approve or reject the introduction of IFR at 1 July 2015 and
- if the 1 July 2015 introduction is rejected, recommend criteria for triggering the introduction of IFR.

3.4 Over-run charges

At Recommendation 7, the Authority stated:

> *The Authority recommends that GAWB retain the current methodology for determining over-run or penalty charges where:*
>
> *(a) actual demand exceeds the contracted/reservation volume for industrial customers, unless otherwise negotiated with GAWB, an additional load factor or surcharge of:*
> *(i) 25% applies to the total charge for incremental volumes where actual consumption is between 110% and 125% of the contracted amount (first over-run charge); and*
> *(ii) 50% applies to the total charge for incremental volumes where actual consumption is higher than 125% of the contracted amount (second over-run charge); and*
>
> *(b) actual demand exceeds the contracted/reservation volume for Local Government Authority customers, unless otherwise negotiated with GAWB, a load factor or surcharge of 10% will apply to the total charge for incremental volumes where actual consumption exceeds 125% of the contracted volume.*
>
> *The Authority also recommends that:*
>
> *(a) GAWB apply discretion in applying over-run charges in extraordinary circumstances or where there is no consequential cost impact on GAWB; and*
> *(b) details of how these over-run charges would apply in relation to proposals for the introduction of IFR charging should be addressed as part of GAWB's review of the framework for IFR charging.*

GAWB accepts Recommendation 7 with the exception that the Authority should confirm a methodology for IFR over-runs. As discussed in Section 3.3 , even if the Authority is not prepared to recommend introduction of IFR pricing in 2015, GAWB submits that the Authority should confirm that GAWB's proposed methodology is appropriate so that GAWB can begin modelling customer bill impacts and consulting with customers.

We also note for clarity that GAWB does not use the term "load factor" to describe over-run charges. Load factor has a specific meaning in engineering which is different from the meaning given to the term in the Authority's reports.

GAWB requests that the Authority explicitly:

- approve GAWB's proposed pricing methodology in relation to IFR over-runs or alternatively set out its recommended methodology.

3.5 Pricing for GRC connections

At Recommendation 8, the Authority stated:

> *The Authority recommends that GAWB should charge the relevant zonal prices for GRC connections.*

GAWB supports this recommendation.

3.6 Pricing zones

At Recommendation 9, the Authority states:

> *The Authority recommends that prices be differentiated for all customers according to their utilisation of specific components of GAWB's infrastructure network in accordance with zones proposed by Davwil Consulting.*

GAWB supports the over-arching recommendation that customers should only be charged for use of the assets they use. GAWB notes that Davwil has accepted all GAWB's zone pricing definition proposals except for the combination of the Awoonga Dam to Fitzsimmons Street Reservoir into one zone.

GAWB continues to believe that its proposed pricing zones are appropriately cost reflective. However, GAWB has no new material to submit in addition to that provided in the Commercial Framework submission.

GAWB therefore accepts the Authority's recommended pricing zones.

GAWB notes that Figure 4.1[17] does not correctly show the allocation of the Boat Creek Reservoir to the North industrial Raw pricing zone in accordance with the Authority's recommendations.

3.7 Differentiation between new and existing customers

At Recommendation 10, the Authority states:

> *The Authority recommends that, as a general principle, the cost of common infrastructure should be allocated to all existing and future new customers.*

17 *QCA Draft Report*, p 31

The Authority notes this 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 in a manner which does (not) conflict with the overarching principle for the pricing of common infrastructure.

GAWB supports the recommendation that existing and new customers should pay the same price for use of common infrastructure.

3.8 Differentiation on the basis of service quality

At Recommendation 11, the Authority states:

The Authority recommends that, as a general principle, prices should reflect service quality to the extent this involves cost differentials. GAWB should continue to monitor customer demand for the scope for water supply products to be differentiated on the basis of reliability, including through an 'opt-in/opt-out' approach where additional supply can be provided from new sources.

GAWB would respectfully submit that it is a relatively small water service provider and its ability to introduce such changes is constrained by State and Federal legislation and policy.

As a matter of principle, however, GAWB supports the recommendation that prices should reflect service quality to the extent this involves cost differentials.

However, GAWB does not accept that an 'opt-in/opt-out' approach is optimal for new sources. GAWB notes that it has made no proposals to the Authority in relation to this issue for the 2010 price review. This matter was being considered as part of the Authority's Part (c) investigation into pricing practices of a multi-source system. The recommendation made by the Authority is broad in nature and does not provide clarity as to the principles underpinning the recommendation. As such, GAWB cannot accept the Authority's recommendation at this time.

GAWB submits that the second sentence should be removed from the Authority's Recommendation 11. The Authority should clearly set out the principles underpinning this recommendation as part of its Part (c) investigation process (as was originally intended), including responding to GAWB's submissions that detail the problems with 'opt-in/opt-out' augmentation in a system where customers receive common security.

3.9 Short-duration contract surcharge

At Recommendation 12, the Authority states:

The Authority recommends that:

(a) GAWB provide justification for the proposed level of the surcharge, with reference to the costs/risks likely to be incurred as a result of shorter contract terms; and
(b) any revenues gained from this surcharge that exceed additional previously unexpected costs should be taken into account in setting future prices.

GAWB accepts part (b) of the recommendation. However, GAWB submits that if the Authority requires *ex ante* quantification of specific costs, part (a) of the recommendation is not practically achievable.

In any event, GAWB submits that the surcharges proposed are cost reflective in that they reflect the economic cost of supply (as determined by the Authority) averaged over the contract duration.

Moreover, GAWB will not retain revenues (ie. no beneficial interest) from short-duration price surcharges. Surcharge revenues will effectively be transferred to long-duration contract customers as lower access prices. GAWB's revenues will continue to be cost reflective in aggregate, unaffected by the surcharge.

GAWB submits that the Authority should make a recommendation on the quantum of surcharges and operation of the price surcharge revenues rebate mechanism in its Final Report.

3.9.1 Surcharge should reflect costs

In response to the concerns outlined by the Authority involving the linkage of the surcharge with GAWB's estimate of costs and risks incurred, GAWB has attempted to quantify the costs of short-duration contracts. GAWB's analysis concluded that the costs are highly dependent on assumptions and vary from customer to customer and over time.

Moreover, effects of hypothetical unusual commercial arrangements are difficult to estimate: If all customers required short-duration contracts, then GAWB would have extreme difficulty in obtaining additional debt at reasonable prices. GAWB would be forced to reduce debt (increasing the cost of funding by adding expensive equity) or pay a very high price for debt. It is difficult to determine what that premium might be because GAWB cannot find an example of a similar utility firm that doesn't underpin investment with long-run contracts.

To overcome the problem that specific cost implications are essentially impossible to assess *ex ante*, GAWB based its surcharges on:

- the level necessary to achieve efficient contracting behaviour
- the level of premiums for spot purchases (or discounts for long contracts) observed in other markets (but noting that we could not find examples in the water industry)
- matching the price averaging period with the contract duration.

This last point, aligning the price-averaging period with contract duration, means that customers bear the efficient costs of supply over the duration of their contract. Short-duration customers do not get the benefit of future customers' demand in their price. In that respect the surcharges are cost reflective. Indeed the surcharge is conservative because GAWB does not inflate the price to include uncertain (but theoretically relevant) additional costs, such as higher cost of capital.

More detail on GAWB's proposal to set the short-duration contract surcharges (largely by aligning the price–averaging period with initial contract term) is included as Appendix 3.

The Authority faced a similar problem in recommending levels of over-run charge. The costs of over-runs are highly dependent on the circumstances of the particular over-run. However, the Authority properly concluded that a standard over-run charge is appropriate to incentivise efficient behaviour. When GAWB submitted that the proposed level of over-run charge was too small to effectively influence behaviour, the Authority appropriately modified the regime. GAWB seeks a similar pragmatic solution in this case.

Finally we note that long-term customers, not GAWB, will benefit from short-duration contract surcharges. The Authority need not therefore accurately align costs with surcharges to prevent GAWB from earning too high a return on investment: the implementation mechanism will ensure only long-term customers benefit. The scale of that benefit is consistent with the principles arising from the Authority's 20-year price averaging period. The imperative for the Authority therefore is to ensure that the surcharge provides incentives for efficient long-term contracting behaviour.

The short-duration contract surcharge revenues will be returned to customers by reducing the storage access charge (the volumetric charge is constrained to LRMC). Therefore the most relevant test for the mechanism is one of equity (which guides recovery of residual target revenue) rather than efficiency (which requires the volumetric charge to reflect marginal costs): the Authority must therefore be convinced that the proposed pricing practice is fair. Precise cost reflectivity is not an overwhelming concern (particularly when prices are averaged over 20-years). GAWB argues that a relative discount of 25% for 20-year contracted customers over uncontracted customers is fair.

GAWB submits that the Authority should adopt its proposed surcharges because:

- it is not possible to accurately determine *ex ante* the additional cost of short duration contracts
- the proposed surcharge levels are conservative (they do not include an allowance for uncertain additional costs)
- the proposed surcharge levels provide appropriate incentives for efficient contracting behaviour
- GAWB does not benefit from surcharge revenue (ie. benefits are derived by long-term customers) and
- the arrangement provides appropriate sharing of costs (and benefits of forecast volume growth) between shorter-term and longer-term customers.

3.9.2 Frontier Economics recommended discounts

The Authority's economic consultant Frontier Economics suggested that, rather than surcharges for short-duration contracts, GAWB might offer discounts to long-term contracts. [18] The Authority would not need to regulate the level of the discount because the Authority could assume that GAWB was acting in its own commercial interest in contracting for a lower than standard price.

Frontier Economics' assessment was made in the context of also suggesting that a five-year price-averaging period was more appropriate than a 20-year price-averaging period.[19]

GAWB's proposal of setting prices over a 20-year price-averaging period and applying surcharges to short-duration contracts (based on shorter price-averaging periods) is mathematically identical to Frontier Economics' recommendation of a five-year price-averaging period and discounts for long-duration contracts.

GAWB notes that the current regulatory arrangements set a price comprising:

- a demand forecasts assumption that all customers remain supplied for the entire 20 year planning period (and additional customers join the system) and
- the regulated rate of return reflects a low risk environment underpinned by long term customers.

That is, the standard prices are stripped of any allowance for higher costs and risk of short-duration contracts. The prices assume long-duration customers anchored by contract. GAWB is not in a position to grant discounts to customers for agreeing to long-term contracts when an assumption of long-term contracting underpins the standard price.

3.9.3 GAWB's proposal too complex

The Authority noted[20] that:

> *'...a graded scale, reducing over time, may be unduly complex and a flat rate may be appropriate.'*

For the avoidance of doubt, GAWB proposes that at the time a short duration contract is struck the appropriate price surcharge is selected from the range set out in **Table 1**.

This single surcharge rate is applied to all GAWB's standard prices for the entire duration of the contract.

18 Frontier Economics, p 64
19 Frontier Economics, p 67
20 *QCA Draft Report*, p 41

The proposed approach is not administratively or conceptually complex.

Table 1 – Proposed short-duration contract price surcharge

	Less than 2 years (incl. uncontracted)	2 to < 5 Years	5 to < 10 Years	10 to < 15 Years	15 to < 20 Years
Price surcharge	25%	20%	10%	5%	3%

GAWB submits that a single short-duration surcharge (say 15% applied to all contracts of duration less than 20 years):

- cannot be cost reflective
- would not be effective in encouraging efficient long-term contacting and
- would be inequitable for customers with longer terms contracts.

Under a single short-duration contract there would be no incentive for a customer to sign a 10-year contract over remaining uncontracted. Under GAWB's proposal a customer that signs a 10-year contract obtains a 20% discount over the uncontracted price.

GAWB's proposed surcharges are a relatively simple mechanism to achieve the outcome that all parties agree is appropriate: to provide an incentive for customers to enter into long-term contracts.

3.9.4 Return of excess revenue to customers

GAWB proposes that any revenue from short-duration surcharges that exceeds the cost of supply should be returned to customers in future regulatory periods.

GAWB proposes the following mechanism for achieving the recommended outcome:

- All revenue from short duration contract surcharges during a regulatory control period will be separately recorded
- At each price review, GAWB will identify any incremental costs imposed by short-duration contract customers (that is any costs imposed on GAWB because the duration of the contract is less than 20 years)
- The difference between the present value revenue from surcharges and present value costs incurred will be returned to customers in the form of a lower reservation and storage charge.

GAWB requests that the Authority endorses this mechanism or recommends an alternative approach to return excess short-duration contract revenue to customers.

GAWB submits that the Authority should make a recommendation on the quantum of surcharges and operation of the price surcharge revenues rebate mechanism in its Final Report.

GAWB submits that the Authority should adopt its proposed surcharges because:

- it is not possible to accurately determine *ex ante* the additional cost of short duration contracts
- the proposed surcharge levels are conservative (they do not include an allowance for uncertain additional costs)
- the proposed surcharge levels provide appropriate incentives for efficient contracting behaviour
- GAWB does not benefit from surcharge revenue (ie. benefits are derived by long-term customers) and
- the arrangement provides appropriate sharing of costs (and benefits of forecast volume growth) between shorter-term and longer-term customers.

GAWB requests that the Authority endorses GAWB's proposed mechanism for returning excess short-duration contract revenue to customers or recommend an alternative approach.

3.10 Contributed assets

At Recommendation 13, the Authority states:

> *In relation to contributed assets, the Authority recommends no change to its previous statement of pricing principles in that:*
>
> *(a) contributed assets should be recognised where there is appropriate evidence of a contractual or policy nature, and provided the contribution is not a prepayment for services, has not been fully repaid or rebated, and the associated assets have not expired or have been replaced at the service provider's expense; and*
>
> *(b) where contributed assets are recognised, they should be included in the asset base for the purpose of determining the revenue requirement and prices with an appropriate rebate provided to the customer(s) making the contribution.*
>
> *The Authority further recommends that GAWB's proposals to the following effect be adopted:*
>
> *(a) unless otherwise agreed with the contributor, rebates for future contributed assets should include return-on-capital and return-of-capital components, provided their contribution was intended to reduce prices in this manner;*
>
> *(b) in some circumstances, particularly where contracts stipulate, the rebate may be equal to the return on capital component only;*
>
> *(c) where the capital contribution attracts a tax liability, this would be included in customers' charges; and*
>
> *(d) where customers use assets contributed by another customer, GAWB should ensure that the price paid by that customer includes recovery of a return on and of capital in respect of the assets contributed by the other customer.*

GAWB supports this recommendation.

3.11 Pricing for drought circumstances

At Recommendation 14, the Authority states:

> *The Authority recommends:*
>
> *(a) no change to the current pricing principle that the direct costs of GAWB's drought contingencies should be included in the revenue requirement as they represent a real cost to GAWB, provided the risks to which they relate are commercially relevant, GAWB has acted prudently and is the most appropriate party to bear the risk and the response is cost-effective;*
>
> *(b) scarcity pricing not be considered at this time but that GAWB should re-evaluate the potential for scarcity pricing in future; and*
>
> *(c) when supply restrictions are triggered, the volumetric charge for storage and delivery services be adjusted to maintain revenues for GAWB and to recoup any efficient drought related costs incurred that were not already incorporated in prices.*

GAWB supports parts (a) and (b) this recommendation. GAWB also supports the principle set out in part (c) this recommendation. However GAWB submits that the recommendation is not drafted to provide sufficient clarity regarding how efficient drought related costs could be included in price.

The recommendation allows GAWB to adjust prices '*when supply restrictions are triggered*'. However all '*efficient drought related costs*' are unlikely to be known at the time restrictions are triggered. Therefore GAWB would need to include an estimate of costs or make multiple adjustments or carry an 'unders and overs' balance forward to the next regulatory review. GAWB submits that the Authority should specify its preferred approach, to reduce the likelihood that any price adjustment will be challenged by customers.

GAWB also requests that the Authority sets out a definition (or at least provide examples) of what constitutes '*efficient drought related costs*' and how the Authority would administer the test for efficiency.

> GAWB requests that the Authority provides clarity regarding the implementation of part (c) of Recommendation 14.

3.12 Counterparty risk

At Recommendation 15, the Authority states:

> *In relation to counterparty risk, the Authority recommends that:*
>
> *(a) price differentiation on the basis of credit risk is appropriate to the extent that the proposed response is commensurate with the cost/risk of the service provision; and*
>
> *(b) loss of revenue resulting from a counterparty becoming insolvent should not be recovered from existing customers. The risk of counterparty default can be commercially managed by appropriate contractual arrangements within GAWB's control.*

GAWB's accepts the principle of the Authority's recommendation. However, the recommendation (like that relating to short-duration contract surcharges) does not provide certainty for GAWB in the absence of an approved mechanism for giving effect to the differentiated price. GAWB requests that the Authority specifies the mechanism by which GAWB can quantify an acceptable price difference.

The Authority as part of its analysis also stated that[21]:

> *'However, the Authority does not agree with GAWB's proposal that lost revenue (from a counterparty becoming insolvent) should be recovered from GAWB's other customers. The Authority also does not agree with the principle that existing customer should pay a penalty for a separate customer being made unable to pay GAWB for its water consumption.'*

For clarity, GAWB believes the Authority's analysis has misrepresented GAWB's position in that:

1. Counterparty credit risk is the risk that GAWB will not recover payment for water already supplied to a customer. GAWB manages this risk through appropriate credit management and/or self insurance mechanisms. As such, this foregone water revenue will not be recovered against customers through a penalty or otherwise.

2. Contract default risk is the risk that a customer defaults or prematurely terminates a contract. Under GAWB's proposed revenue cap, GAWB will not recover foregone revenue from other customers in the event of default. However, customer prices will be impacted by the re-balancing of demand.

GAWB requests that the Authority provides clarity regarding the implementation of part (a) of Recommendation 15.

21 *QCA Draft Report*, p 48

4 Water Supply and Demand

4.1 Awoonga Dam supply

At Recommendation 16, the Authority states:

> *The Authority recommends that planning and prices for services provided by Awoonga Dam be based on a HNFY of 78,000ML.*

At the time of GAWB's submissions to the Authority, the interim water allocation available to GAWB, based on the Historic No Failure Yield (HNFY) of Awoonga Dam, was 70,000ML per annum. Since GAWB's submissions, there have been significant inflow events which GAWB estimates will increase the available interim HNFY allocation of Awoonga Dam to 76,000ML per annum. In discussions with the Authority prior to the release of the Draft Report, GAWB advised that the new interim allocation would be used for price modelling purposes.

As outlined in GAWB's Expenditure Proposals submission, GAWB proposed to set an aggregate demand forecast for years six to 20 of the planning period that assumes that existing spare capacity will be consumed by the end of the planning period. The approach adopted by the Authority means that the aggregate demand at the end of the planning period is greater than GAWB can supply under its current permitted yield allocation.

Given the small difference between the new interim allocation and the full supply allocation of 78,000ML, GAWB accepts the Authority's recommendation. GAWB however contends that GAWB's permitted yield is the most appropriate measure for determining aggregate demand at the end of the planning period.

4.2 Demand

At Recommendation 17, the Authority states:

> *The Authority recommends that, for pricing purposes, the demand scenario for the regulatory pricing period commencing 1 July 2010 should reflect existing contracted volumes, anticipated contracted volumes and a component to reflect expected long term growth as outlined in Table 5.3.*

The Authority's Table 5.3 demand is reproduced in **Table 2** below.

Table 2 - The Authority's Table 5.3 Indicative Demand Forecast (ML)

Demand	2010-11	2011-12	2012-13	2013-14	2014-15	2019-20	2024-25	2029-30
QCA Method								
Treated	10,230	10,435	10,645	10,860	11,079	12,567	14,193	15,976
Raw	38,693	40,141	41,589	43,037	44,486	51,726	56,893	62,060
Total	**48,923**	**50,576**	**52,234**	**53,897**	**55,564**	**64,293**	**71,086**	**78,036**
GAWB Forecast								
Treated	10,230	10,435	10,645	10,860	11,079	12,567	14,193	15,976
Raw**	38,639	38,639	38,639	38,639	38,639	43,805	48,917	54,024
Total	**48,923**	**49,128**	**49,338**	**49,553**	**49,772**	**56,372**	**63,110**	**70,000**
Difference	0	1,448	2,896	4,344	5,793	7,921	7,976	8,036

** GAWB notes that the GAWB raw water forecast as stated in the table by the Authority contains a transcription error. The raw water demand for the years 2010/11 to 2014/15 should be 38,693 ML per annum not the 38,639ML per annum as stated by the Authority.

GAWB notes that there is no difference between GAWB's and the Authority's treated water forecasts. GAWB therefore accepts the recommended treated water demand.

GAWB however does not accept the approach taken by the Authority in estimating raw water demand for the 2010 to 2015 regulatory control period based on confidential discussions with customers.

The Authority contends that '*its forecasts are based on the best available information and fall within the range of scenarios identified by GAWB and therefore represent a reasonable basis for estimating indicative prices*'. The Authority however has not acknowledged the risk associated with its approach, which is entirely borne by GAWB, given that:

- GAWB's raw water demand is idiosyncratic in nature
- GAWB has no ability to influence whether the demand will eventuate including the timing of such take-up of new demand
- customers have a vested interest in providing optimistic demand forecasts to reduce the price paid for water particularly when they do not have to commit to such forecasts through contract or otherwise at the time such forecasts are provided to the Authority.

GAWB also notes that in the detailed forecasts provided by the Authority, this additional demand is not assigned to any project in particular or to any customer.

The approach that has been adopted by the Authority has essentially substituted GAWB's raw water demand forecasts with its own – a process that GAWB is unable to accept. In essence, the Authority has passed to GAWB additional demand risk with GAWB having no understanding as to the underlying assumptions behind the additional demand forecast. GAWB has no ability to manage this risk. In conjunction with the Authority's rejection of GAWB's proposed revenue cap, this approach adds a considerable component of regulatory risk to GAWB. If the Authority's forecast demand is not achieved, GAWB will not achieve an economic return on assets.

This risk is real and material.

GAWB has suffered depressed return on investment in the current regulatory period as a result of lower-than-forecast demand. GAWB strongly argues that the Authority's approach of accepting customer estimates for uncontracted future growth biases expected outcomes to lower-than-target return on investment.

As discussed in Section 2.1, GAWB is being asked to accept lower prices on the basis of an altered demand forecast that it is not meaningfully able to respond to, and to accept the entire risk that such demand may not materialise. GAWB urges the Authority to reconsider its approach, either by adopting a more reasonable forecast or, preferably, accepting GAWB's proposal to operate under a revenue cap.

As set out in our response to Recommendation 1, GAWB submits that the Authority should either adopt a more reasonable demand forecast or, preferably, accept GAWB's proposal to operate under a revenue cap.

If neither of these options is unacceptable, the Authority should work with GAWB to develop a mutually acceptable hybrid form of regulation.

5 Regulated Asset Base

5.1 DORC valuation

At Recommendation 18, the Authority states:

> *The Authority recommends that infrastructure assets continue to be valued at DORC, land be valued at market value, and easements be valued at indexed historical cost.*

GAWB supports this recommendation.

5.2 RAB roll-forward

At Recommendation 19, the Authority states:

> *The Authority concurs with GAWB that a roll-forward approach is appropriate for the 2010-15 regulatory period, rather than a full revaluation.*

GAWB supports this recommendation.

5.3 Opening RAB value

At Recommendation 20, the Authority states:

> *The Authority recommends that the opening asset value (as at 1 July 2005) remain unchanged from that adopted in the 2005 review (approximately $356 million).*

GAWB does not accept this recommendation.

The Authority recommended in its 2005 Final Report[22]:

> *'…that GAWB's asset base be revalued due to the material changes to the key assumptions underpinning the prior…The* ***estimated*** *(emphasis added) DORC as a 1 July 2005 is $355.6 million.'*

This valuation was based on the SMEC valuation as at 1 July 2004 indexed forward to 1 July 2005.

The Authority stated in the 2010 Draft Report[23]:

> *'If there is to be a change, the onus is on GAWB to justify it. Therefore, unless GAWB is able to identify (and justify) the source of the difference in the asset valuations (which it has been to date unable to do), it is not appropriate to adjust the asset base adopted in the Authority's 2005 review.'*

As outlined in GAWB's submissions, SMEC also undertook a Depreciated Optimised Replacement Cost (DORC) valuation for GAWB as at 1 July 2005. GAWB has been frustrated in its attempt to reconcile this asset valuation with the ***estimated*** valuation provided by the Authority because:

- the Authority has advised that it has no records as to the detail behind the 2005 asset valuation
- the Authority's 2005 consultant SMEC's records did not match the valuation of the RAB included in the Authority's Draft Report.

22 *Final Report GAWB: Investigation of Pricing Practices* (QCA, March 2005) (*QCA Final Report 2005*), p 8
QCA Draft Report, p 88

23 QCA *Draft Report*, p 61

GAWB submits that the Authority is the only party that could reconcile the valuation provided by its consultant with the estimated value of the RAB adopted by the Authority in its 2005 Final Report.

The Authority has not maintained the detailed records provided by its consultant and this is the sole reason why GAWB could not reconcile valuation differences with the DORC valuation it obtained. That is, GAWB would have been able to justify the valuation difference if the Authority had kept, and been able to produce, the records used as a basis for its 2005 decision.

For clarity, GAWB has provided the Authority with the detail (asset by asset) of its proposed RAB. The Authority has advised that it is not able to provide asset by asset detail of its recommended valuation. Therefore GAWB cannot reconcile the valuations.

As part of the 2010 price review, Davwil, the Authority's consultant, also attempted to review the opening valuation differences. Davwil makes the following comments in its report[24]:

> *In looking at both asset bases it would appear the difference is a combination of the following:*
>
> - *Optimisation variation. (Note: the revised RAB for 1 July 2010 determined by Davwil has this variation corrected – Refer section 5.2);*
> - *Numerous variation where SMEC 2005 re-valued assets have different values than inflated SMEC 2004 values including any valuation errors detected by SEMC in the 2005 re-valuation, with some of these valuations likely to be difference in depreciation and inflations used; and*
> - *Actual disposal and acquisitions variations compared with estimates.*
>
> *Davwil considers that the GAWB 2005 Asset Base (re-valued) is the most accurate representation of the value of their assets adjusted for the optimisation difference. It is also the asset base accepted for GAWB's annual financial reports audit and has been thoroughly reviewed by separate GAWB auditors...*
>
> *Accordingly GAWB 2005 Asset Base has been used to establish the RAB for 1 July 2010.*

GAWB therefore submits that GAWB's proposed opening value of the RAB at 1 July 2005, adjusted for the optimisation differences identified by Davwil, be accepted because:

- the valuation best gives effect to the Authority's recommendation that a 2005 DORC valuation be used (the proposed valuation is an accurate value of assets at 1 July – as highlighted by Davwil)
- the Authority's valuation is not capable of being rolled forward at the asset level (if adopted, this valuation would create perpetual uncertainty as to valuation of assets replaced in the asset base)
- the Authority has no detailed records as to what made up their 2005 valuation and
- Davwil concluded that the Authority's valuation contains errors which can only be corrected through adopting GAWB's value at 1 July 2005.

GAWB submits that the Authority should adopt GAWB's proposed opening value of the RAB at 1 July 2005, adjusted for the optimisation differences identified by Davwil.

24 *Davwil: Final Stage 2 Report (incorporating stage 1) for Queensland Competition Authority on Gladstone Area Water Board 2010 Investigation of Pricing Practices Asset Valuation and Assessment of Efficiency Operating Costs* (March 2010) (*Davwil report*), p 75

5.4 CPI inflator

At Recommendation 21, the Authority states:

> *The Authority recommends that the CPI be used to roll-forward 2005 asset values.*

GAWB supports this recommendation.

5.5 Depreciation

At Recommendation 22, the Authority states:

> *The Authority recommends that assets be depreciated on a straight-line basis using the remaining lives determined in the 2005 revaluation.*

GAWB supports this recommendation.

5.6 Boat Creek reservoir

At Recommendation 23, the Authority states:

> *The Authority recommends that the Boat Creek Reservoir be reinstated into the regulatory asset base for the 2010 price investigation.*

GAWB supports this recommendation.

5.7 2005 to 2010 regulatory control period capital expenditure

At Recommendation 24, the Authority states:

> *The Authority recommends an indicative estimate of capex to the value of $35.654 million be included in the asset base and rolled forward to 1 July 2010.*

Table 6.3 of the Authority's report summarises the Authority's recommendations in relation to individual capital expenditure items and this has been reproduced here.

Table 3 - Table 6.3 Review of Capital Expenditure (2005-10 $m) (variance analysis has been added by GAWB)

Project	GAWB Proposal	Davwil	Authority Recommendation
Northern supply assets purchase	1.927	1.927	1.927
YWTP upgrade	2.587	2.587	2.587
Control systems upgrade	2.819	2.819	2.819
Awoonga Dam switchgear upgrade	1.659	1.659	1.659
Land and catchment management	2.344	2.344	2.344
Fitzsimmons St/Mt Miller connection	1.085	1.085	1.085
Fitzsimmons St reservoir refurbishment	1.046	1.046	1.046
Contingent supply strategy	33.328	22.3	10.65
Variance		*11.03*	*22.68*
% Variance		*33.09%*	*68.04%*
Office refurbishment	0.47	0.47	0.47
Other	12.297	11.067	11.067
Variance		*1.23*	*1.23*
% Variance		*10.00%*	*10.00%*
Total	**59.562**	**47.304**	**35.654**

GAWB accepts the Authority's recommendations in relation to all expenditure summarised at Table 6.3 in its report, with the exception of:

- expenditure allowed for the Contingent Supply Strategy (CSS)
- the adjustment made to other capital expenditure.

5.7.1 Contingent Supply Strategy

The major variance between the Authority's recommendation and GAWB's proposal relates to expenditure upon the CSS. GAWB proposed to include expenditure totalling $33.328m, but the Authority recommended that only $10.65m be taken into account for the purpose of determining prices (for the present period), leaving a shortfall of $22.678m.

The Authority has stated[25] that the $22.678m is to be:

> *'capitalised until a decision is made on the CSS, at which time the expenditure will either be included into the asset base for pricing purposes or written off at GAWB's expense.'*

The Authority's recommendation does not specifically state that it is intended for these amounts to be capitalised and rolled forward with a WACC component. GAWB seeks the Authority's clarification of this matter in the Authority's Final Report.

GAWB welcomes the Authority's acceptance[26] of Davwil's conclusion concerning the efficiency of GAWB's actual expenditure that:

> *'The outcome of all this assessment is that the efficiency of actual individual actions themselves before and after the breaking of the drought in Feb 2008 is not in question. GAWB's processes to efficiently get an activity completed once decided to proceed have been found to be good practice.'* [27]

25 *QCA Draft Report*, p 71
26 ibid
27 *Davwil report, p 67*

However, GAWB does not accept the approach that the Authority has taken in the application of its earlier recommendations concerning GAWB's CSS.[28] In relation to the expenditure to be taken into account to determine prices the Authority notes:

> *'Davwil did not provide a specific recommendation as to how the Authority should treat the CCS expenditure in its pricing review. Instead Davwil suggested options, including accepting GAWB's full claim, accepting only the $24.8 million foreshadowed in the Part (a) report or accepting expenditure as at 2007-08 plus a provision for contractual commitments, mothballing and holding costs.'*[29]

Davwil notes that in relation to the four different options, it identified '*[t]hat in the end, there is no right answer*'[30] as expenditure to be taken into account to determine prices.

Ultimately, the Authority concludes[31]:

> *'In principle, it is proposed to include only expenditure incurred as at February 2008 plus previously committed expenditure incurred after that date. In addition, completion of investigations into desalination is warranted as recommended in the Authority's Part (a) report. It is also considered that expenditure on approvals processes to 2009-10 should also be completed to maximise the benefit of the remaining investment in preparatory works.'*

GAWB's considers that this approach is inconsistent with the proper application of the test that the Authority formulated in its earlier investigation concerning the CSS.[32]

5.7.1.1 Part (a) Test

GAWB believes there is a flaw in Davwil's interpretation of the test to be applied to assess the efficient costs to be included for pricing. This flaw necessarily infects the conclusion of the Authority.

The Authority was provided with a referral by the QCA Ministers that provided, inter alia:

> *The Gladstone Area Water Board's (GAWB's) strategic water plan includes GAWB's contingent supply strategy. GAWB has selected a supply of water from the Fitzroy River as its preferred contingent supply. <u>GAWB proposes to undertake preparatory expenditure to provide reasonable certainty that water can be sourced from the Fitzroy River within 24 months of agreed events (either drought or demand led) that might trigger an augmentation</u> (emphasis added).*
>
> *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 of the GAWB to the Queensland Competition Authority (QCA) for investigations regarding the appropriateness of the following pricing practices:*
>
> *(a) GAWB's recovery of proposed preparatory expenditure from existing and future customers, specifically having regard to;*
> *(i) the prudence of GAWB's contingent source strategy, including selection of a supply from the Fitzroy River as the appropriate contingent source;*
> *(ii) the level of efficient costs associated with the development of GAWB's contingent supply strategy that should be included in prices;*
> *(iii) the timing of expenditures which are related to the implementation of the contingent supply strategy;*
> (iv) the means by which efficient costs of the contingent supply strategy should be included in prices for subsequent years.[33]

28 *Gladstone Area Water Board:2007 Investigation of Contingent Water Supply Strategy Pricing Practices, Stage A* (QCA, December 2007) (*QCA CSS Report Stage A*)
29 *QCA Draft Report*, p 70
30 *Davwil report*, p 72
31 *QCA Draft Report*, p 70
32 *QCA CSS Report Stage A*
33 Provided by letter dated 23 February 2007.

In its submissions to the Authority, GAWB explained the CSS as follows:

> *The long lead time that is necessary to access new water sources is incompatible with the relatively short period of time required to respond to stepped changes in inflow or demand without the likelihood of supply failure to customers.*
>
> *The objective of the 'contingent source' strategy proposed by GAWB is to shorten the lead time of the most suitable new water source so that it can most efficiently respond to these changes to address the potential for supply failure.*
>
> *The present application of the 'contingent supply strategy' by GAWB results in it undertaking works totaling an estimated $23.8 million. These works will be undertaken so that GAWB may have certainty that within 24 months it can access a supply of high reliability water from the Lower Fitzroy that has been reserved for it by Government (emphasis added).*[34]

In response, the Authority provides a number of "Key Conclusions".[35] Davwil summaries these conclusions[36], but omits any reference to the first, and in GAWB's contention, the most important conclusion made by the Authority:

> *'A contingent supply strategy is a prudent response to the demand and supply risks facing GAWB.*[37]*'*

The inflows of February 2008 could not affect the prudence of the strategy itself. The strategy is not predicated on prevailing circumstances. Rather, the occurrence of these inflows could (and did) alter GAWB's assessment of the earliest trigger for the implementation of that strategy. Indeed, the Authority itself describes the then current drought as the "*key imminent risk*"[38], not the exclusive reason for the existence of the strategy.

The inflows into Awoonga Dam of February 2008 were substantially improved from those received in the three immediately preceding years (ie. 2004-2007).[39] These inflows resulted in the deferral of the earliest possible implementation of the CSS by about two years. GAWB accepts this is relevant to an assessment of the prudency of some items of expenditure as distinct from the strategy itself.

For this reason GAWB undertook a substantial review of the activities and associated expenditure being undertaken by the CSS with a view to:

- maximise the value to be retained of the work already undertaken for future use at an uncertain date and
- defer non-essential expenditure to an 'early works stage' occurring prior to construction.

Nevertheless, once commenced GAWB's objective from its CSS expenditures was to develop the capacity to have certainty that it could, within 24 months, access a supply of high reliability water from the Lower Fitzroy. GAWB's expenditure submissions from 1 July 2010 to 30 June 2030 are premised upon retaining this capability.

The approach that Davwil asserts as being open to the Authority in relation to the treatment of GAWB's expenditure[40] proceeds from the premise that the CSS was confined to addressing the particular consequences of the sustained drought that was in existence during 2007.

34 *Submissions to the Queensland Competition Authority Fitzroy River Contingency Infrastructure* (GAWB, March 2007), p 6
35 *Gladstone QCA CSS Report Stage A,* p viii to p ix
36 *Davwil report*, p 67 – 68
37 see, p viii *QCA CSS Report Stage A*
38 ibid
39 The period from 2004 to 2007 represents the three worst inflow sequences recorded.
40 In relation to options 2, 3 & 4 *Davwil report*, p 72

The interpretation identified by Davwil as supporting options 2, 3 and 4 is not consistent with: the terms of the Referral Notice; GAWB's description of the strategy; nor a 'plain reading' of the Authority's report. In February 2008, GAWB had not attained (and could not maintain) the ability to access a supply of high reliability water from the Lower Fitzroy within 24 months.

Moreover, to the extent that the purpose of the Referral Notice concerning the CSS was to promote certainty around the treatment of the expenditure proposed by GAWB – there would seem to have been an absolute failure of meeting his objective. The Authority's consultant concludes, in relation to the relevant test to be applied '*[i]n the end, there is no clear right answer'.*[41] Such an outcome undermines investment certainty and allocates unacceptable risk to GAWB.

Accordingly, GAWB submits that options 2, 3 and 4 identified by Davwil should not be adopted by the Authority because the formulation of these options does not apply the correct test to the relevant expenditure.

To the extent that the relevant expenditure has been subject to an ex-post review, Davwil recommends, and the Authority accepts, that the expenditure was efficiently incurred.[42] This is consistent with GAWB's submissions.[43]

For these reasons, the Authority should adopt option 1 as identified by Davwil. This is consistent with GAWB's submissions.[44]

GAWB notes that Davwil understands the Authority to have approved expenditure from a 'pricing perspective' up to $24.8m.[45] For completeness, GAWB recognises that the Authority only reported that various classes of expenditure seemed *appropriate* and noted GAWB's estimated expenditure against those items (prepared in February 2007).[46]

5.7.1.2 2010 price review test

Notwithstanding the above submissions as to the proper approach to be taken concerning the interpretation of the test enunciated by the Authority[47], the Authority states that expenditure meeting the following test will be included into GAWB's asset base for pricing purposes:[48]

> *'In principle, it is proposed to include only expenditure incurred as at February 2008 plus previously committed expenditure incurred after that date. In addition, completion of investigations into desalination is warranted as recommended in the Authority's Part (a) report. It is also considered that expenditure on approvals processes to 2009-10 should also be completed to maximise the benefit of the remaining investment in preparatory works.'*

The Authority appears to have reformulated its Part (a) test. The Authority advises that the application of this reformulated test:

> *'… produces a total cost of $20.65 million. This cost is made up of $2.73 million for project management, $4.18 million for approvals, $0.13 million for land acquisition, $0.36 million for communication and consultation, $11.24 million for engineering and technical, $1.13 million for desalination investigations and $0.89 million for regulatory submissions.'*[49]

GAWB has had difficulty reconciling this expenditure to the reformulated test applied by the Authority. In this regard GAWB has sought to apply the Authority's test and assumptions and notes:

41 ibid
42 *QCA Draft Report*, p 71
43 GAWB's *Expenditure Proposals* submission (December 2009), Appendix 5
44 *Davwil report*, p 71–2
45 *Davwil report*, p 68
46 *QCA CSS Report Stage A*, p 56
47 supra
48 *QCA Draft Report*, p 70
49 ibid

- The Authority incorporated costs from 'engineering and technical' totalling $11.24m. This amount represents the actual expenditure to 30 June 2008. Using the approach proposed by the Authority, GAWB believes that $10.17m represents a reasonable assessment of GAWB's expenditure, assuming a decision to terminate the project had been made at the end of February 2008.[50]

- It appears that no allowance has been incorporated for expenditure associated with works to secure the supply of water from the Fitzroy River – the Lower Fitzroy River Infrastructure (LFRI). The Authority had previously determined that[51]:

  'GAWB should ensure that the necessary arrangements have been entered into to ensure a right of access to supplies of water from the Fitzroy River from mid-2012 should they be required'

  Without a right to water, construction of the balance of the infrastructure would have no value. In these circumstances, GAWB questions the Authority's exclusion of this expenditure. Accordingly, GAWB submits that expenditure of $8.49m[52] on the LFRI project (to secure critical Commonwealth and State approvals) satisfies the test enunciated by the Authority in its Draft Report for inclusion into GAWB's asset base for pricing purposes.[53]

- No allowance seems to have been made for regulatory submissions beyond 30 June 2009 or for the development of the 'decision tool' to compare all options, including investment in demand reduction investments, prior to any final decision to augment.[54] This would result in the exclusion of expenditure related to Part (c) of the Referral Notice and the exclusion of expenditure associated with the development of this model. GAWB submits that additional expenditure of $0.72m satisfies the test enunciated by the Authority in its Draft Report for inclusion into GAWB's asset base for pricing purposes.

- GAWB has identified other (less material) variances across the other expenditure classes. These variances may arise from an incomplete understanding of how the Authority applied the test detailed in its Draft Report. The expenditure that GAWB has included has been calculated using the Authority's assumption that a decision to terminate the CSS project should have been made at the end of February 2008, such that the project was completely demobilised by 30 April 2008.

Table 4 compares the expenditure identified by the Authority to GAWB as satisfying the 'test' enunciated by the Authority in its Draft Report.

50 Having regard to the provisions of cl 29, Project delivery proposal agreement. This amount is calculated on the assumption that the project could be demobilised by 30 April 2008. It also includes a profit margin of 15% payment in accordance with the agreement.

51 *QCA CSS Report Stage A*, p viii

52 Due to differences relating to infrastructure that requires construction between the GFP and the LFRI, expenditure 'engineering and technical' component of the LFRI has been undertaken (only) to the level that is necessary to support processes to secure necessary Commonwealth and State approvals.

53 GAWB's *Expenditure Proposals* submission (December 2009) pp 21 – 24 and Appendix 5, pp 34–38

54 GAWB's *Expenditure Proposals* submission, p 22 table 7

Table 4 - Comparison of the application of principles in the Draft Report to CSS expenditure to 30 June 2010

CSS Cost Centre	QCA total ($000,000)	GAWB total (QCA Scenario) ($000,000)	Variance ($000,000)
Project Management	2.73	2.51	-0.22
Approvals	4.18	4.18	0.00
Land Acquisition	0.13	0.01	-0.12
Communication & Consultation	0.36	0.25	-0.11
Engineering /Technical Support	11.24	10.17	-1.07
Asset Creation	nil	nil	nil
Sub-total GFP Project	**18.64**	**17.12**	-1.52
Federal Funding	-10.00	-10.00	0
Net Overall Cost of GFP Project	**8.64**	**7.12**	-1.52
Desalination	**1.13**	**1.13**	0.00
Cost of Securing Water (LFRI)	**0**	**8.49**	8.49
Regulatory Submissions	**0.89**	**1.61**	0.72
TOTAL:	**10.66**	**18.35**	7.69

In relation to the LFRI expenditure, GAWB makes specific reference to the extensive description and analysis that is contained within its Expenditure Proposals submission.[55] For the reasons canvassed, this expenditure was not capable of being reliably estimated when GAWB was developing its Part (a) (CSS) submissions in February 2007. Accordingly, there is no provision for LRFI expenditure in the estimate of costs, grouped by cost centre, contained in this 2007 submission.[56]

This is to be distinguished from the suggestion made by Davwil that expenditure upon the LFRI project is at variance (or in excess) of GAWB's estimated expenditure (in February 2007).[57]

Quite sensibly, notwithstanding that such estimates could not be provided at this time, the Authority did provide specific and unambiguous support for expenditure associated with securing a supply of water from the Lower Fitzroy River.[58]

Further, and as noted in GAWB's submission[59], both the LFRI and GFP are projects being developed under the *Program of Works, Statewide Water Grid Regional Water Infrastructure Projects* (POW). The Governor in Council approved the POW under Part 3 of the *State Development and Public Works Organisation Act 1971* on 13 December 2007. [60]

55 GAWB's *Expenditure Proposals for the 2010 price review* (December 2009), pp 21–23. See also the following appendices to this submission: Appendix 5 at pp34–38 including reference to clauses 13, 21–24 of the attached Q&A document and Appendix 12 at section 4.44, pp 14–16.

56 see *Submissions to the Queensland Competition Authority Fitzroy River Contingency Infrastructure* (GAWB, March 2007). See estimated expenditure detailed at p104 as detailed in table 3.

57 *Davwil Report*, p 68

58 *QCA CSS Report Stage A*, pviii

59 GAWB's *Expenditure Proposals* submission (December 2009), Appendix 12

60 *Establishment of Program of Works State Water Grid Regional Water Infrastructure Projects Notification (no 3) 2007 (*13 December 2007)

The POW identifies a number of Regional Water Infrastructure Projects to assist in providing Queensland with a more reliable water supply system. Specifically, the GFP and LFRI will lay the foundations for economic growth by:

- providing secure water supplies for Yeppoon and for industrial and rural uses in Rockhampton and
- guaranteeing water to industry in Gladstone.[61]

The POW requires GAWB, as the proponent,[62] to undertake business case feasibility investigations[63]. Work required to be undertaken includes environmental assessment and approvals; cultural heritage; engineering and design; geotechnical investigations; hydrological studies and property acquisition.[64]

GAWB's legislative requirement to complete and submit business cases for the LFRI and GFP underpins and is consistent with the activities and associated expenditure undertaken by the CSS to retain and maximise value for future use at an uncertain date.

As noted by the Authority, this expenditure needs to be completed to maximise the benefit of the remaining investment in preparatory works.[65]

GAWB submits that, on a proper application of tests set out in the recommendations of Authority's CSS investigation, the Authority should accept GAWB's originally proposed CSS capital expenditure.

5.7.2 Other capital expenditure

The Authority has noted in their analysis[66] that *a further $1.23 million in assets that were acquired and disposed of during the period , that is, short life assets. No adjustment to the asset base is needed on account of these items.*

The Authority conclusion is based on a table contained in the Davwil report[67]. GAWB agrees that assets no longer on hand should be included in the opening balance of the Regulated Asset Base (RAB) calculation. These assets were removed from the RAB. GAWB is unsure as to the nature of the further adjustment proposed by Davwil and accepted by the Authority. The adjustment seems to be a misinterpretation of GAWB's working papers and that GAWB's RAB already accurately reflects the assets on hand at 1 July 2010, as reflected by the comments made by Davwil in its report. GAWB will continue to work with the Authority to ensure that they are comfortable that all disposed assets have been removed from the RAB.

5.8 Land adjustment

At Recommendation 25, the Authority states:

> *The Authority recommends that land to the value of $3.05 million be removed from the regulatory asset base as of 30 June 2010.*

GAWB supports this recommendation.

61 *Establishment of Program of Works State Water Grid Regional Water Infrastructure Projects Notification (no 3) 2007 (*13 December 2007), p 1
62 GAWB is a joint proponent on the LFRI and shares equally the costs with SunWater. GAWB is the only proponent for the GFP.
63 *Establishment of Program of Works State Water Grid Regional Water Infrastructure Projects Notification (no 3) 2007 (*13 December 2007), p 5 – 6
64 ibid
65 *QCA Draft Report*, p 70
66 *QCA Draft Report*, p 72
67 *Davwil Report*, p 74

GAWB submits that:

- a plain reading of the Authority's CSS Part (a) report, supports GAWB's submission that the entire $33.3m ($37.3m capitalised) expenditure should be included
- even if the Authority continues to recommend that the allowed expenditure should be calculated as if the project had been suspended after the February 2008 inflows, a proper quantification of that amount is $18.35m.

GAWB submits that the Authority should also include into the RAB the full amount of GAWB's 'other' capital expenditure. The reduction recommended is not justified.

6 Capital Expenditure Proposals

6.1 2010 to 2015 regulatory control period capital expenditure

At Recommendation 26, the Authority states:

> *The Authority recommends estimated capital expenditure of $50.5 million over the 2010-15 period be included for pricing purposes.*

The Authority has recommended that capital expenditure of $50.5 million over the 2010 to 15 regulatory control period be included for pricing purposes. The projects that this expenditure relates to were outlined in Table 6.5 in the Authority's Draft Report which is reproduced below.

Table 5 - Table 6.5 Capital Expenditure 2010-15 ($ million)

Project	GAWB	Davwil	Authority Recommendation
SaddleDam No 3 and Awoonga Dam left abutment raising	27.0	26.0	26.0
System storage project	22.0	2.0	2.0
End-of-life asset replacement			
Golegumma treated water pipeline	5.4	0.5	0.5
Awoonga pump station building	2.6	2.6	2.6
East End pipeline	2.03	0.3	0.3
QAL pipeline	2.1	0.5	0.5
Awoonga to Gladstone pipeline	0.8	0.8	0.8
Other	8.1	7.3	7.3
Contingent Supply Strategy	3.441	0.8	0.8
Gladstone water treatment plant upgrades	3.0	3.0	3.0
Gladstone water treatment plant emergency power supply	2.1	0	0
Gladstone water treatment plant sludge dewatering	1.2	1.2	1.2
Fitzsimmons St Reservoir roof replacement	1.3	1.3	1.3
Awoonga Dam variable frequency drive	1.2	1.2	1.2
Other (including recreational area upgrades and hatchery relocation)	4.2	3.0	3.0
Total	**86.6**	**50.5**	**50.5**

GAWB notes that the majority of its capital expenditure proposals have been accepted by the Authority. The following projects, for which the Authority has not accepted GAWB's proposal in full, are discussed in further detail:

- Saddle Dam No 3 and Awoonga Dam left abutment raising
- System storage project
- Golegumma treated water pipeline
- East End pipeline
- QAL pipeline
- Other
- CSS
- Gladstone water treatment plant emergency power supply and
- Other (including recreational area upgrades and hatchery relocation).

6.1.1 Saddle Dam No 3 and Awoonga Dam left abutment raising

The Authority has recommended that the Saddle Dam embankment dam safety upgrade, or an alternative option to address the dam safety requirements, should be included in the 2005-10 capital expenditure. This investment, or similar solution, must be in place by 2015. The Authority has also recommended that raising the left abutment not occur at the same time as work on the saddle dam is forecast to be undertaken.

6.1.1.1 Saddle Dam No.3

GAWB has forecast to complete the expenditure over a three-year period ending in the 2012/13 financial year. While the Authority has accepted this work is required (subject to review of alternative options), it has not accepted GAWB's proposed timing of the project. The Authority recommends that the final option be in place by 2014/15 – two years later than GAWB's proposal.

While GAWB acknowledges that the regulatory requirement for completion of this project is in 2015, it also acknowledges the importance of this work to be completed in a measured approach as soon as possible in order to address the underlying reason for the dam safety direction – population at risk (PAR). GAWB also notes that at times of high storage levels, as is currently being experienced, there is an increased likelihood of the dam overtopping. An overtopping event will result from a lower inflow event than what would normally be required. A delay in the timing of works has the following consequences:

- increased risk of flooding for the PAR and
- increased risk of environmental harm due to erosion of the gully and deposition within the Boyne River (GAWB may potentially be liable for causing environmental harm resulting from an overflow event).

Results of recent investigative drilling of the saddle dam confirm that an overflow event could erode the gully, to the width of the saddle dam, to a depth of 7 metres below the foundation level of the dam. This may result in loss of storage of approximately 66,000ML and result in the eroded sediment being deposited in the Boyne River.

6.1.1.2 Raising left abutment

As outlined in GAWB's Expenditure Proposals submission[68], the raising of the left abutment is not required until 2025. GAWB planned to align the raising of the left abutment with the work being undertaken on the saddle dam due to efficiencies that would be generated in regards to:

- procurement of goods and services
- mobilisation and demobilisation of the construction team
- specialist engineering support

68 GAWB's *Expenditure Proposals* submission (December 2009), p 26

- construction supervision costs and
- utilisation of specific plant and equipment such as an onsite concrete batching plant.

Undertaking the project in isolation to the saddle dam works would add a further 20% to the cost of this project and not address the underlying reasons for the dam safety direction as outlined in section 6.1.1.1.

GAWB therefore contends that its proposal to undertake both the Saddle Dam No. 3 upgrade and raising left abutment projects by 2012/13 should be accepted by the Authority.

6.1.2 System storage project

In its Expenditure Proposals submission, GAWB discussed the need to construct additional storage within its delivery network to mitigate the risks it identified resulting from the dependence on the continuous operation of the Awoonga Pump Station.[69] GAWB's supply is entirely dependent on pumping from Awoonga Dam. Even utilising maximum downstream reservoir capacity, there is only 12 to 16 hours supply stored within the raw water delivery network. This lack of supply redundancy is also a critical issue (and potentially an impediment) to scheduling significant maintenance and refurbishment works.

Davwil concluded that further work should be undertaken on the proposed response, but did not reject GAWB's assessment concerning the underlying vulnerability to risk (and associated major consequences).[70] Indeed, Davwil recommends that funds be allocated to investigate the optimal mitigation of this risk.[71]

In its Draft Report, the Authority allowed expenditure in the order of $2m for necessary investigatory work.[72] This approach seemed also to acknowledge the criticality of the risk, but not the prudence of the response proposed by GAWB in its Expenditure Proposals submissions.

As canvassed elsewhere, GAWB notes the distinction between the different basis upon which five (and 20) year forecasts are prepared and the basis upon which business cases recommending final investment decisions are prepared. GAWB contends that the risk that it has identified warrants treatment (ie. mitigation), but accepts that the specific response proposed will require further analysis prior to final investment decision. Nonetheless, GAWB strongly contends that a response is both necessary and prudent within the next regulatory period.

As noted by Davwil, GAWB is exploring other infrastructure (and operational) alternatives.[73] The total estimated expenditure of the options that GAWB believes are likely remains largely consistent.

Since GAWB's Expenditure Proposals submission was prepared, further analysis has been undertaken on the timing of necessary refurbishment works on infrastructure that supplies the pump station with water from the dam. This work has concluded that GAWB should undertake refurbishment activities within the next 10 years. The duration of these works is expected to be for a period of not less than 10 days. Importantly, this will require the shut down of the pump station for the duration of these necessary activities.

In circumstances where some redundancy of existing infrastructure will be required to be developed in the next 10 years to enable the shutdown of the pump station, GAWB strongly submits that it is both prudent and efficient to develop this capacity in the next regulatory period; thereby also addressing the significant risk associated with GAWB's critical reliance upon the continuous operation of the pump station.

Accordingly, GAWB submits that timing and quantum of expenditure proposed by GAWB in its submission represents efficient expenditure and should be taken into account for pricing purposes in the 2010 to 2015 regulatory control period.

69 Ibid
70 *Davwil Report*, pp 79 – 80
71 Ibid
72 *QCA Draft Report*, p 78
73 *Davwil Report*, p 79 – 80

6.1.3 Golegumma treated water pipeline

GAWB had proposed expenditure to replace sections of the Golegumma treated water pipeline that are at the end of its useful life. The Golegumma pipeline services customer connections in Boyne Island, Wurdong Heights, Benaraby, Pikes Crossing and the Lake Awoonga Recreational Area. GAWB notes the Authority's recommendation that only a small allowance be included in pricing to replace small critical lengths of pipeline.

While GAWB accepts the Authority's recommendation, it contends that the expenditure is justified having regard to the likely consequence of the risk. The approach recommended by the Authority may result in supply failures for customers utilising this pipeline. GAWB notes Gladstone Regional Council's (GRC's) comments in relation to the proposed expenditure and that GRC will be responsible for the majority of the costs through pricing.

6.1.4 East End pipeline

GAWB had proposed expenditure to replace sections of the East End pipeline that are at the end of their useful life. GAWB notes the Authority's recommendation that only a small allowance be included in pricing to replace small critical lengths.

While GAWB accepts the Authority's recommendation, it contends that the expenditure is justified having regard to the likely consequence of the risk, and notes that the Authority's proposals may increase the risk of supply failures for customers serviced by the East End pipeline.

6.1.5 QAL pipeline

GAWB had proposed expenditure to replace sections of the QAL pipeline that are at the end of its useful life. GAWB notes the Authority's recommendation that only a small allowance be included in pricing to replace small critical lengths.

While GAWB accepts the Authority's recommendation, it contends that the expenditure is justified having regard to the likely consequence of the risk. While Davwil has concluded that 'cathodic protection, clamping of all joints or additional onsite storage for QAL appear to be the most cost effective solutions for this critical pipeline', the proposed solutions do not address the issue of internal corrosion at the rubber ring joint, the cause of previous failures on this pipeline. GAWB notes the Authority's comments in relation to the appropriate solution and will work with QAL to determine the most appropriate response.

6.1.6 Other

Davwil has reduced GAWB's forecast other replacements from \$8.1m to \$7.3m. The reason provided by Davwil for this reduction is:

> *'GAWB has used accounting based asset lives for the replacement costs which were around 15 to 20% less than design lives incorporated in the original SMEC valuations. When corrected, the replacement expenditure components reduces from \$4.8m to \$4m.'*[74]

GAWB has not used 'accounting lives'. GAWB's replacement is indeed based on SMEC (the consultant engaged by the Authority in the 2005 price review) valuation lives. GAWB contends that the analysis provided by Davwil is incorrect.

On receiving the updated capital expenditure input file from the Authority, GAWB has been able to determine that the only adjustment made by Davwil relating to forecast expenditure for 2010 to 2015 regulatory control period was to exclude the proposed replacement of sections of the 375mm Hanson Road pipeline (approximately 10% of the pipline length). This replacement was forecast to cost \$679,000 in 2015. GAWB contends that this replacement is required because:

74 *QCA Draft Report* p 80

- there have been two failure of appurtenances in the past five years (ie. sluice valve and collar)
- some sections of the pipeline are installed in acid sulphate soils which have corroded the fittings – as identified when conducting asset condition assessments
- the pipeline, which has failed previously, is installed under a major road and rail crossing (failures in this section of the pipeline could result in a significant cost to GAWB) and
- there is an increased likelihood of failure due to the age and condition of the pipeline.

GAWB therefore contends that the other capital expenditure proposed of $8.1m should be accepted by the Authority.

6.1.7 Contingent Supply Strategy

The Authority has accepted Davwil's recommendation that only $0.8million of capital expenditure should be allowed for the CSS comprising:

- $0.4m for desalination and other options
- $0.4m for mothballing the project.

GAWB does not accept this recommendation.

GAWB's proposed capital expenditure of $3.4m over the 2010 to 2015 regulatory control period was based on detailed advice. The expenditure represents the minimum efficient and prudent holding costs for the project, necessary to:

- retain the value of the work performed to date and
- maintain the state of preparedness

GAWB submits that the 'mothballing' approach proposed by Davwil and accepted by the Authority is inconsistent with the purpose of the CSS because it would neither retain value nor maintain the state of preparedness. There doesn't appear to be any consideration of the objectives of the CSS in arriving at this conclusion. Davwil has also provided no transparency as to how it arrived at its forecast expenditure of $0.8m.

GAWB therefore contends that the CSS expenditure of $3.4m over the 2010 to 2015 regulatory control period should be allowed.

6.1.8 Gladstone water treatment plant emergency power supply

GAWB proposed expenditure to acquire an emergency power supply for the Gladstone water treatment plant. The purpose of this expenditure was to maintain potable water supplies following a disaster event (eg. cyclone).

GAWB contends that the expenditure is justified having regard to the likely consequence of the risk. GAWB however recognises GRC's comments in relation to the proposed expenditure and that GRC will be responsible for the majority of the costs through pricing. In any event, the risk is such that it warrants risk management on a least cost basis to ensure continuity of supply for the Gladstone region.

GAWB accedes to the Authority's recommendation.

Davwil also made comments in relation to the need for GAWB to prepare a rigorous business case to justify inclusion of this expenditure. While GAWB acknowledges that a business case will be required prior to implementing the desired solution, it is not considered appropriate to prepare a full business case, given that the expenditure is still three years away.

GAWB's expenditure proposals are appropriately detailed for regulatory purposes. That is, they are based on prudent medium-term planning. Detailed business cases are produced before undertaking the expenditure.

In some jurisdictions, regulators audit samples of completed projects to ensure that business cases were appropriately developed and that the projects were efficiently procured. However, as far as GAWB is aware, no Australian regulated business submits detailed business cases for all projects throughout a five-year capital program. No regulator requires full business cases for all future projects. GAWB believes it should not be criticised for not producing full business cases when there is no requirement in any jurisdiction for this to be done.

6.1.9 Other

The Authority, based on the analysis undertaken by Davwil, recommended that other capital expenditure be reduced by $1.2m due to GAWB double counting the sludge de-watering proposed expenditure. GAWB strongly contends that there has been no double counting of the sludge de-watering capital expenditure proposal. Therefore no adjustment to GAWB's proposal is required.

GAWB was not aware of Davwil's finding of this supposed 'double counting' until the assertion appeared in the Draft Report. GAWB will work with the Authority to ensure it has comfort that this expenditure has not been doubled counted.

GAWB contends that other expenditure of $4.2m should be included in capital expenditure for the 2010 to 2015 regulatory control period.

GAWB submits that its proposal to undertake both the Saddle Dam No. 3 upgrade and raising left abutment projects by 2012/13 should be accepted by the Authority.

GAWB submits that its proposal to develop critical system storage within the 2010 to 2015 regulatory control period should be accepted by the Authority.

GAWB submits that the 'other' capital expenditure proposed of $8.1m should be accepted by the Authority. Davwil's analysis recommending lower expenditure is in error.

GAWB submits that CSS expenditure of $3.4m over the 2010 to 2015 regulatory control period should be accepted by the Authority. Failure to allow expenditure to maintain the defined capability is inconsistent with the purpose of the CSS.

GAWB submits that other expenditure of $4.2m should be included in capital expenditure for the 2010 to 2015 regulatory control period. Davwil's analysis alleging double counting of some expenditure items is in error.

6.2 2015 to 2030 planning period capital expenditure

At Recommendation 27, the Authority states:

> *The Authority recommends that estimated capital expenditure of $34 million over the 2015-30 period be included for price modelling purposes.*
>
> *The Authority recommends that no expenditure be included for the contingent supply strategy.*

The Authority has based this recommendation on Davwil's analysis undertaken using the following categories:

- ongoing age-based and condition based replacement
- Contingent Supply Strategy and
- other expenditure.

GAWB's regulatory framework requires preparation of 20-year capital expenditure forecasts. That is, forecasts are required for the 2015 to 2030 planning period that extends beyond the next regulatory control period and are used solely for the purpose of setting the price path for the 2010 to 2015 regulatory control period. GAWB has previously identified the inherent uncertainty involved in preparing such long-range forecasts and proposed a five-year price averaging period.

GAWB's approach to forecasting capital expenditure has been to include:

- GAWB's 10 year capital works program and
- scheduled replacement of assets based on remaining useful lives.

It is not efficient or practicable to have business cases developed for this forecast expenditure.

GAWB does not agree with the adjustments made by Davwil, as referenced in the Authority's statement '*Davwil also adjusted asset lives from the accounting basis used by GAWB to useful design lives as defined in the original SMEC valuation on the basis that these were more appropriate for asset replacement decisions*.'

While GAWB understands that Davwil has made changes to the useful lives of forecast capital expenditure, having a minimal impact on the timing of scheduled replacement, Davwil has also made changes to the useful lives, adopted by GAWB, that were used in the original SMEC valuation. The reason for this adjustment has not been reflected in the Authority's statement or Davwil's analysis.

The changes adopted by Davwil have the effect of moving a considerable amount of capital expenditure that was due to be replaced in 2028 or 2030 to 2031. GAWB can only conclude that Davwil has made an error or the adjustment has been made to reduce prices (which is counter to the purpose of preparing 20-year forecasts).

Furthermore, based on further information received from the Authority, GAWB can only find a reduction in the 2016-2030 capital expenditure of $39m (excluding CSS), not the $59m arrived at by Davwil. GAWB will continue to work with the Authority to understand this difference.

As outlined in GAWB's response to Recommendation 26, ongoing expenditure is required in relation to the CSS (refer section 6.1.7). The expenditure is necessary to:

- retain the value of the work performed to date and
- maintain the state of preparedness.

If Davwil is recommending that no further expenditure be included for the 2015-2030 planning period, it is implying that there will be no value to the strategy from that date. If the Authority is to accept Davwil's approach, a subsequent write off of the CSS expenditure should be included in the RAB. GAWB understands that the Authority supports the CSS in principle and therefore expenditure necessary to maintain the defined state of preparedness should be included.

Therefore, GAWB submits that CSS expenditure forecast of $12m be included when determining prices.

GAWB will work with the Authority to understand the differences in capital expenditure between that proposed by GAWB, which it submits should be accepted, and that subsequently adjusted by Davwil.

GAWB submits that:

- replacement expenditure should be based on SMEC's assessed asset lives unless a change is justified by more recent asset condition assessment
- CSS expenditure of $12m over the 15 year period be accepted (being that necessary to retain the value of the work performed to date and maintain the state of preparedness).

6.3 Cost escalation

At Recommendation 28, the Authority states:

> *The Authority recommends that:*
>
> *(a) GAWB review the basis for escalating capital costs over the 2010-15 regulatory period, with CPI being used until a more appropriate escalation basis is determined; and*
>
> *(b) CPI should be applied to capex over 2015-30.*

GAWB does not accept this recommendation.

GAWB contends that it is not clear from the Authority's recommendation when and how 'a more appropriate escalation basis will be determined'.

GAWB does not accept that CPI should be applied as an 'across-the-board' escalation factor for capital expenditure, particularly when more appropriate and reasonable indices are available – such as those adopted by GAWB in its forecasts. GAWB also notes that Davwil, the Authority's consultant, has acknowledged that the escalation factors proposed by GAWB were '…*considered reasonable and should be acceptable.*[75]'

GAWB submits that either:

- the escalation factors proposed by GAWB to determine forecast capital expenditure for the 2010 to 2015 regulatory control period should be adopted or
- the Authority should specify other appropriate cost escalation factors in the Final Report.

6.4 Working capital

At Recommendation 29, the Authority states:

> *The Authority recommends that working capital be determined on the basis of debtors (accounts receivable) less creditors (accounts payable) plus inventories.*
>
> *An indicative estimate of $2.355 million is considered appropriate.*

GAWB supports this recommendation.

75 *Davwil report* page 97

7 Depreciation

At Recommendation 30, the Authority states:

> *The Authority recommends that return of capital be based on straight line depreciation for all GAWB's assets, taking into account the expected lives of specific assets or groups of assets.*

GAWB supports this recommendation.

8 Rate of Return

8.1 Capital Asset Pricing Model

At Recommendation 31, the Authority states:

> *The Authority continues to recommend the WACC/CAPM approach using the Officer CAPM for determining the cost of equity capital, in nominal post-tax terms (Officer's WACC 3). The Authority also proposes to continue using the Conine beta levering formula.*

GAWB accepts this recommendation.

8.2 WACC parameters

Recommendations 32 to 39 relate to the parameters and methodology that underpin the calculation of the weighted average cost of capital (WACC).

While GAWB accepts that the Authority's final recommendation will be consistent with other recent Authority decisions, particularly that of Queensland Rail, GAWB notes that issues still surround the Authority's application of the WACC methodology and determination of parameters. These concerns have been noted by Synergies in Appendix 4.

GAWB accepts the WACC parameter recommendations.

9 Operating Costs

9.1 Administration cost allocation

At Recommendation 40, the Authority states:

> *The Authority recommends that:*
>
> *(a) GAWB's general administrative costs be allocated to customers on the basis of the relative administrative effort required to provide storage, raw water and treated water services; and*
>
> *(b) GAWB undertake an activity based analysis of overhead costs and develop an approach based on key drivers, in consultation with its customers.*

GAWB accepts that general administrative costs be allocated to customers on the basis of the relative administrative effort required to provide storage, raw water and treated water services.

However, GAWB does not accept the prudence of the Authority's recommendation that *'GAWB undertake an activity based analysis of overhead costs and develop an approach based on key drivers, in consultation with customers.'*

Most operating and maintenance cost is directly allocated to assets and pricing zones. The remaining, unallocated costs, are recovered in prices through the general administration cost pool. This represents less than 10% of the target revenue in any year.

The approach that was proposed by GAWB, while not perfect, was reasonable and cost reflective. GAWB also submits that the approach being proposed by the Authority seeks to attain a level of accuracy in overhead allocation that will be inefficient for an organisation of GAWB's size. This recommendation, based on Davwil's advice, appears not to consider the functionality of GAWB's existing financial system, existing processes or the appropriate level of resourcing required to undertake such a review.

Because the general administration cost pool represents less than 10% of target revenue, the activity-based analysis would need to drive a major change in cost allocation to have a material impact on customer prices.

GAWB submits that the Authority's recommendation is unreasonable unless sufficient resources are provided through an additional operating expenditure allowance. GAWB estimates that a full activity-based overhead allocation review would cost approximately $150,000. GAWB submits that the costs of such a study are likely to outweigh the benefits.

GAWB submits that the Authority should either:

- remove the requirement that GAWB undertake an activity-based cost analysis from Recommendation 40 or
- allow funding for the activity-based cost analysis in GAWB's operating costs.

9.2 Cost escalation

At Recommendation 41, the Authority stated:

> *The Authority recommends that:*
> *(a) GAWB review the basis for escalating the costs of operations, maintenance and chemicals costs over the 2010-2015 regulatory period, with CPI being used until a more appropriate escalation basis is determined; and*
> *(b) Operating costs be escalated using CPI during the period 2015-2030.*

GAWB accepts the Authority's recommendation in relation to the escalation of operating expenditure costs for the period 2015 to 2030 and notes that this agrees with GAWB's submissions.

GAWB however does not agree that CPI be used as the basis for escalating operations, maintenance and chemicals costs for the 2010 to 2015 regulatory control period.

It is important to note that the purpose of the CPI is to measure the quarterly change in the price of a 'basket of goods' for metropolitan households. Given this purpose, CPI should not simply be accepted as a broad based escalation factor where more appropriate indices are available.

GAWB has endeavoured to develop operating expenditure forecasts that are as meaningful and accurate as possible through the use of appropriate and reasonable escalation factors. This is particularly important for operating expenditure given that any shortfall in forecast costs is at GAWB's expense. The Authority's own consultant, Davwil, stated that GAWB's escalation factors are appropriate *'all factors were reviewed by considering the appropriateness of GAWB's reason for their selection checks with external bodies…..were also undertaken to confirm percentage increases seemed appropriate. In all cases GAWB's selection basis was considered reasonable and should be accepted.*[76]'

9.2.1 Operations expenditure

The Authority has recommended that CPI be used as the escalation factor for all operations expenditure, not taking into account different expenditure categories that make up the total operations expenditure forecast. While most of GAWB's operations expenditure is already being escalated by CPI, there are some expenditure items being escalated by more appropriate indexes such as the professionals services index.

GAWB therefore strongly questions the Authority's recommendation in relation to using CPI to escalate all operations expenditure. GAWB submits that escalation factors by expenditure category as proposed by GAWB should be accepted in relation to operations expenditure for the 2010 to 2015 regulatory control period.

9.2.2 Maintenance expenditure

GAWB contends that CPI has no relevance or basis to be used as an escalation factor for determining maintenance costs.

GAWB contends that either the Construction Index of 6.3% or the Professional Services Engineers Index of 4.63% should be adopted as the escalation factor for this category of expenditure.

9.2.3 Chemicals expenditure

The Authority has recommended that CPI be used to escalate costs rather than GAWB's proposed escalation factor of 4.84% which was based on the Manufacturing Industries Chemical Index. GAWB disagrees with the Authority's recommendation in relation to this escalation factor.

76 *Davwil Report*, p 97

GAWB's chemical cost movement bears no relationship to the movement in the CPI. Therefore, CPI should not be used as an appropriate escalation factor. This is particularly important given the significant cost increases GAWB has experienced and borne over the current regulatory period. Over the 2005 to 2010 regulatory control period, GAWB has experienced the following increases in chemical costs, for the same quality product, for its major chemical expenditure items:

- Liquid Alum – 60% increase
- Sodium Hypochlorite – 9% increase
- PS1300 Activiated Carbon – 72% increase.

These increases are significantly above the CPI and, indeed, greater than GAWB's proposed escalation factor of 4.84%.

GAWB therefore contends that while conservative, the most appropriate escalation factor for chemicals for the 2010-2015 regulatory control period is the 4.84% as proposed by GAWB.

GAWB submits that the Authority should specify appropriate cost escalation factors for each category of expenditure for the 2010 to 2015 period. The use of general CPI is not cost reflective or appropriate.

9.3 Operating expenditure levels

At Recommendation 42, the Authority states:

> *The Authority recommends that efficient operational expenditure as identified in Table 8.13 be included for indicative pricing purposes.*

The Authority's Table 8.13 is reproduced below.

Table 6 - Table 8.13 Operating Expenditure: Summary of GAWB's proposals and Authority's conclusions (variance analysis and 5yr total added by GAWB)

	2010-11 $'000	2011-12 $'000	2012-13 $'000	2013-14 $'000	2014-15 $'000	5yr Total $'000
Operations						
GAWB	1,450	1,301	1,169	1,201	1,235	**6,356**
Authority	1,384	1,186	1,016	996	1,003	**5,585**
Variance	**66**	**115**	**153**	**205**	**232**	**771**
% variance	**4.55%**	**8.84%**	**13.09%**	**17.07%**	**18.79%**	**12.13%**
Maintenance						
GAWB	2,993	3,074	2,577	2,798	2,795	**14,237**
Authority	2,450	2,107	1,860	2,428	2,331	**11,176**
Variance	**543**	**967**	**717**	**370**	**464**	**3,061**
% variance	**18.14%**	**31.46%**	**27.82%**	**13.22%**	**16.60%**	**21.50%**
Electricity						
GAWB	1,286	1,350	1,464	1,587	1,721	**7,408**
Authority	1,202	1,232	1,303	1,418	1,543	**6,698**
Variance	**84**	**118**	**161**	**169**	**178**	**710**
% variance	**6.53%**	**8.74%**	**11.00%**	**10.65%**	**10.34%**	**9.58%**

	2010-11 $'000	2011-12 $'000	2012-13 $'000	2013-14 $'000	2014-15 $'000	5yr Total $'000
Chemicals						
GAWB	866	926	990	1,059	1,132	**4,973**
Authority	847	885	925	967	1,011	**4,635**
Variance	**19**	**41**	**65**	**92**	**121**	**338**
% variance	**2.19%**	**4.43%**	**6.57%**	**8.69%**	**10.69%**	**6.80%**
Other						
GAWB	2,347	2,321	2,302	2,822	3,005	**12,797**
Authority	2,000	2,000	2,000	2,250	2,250	**10,500**
Variance	**347**	**321**	**302**	**572**	**755**	**2 297**
% variance	**14.78%**	**13.83%**	**13.12%**	**20.27%**	**25.12%**	**17.95%**
Staffing						
GAWB	6,183	6,415	6,725	7,051	7,393	**33,767**
Authority	5,920	5,782	5,707	5,881	6,177	**29,467**
Variance	**263**	**633**	**1,018**	**1,170**	**1,216**	**4,300**
% variance	**4.25%**	**9.87%**	**15.14%**	**16.59%**	**16.45%**	**12.73%**
Insurance						
GAWB	696	731	767	786	805	**3,785**
Authority	696	731	767	786	805	**3,785**
Variance	**0**	**0**	**0**	**0**	**0**	**0**
% variance	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Rates						
GAWB	336	354	373	392	413	**1,868**
Authority	336	354	373	392	413	**1,868**
Variance	**0**	**0**	**0**	**0**	**0**	**0**
% variance	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Total Expenditure						
GAWB	**16,157**	**16,471**	**16,365**	**17,697**	**18,499**	**85,189**
Authority	**14,835**	**14,278**	**13,951**	**15,118**	**15,533**	**73,715**
Variance	**1,322**	**2,193**	**2,414**	**2,579**	**2,966**	**11,474**
% variance	**8.18%**	**13.3%**	**14.75%**	**14.57%**	**16.03%**	**13.47%**

Note: These figures may not add due to rounding

9.3.1 Additional review

The Authority noted that:[77]

> *'The time available did not allow the Authority to benchmark GAWB's current and proposed cost levels against relevant comparators. Therefore, the Authority proposes to undertake a benchmarking exercise prior to the Final Report to provide a more up-to-date analysis and potentially a more informed basis for identifying efficient operating costs.'*

Since the draft report was published, the Authority has engaged Halcrow to undertake the 'benchmarking' review. The Authority provided GAWB with the scope of engagement for reference. GAWB has endeavoured to work closely with Halcrow to provide the data requested for its 'benchmarking' review.

77 QCA Draft Report, p126

GAWB welcomes the Authority's decision to engage a second consultant to calibrate its Draft Report findings regarding the appropriate level of operating expenditure. Whilst perhaps not optimal, GAWB believes such action is justified.

GAWB would, however, note its concern that the limited time to complete this review has the potential to inhibit the quality and the robustness of the analysis. Associated to this concern, GAWB has sought to provide the assistance required by Halcrow over a very short period of time whilst concurrently preparing its response to the Draft Report. GAWB is a small organisation, its ability to respond to requests for additional information and analysis (over this relatively short time frame) has itself been significantly constrained.

GAWB is unsure whether the outcomes of the Halcrow review are capable of incorporation into the Authority's Final Report without publication in draft, but readily acknowledges that these are matters for the Authority. For the avoidance of doubt, however, GAWB seeks the opportunity to consider and respond the contents of the Halcrow report, before the publication of the Authority's Final Report.

GAWB's discussion of the Authority's draft 'operational expenditure' findings that follows does not make further reference to the additional Halcrow analysis ('benchmarking' review). Given that the Authority published findings in its Draft Report on the work undertaken by Davwil and by its own analysis, GAWB considers that it is necessary to respond to those Draft Report recommendations. This is especially the case given the magnitude of the recommended reduction in expenditure.

9.3.2 Impact of proposed reductions

A large proportion of GAWB's expenditure is of a non-discretionary nature (electricity, chemicals, rates and insurance). While the Authority has recommended an aggregate reduction in operating expenditure of 8.18% in 2010/11, increasing to 16.03% in 2014/15, some of this proposed reduction has occurred in the non-discretionary expenditure items of electricity and chemicals. The actual effective reduction proposed by the Authority, when applied to costs that can be controlled by GAWB, is considerably greater than what was stated. Because such large efficiencies are unachieveable and most expenditure is non-discretionary, GAWB will effectly earn an uneconomic return on assets for the period. The following table summarises the effective percentage reduction in operating expenditure to non-discretionary expenditure based on the Authority's draft recommendations.

Table 7 - Effective reduction in controllable expenditure

	2010-11	2011-12	2012-13	2013-14	2014-15	5yr Total
Authority	8.18%	13.3%	14.75%	14.57%	16.03%	13.47%
Effective reduction	10.19%	16.73%	18.9%	18.59%	20.56%	17.09%

The reductions proposed by the Authority will not provide GAWB with sufficient operating expenditure allowance to carry out its activities as a bulk water provider. The proposed reduction will either significantly impact:

- the ability of GAWB to earn its permitted return on assets or
- the services provided by GAWB.

GAWB cannot accept the reductions that are recommended. The expenditure forecasts prepared by GAWB have been developed on a detailed line by line basis, are forward looking, and represent an efficient level of expenditure necessary for GAWB to discharge its duties as a bulk water supplier. In the absence of adequate justifications as to why these detailed forecasts have been dismissed, GAWB's operating expenditure proposals should be accepted in full.

GAWB also notes Davwil's statement that '. . . .*from a customer efficiency perspective, the approach could be that these efficiencies should have been ongoing over the past five years and so full reduction percentages should start straight away as part of setting prices for the next five years. GAWB would need to work out how to get down to such levels of efficiency as quickly as possible and wear the costs of doing so. Davwil believes this is a pricing issue for QCA to decide.*'[78]

GAWB acknowledges that the Authority has not accepted this recommendation from Davwil. GAWB contends that the statement made by Davwil does not reference any justifications or analysis performed by Davwil and seems to be made in isolation of the efficiency improvements made by GAWB over the 2005 to 2010 regulatory control period.

9.4 Benchmarking analysis

To assist in demonstrating the efficiency and prudency of GAWB's proposed expenditure, GAWB undertook a benchmarking study, conducted by Marchment Hill Consulting (MHC). The study report was included in GAWB's submissions to the Authority. This benchmarking study compared GAWB to a representative peer group using 19 benchmarking metrics. The result of this study demonstrated that GAWB's efficiency and productivity were significantly better than the peer group.

While Davwil has based some of its report on GAWB's benchmarking analysis[79], it has done so without fully understanding the data on which the benchmarking is based. This is evidenced by the statement: '*the information used is from the period 2006-2008. With significant increase and operating and capital expenditure increases since that period, GAWB's relative performance has declined*'[80].

The data used for the benchmarking report was clearly outlined in the GAWB specific assumptions section of the report, namely[81]:

- The 2008-09 'Total OPEX' and 'FTE' data was used in this benchmarking study, as this is believed to be most representative of the business going forward.
- The 'Total CAPEX' is an average of the capital expenditure in the years 2008/09, 2007/08, and 2006/07.

This misinterpretation of the data used for benchmarking has also infected the Authority's analysis: '*However, this benchmarking review was based on 2007-08 data, prior to very significant increase in operating costs and staffing levels (refer Table 8.1)*[82]'.

GAWB has further concerns over the analysis undertaken by Davwil and subsequent comments arising from this analysis. MHC, who undertook GAWB's benchmarking study, have also responded to Davwil's analysis. A copy of this detailed response has been included at Appendix 5. The following key points are outlined in MHC's response:

- Davwil had made an incorrect assertion regarding the dataset used for the benchmarking study (as evidenced above). The analysis from Davwil has also had no regard to the normalisation process required to ensure benchmarking studies are meaningful. These errors have led to the inference that the benchmarking presented provides an inappropriate representation of GAWB's future state. MHC do not agree with this inference.

- The inference made by Davwil that given GAWB is small it has greater opportunities for higher efficiency is generally false. Large water utilities are typically in a stronger position to generate improvements in efficiency and effectiveness through their advantages in economies of scale. Caution should also be taken with Davwil's inferences on the impact of efficiency and GAWB's relatively low number of customers.

78 *Davwil Report*, p 11
79 *Davwil Report,* pp 99 – 102
80 *Davwil Report*, p I
81 Final Report – Marchment Hill Consulting GAWB operational Benchmarking Study, p 82
82 QCA *Draft Report* p 111

- The unsophisticated approach by Davwil in updating one benchmarking metric should be treated with a high degree of caution. Benchmarking of any single metric carries a far greater risk of resulting in an unrepresentative comparison of performance.

Davwil has also made comments in relation to the International Water Services Association/Water Services Association of Australia (IWA/SAA) 2008 benchmarking project that GAWB participated in. As outlined in the MHC response, Davwil did not understand the purpose of the IWA/WSAA 2008 benchmarking project and its relevance to GAWB. GAWB also notes that MHC were directly involved in the IWA/WSAA 2008 benchmarking project and therefore can provide informed comment upon it. Davwil has misinterpreted the substance of the IWA/WSAA benchmarking study where a cursory exploration of GAWB's IWA/WSAA report would have shown that the fundamental basis of comparison is on *practices* and not *processes*. The purpose of a practices benchmarking study is to focus on a comparison of work practices and facilitate collective learning across a peer group.

Furthermore, the following explanations, which were not contained in the Davwil report, provide further context to the results from the IWA/WSAA benchmarking study that were referenced by Davwil:

> *'GAWB's IWA/WSAA Process Benchmarking Study generally found that GAWB's processes and systems, particularly asset management strategic development and systems including maintenance need significant improvement.'* [83]

This comment is based on a 2007/08 assessment of GAWB's outsourced operations and maintenance services delivery model. Process development was 'sound' according to the benchmarking report. The report recommended that improvements could be made in the documentation of these processes so that execution of the processes could be ratified. Since the IWA/WSAA benchmarking process, considerable advancement has been made in the delivery of GAWB's operations and maintenance requirements, including the further development of the asset management system and the in-sourcing of water treatment activities.

> *'Where current GAWB asset management practices are below best appropriate levels, as measured by the IWA/WSAA process benchmarking system, it would be expected that GAWB undertakes a plan of business improvement over the pricing period to achieve best appropriate practice.'*[84]

In the benchmarking study, GAWB scored very well in corporate policy and business planning and asset capability forward planning, both overall and against the peer group.

In terms of some asset management processes, GAWB's coverage and frequency was generally good, however levels of documentation were lower in 2007/08, reflected in scores near the average (mean) for GAWB's peer group for several of the asset functions. GAWB is continuing to make improvements in this area particularly with the addition of further legal/ corporate counsel resources.

In summary, GAWB submits that Davwil's selective use of the available benchmarking data and mis-understanding of the IWA/WSAA benchmarking study has resulted in a misleading and uninformative analysis. Davwil did not recognise that GAWB was assessed to be very strong in planning. Davwil did not recognise that the 'weakness' in execution identified in the WSAA study was relative to many much larger organisations: GAWB's performance was assessed as being consistent with water services of its size. Moreover, the WSAA benchmarking is earlier than that undertaken by MHC. Davwil did not recognise that the later study more completely reflects improvements in performance achieved since the WSAA benchmarking was completed.

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83 *Davwil Report*, p 10
84 *Davwil report*, p 51

9.5 Operations

The following table summarises the Authority's draft position in relation to operations expenditure.

Table 8 - Comparison of GAWB-proposed and Authority-recommended operations expenditure (variance analysis added by GAWB)

	2010-11 $'000	2011-12 $'000	2012-13 $'000	2013-14 $'000	2014-15 $'000	5yr Total $'000
Operations						
GAWB	1,450	1,301	1,169	1,201	1,235	**6,356**
Authority	1,384	1,186	1,016	996	1,003	**5,585**
Variance	**66**	**115**	**153**	**205**	**232**	**771**
% variance	**4.55%**	**8.84%**	**13.09%**	**17.07%**	**18.79%**	**12.13%**

The Authority has made two recommendations in relation to forecast operations expenditure:

1. The Authority has accepted Davwil's proposals in regards to potential efficiencies that can be gained through reducing GAWB's forecast expenditure by 2.5% in 2010/11, 5% in 2011/12, 7.5% in 2012/13 and 10% from 2013/14 onwards.

2. As outlined in Recommendation 19, all operations expenditure should be escalated using CPI as an escalation factor.

GAWB notes that the effective reductions applied by the Authority, as outlined in **Table 8**, are considerably greater than its recommendations in relation to operations expenditure.

While GAWB disputes that efficiencies of the scale proposed by the Authority are achievable, it submits that the operations expenditure forecasts allowed by the Authority are inconsistent with its Draft Report recommendations, as evidenced in **Table 9**.

Table 9 - Reconciling the Authority's operations cost reductions

	2010/11 $'000	2011/12 $'000	2012/13 $'000	2013/14 $'000	2014/15 $'000	5yr Total $'000
Operations						
GAWB	1,450	1,301	1,169	1,201	1,235	**6,356**
GAWB with CPI[1]	1,445	1,287	1,157	1,185	1,214	**6,288**
GAWB CPI & savings[2]	1,409	1,223	1,070	1,060	1,093	**5,855**
Authority	1,384	1,186	1,016	996	1,003	**5,585**
Variance	**25**	**37**	**54**	**64**	**90**	**270**

Notes

1 – The majority of GAWB's operations expenditure is based on a CPI escalation factor. Only selected expenditure, where warranted, have used a different escalation factor.

2 – The calculation reflects the Authority's draft recommendations by incorporating proposed savings by Davwil of 2.5% in 2010/11, 5% in 2011/12, 7.5% in 2012/13 and 10% from 2013/14 onwards and using CPI has an escalation factor for all accounts that constitute operations expenditure.

As shown in **Table 9**, the values for operations expenditure arrived at by the Authority do not reflect the recommendations contained in the Draft Report. The difference arises because the Authority, in its escalation adjustment calculation, has assumed that all accounts that constitute operations expenditure have been escalated using the Professional Services Index. As outlined in GAWB's submissions and detailed account forecasts provided to the Authority this is not the case. Only a relatively small number of accounts that make up operations expenditure use an escalation factor different than CPI. GAWB will continue to work with the Authority to ensure this calculation error is not repeated in its final recommendations.

9.5.1 Reductions in forecast expenditure

With the exception of water quality and environmental management expenditure, Davwil provides no explanation for its recommended approach for potential efficiencies. This prevents GAWB from providing an informed response. GAWB strongly submits that in the absence of credible rebuttal, reliance should be placed upon the detailed justifications that GAWB has provided for the forecast expenditure.

The only premise provided by Davwil in relation to these cost savings is that:

> *'…from Davwil's experience when there is a major rise in expenditure such as with GAWB, normally savings can be made.*
>
> *Accordingly this is one of the main reasons why Davwil has taken the approach of a percentage reduction across the operation and staff expenditure including water quality and environmental management.'*[85]

While GAWB accepts that there has been a major rise in expenditure, the only conclusions that can be drawn from Davwil's statement are that:

- GAWB has dealt with the increase in an inefficient manner. This is simply not the case and is at direct odds with a further statement made by Davwil that *'activity information provided by GAWB doesn't show an inefficient position.*[86]*'*
- The operations expenditure allowance provided in 2005 was appropriate. GAWB submits that this approach is flawed due to the broad nature of the 2005 assessment of efficient costs as performed by SMEC and approved by the Authority. This assessment did not provide individual account forecasts only a high level allowance. Detailed analysis on this basis is ill-informed.

To the extent that increases in expenditure related to water quality and environmental management have been evident in recent years, GAWB has particularised the reasons and demonstrated the necessity in documentation that it supplied, upon request, to the Authority in March 2010. [87]

Causes for changes in environmental expenditure include:

- additional work and improvements required for in catchment monitoring activities (in response to Bureau of Meteorology reporting requirements and to fulfil monitoring obligations in accordance with the Water Regulations 2008 and Water Resource Plan 2000 respectively)
- costs of monitoring and maintaining gauging station equipment
- installation of Water Profiler
- increases in volume-related trigger releases caused by inflows that have occurred since 2007 (required by the Water Resource Plan 2000 – with low inflows prior to 2007, there were no 'trigger flow events' to monitor the effect of releases on down stream impacts)
- timing of some compliance works (i.e. performance monitoring) not being annual but scheduled in years one, five, seven and nine of the Resource Operation Plan (eg. riparian vegetation assessment and geomorphic process survey)

85 *Davwil Report*, p 108
86 *Davwil Report*, p 108
87 Document headed "*Information requested by QCA*" supplied by GAWB in meeting with QCA in March 2010

- investigation into specific issues affecting water quality at Awoonga Dam (eg. outbreaks of blooms blue green algae) and investigations into specific issues (for example rapid temperature movements causing fish kills)
- establishing and monitoring groundwater bores at the Awoonga sewerage treatment plant to comply with environmental agency (EPA and DERM) requirements.

Causes for changes in expenditure relating to the testing of potable water are summarised below:

- The release of the revised Australian Drinking Water Guidelines (ADWG) in late 2004 required a fundamental change from earlier practices upon which expenditure was predicated. GAWB's testing regime was substantially altered in 2006 to respond to these changes. This included twice-monthly sampling for drinking water quality, doubling the time taken for sampling and the analytical requirements for this component.
- In 2008, in response to new legislation and other reporting requirements a further substantial change to GAWB's testing regime was necessitated.[88] This represented a rigorous review of the applicability of each analytical parameter, at each sample point for a particular frequency of sampling and included analysis of historic data. As a consequence, the frequency of monitoring increased to weekly for fundamental parameters.
- Since 2008, GAWB has implemented further initiatives associated with its 'catchment to tap philosophy' consistent with recognised best practice standards and anticipated changes to the ADWG.[89] This has also involved enhancements to monthly and quarterly testing.

The present case is distinguished from that of an unjustified substantial increase in expenditure. In GAWB's submission, any imputation of inefficiency based solely upon a substantial increase in expenditure is unreliable. It is entirely flawed where, as in the present circumstances, the reasons for the increases have not been disputed.

In any event, GAWB submits that the prime area of focus should not be backward looking; rather it should be directed forward to determine whether GAWB's forecast expenditure is reasonable/efficient given this is an area of increasing regulation and focus. Using this approach, Davwil itself concedes that GAWB's forecast doesn't reveal an '*inefficient position*'.

The Authority has, in reliance of the Davwil report, determined that reductions should be applied to GAWB's forecast operations expenditure, increasing from 4.6% in 2010/11 to 18.8% by 2014/15. GAWB contends that these reductions are neither reasonable nor appropriate and no justification has been provided as to the nature of the savings. This recommendation appears to be made in isolation of efficiency savings already achieved by GAWB in the 2005 to 2010 regulatory control period. GAWB contends that it has already realised considerable efficiency savings over the current regulatory period through in-sourcing the water treatment plant operations and water testing services. These considerable savings have already been incorporated into forecast costs. GAWB also cannot agree with the Authority's comment that[90]:

> *'Davwil noted that the primary drivers for the increase in GAWB's actual operating expenditure from 2005/06 to 2009/10 relates to increased costs associated with…..and the transfer of operating activities form the Gladstone Regional Council.'*

While the cost of water treatment plant operations was shown as operations expenditure in 2009/10 ($606,000), the impact of in-sourcing has provided an efficiency gain of over $200,000 per annum. Davwil's statement made by the Authority is inconsistent with Table 8.3 in its draft report and expenditure proposals provided by GAWB to the Authority.

GAWB is also concerned with the statement by the Authority that:

> *'The Authority also noted that GAWB could achieve savings in regard to the Strategic Water Plan and demand management activities given that these should now be a lower priority following recent inflows'.*[91]

88 *Water Supply (Safety & Reliability) Act (2008); Water Fluoridation Act (2008)*; various public health regulations; BOM and DERM reporting requirements including the development of GAWB's Drinking Water Quality Management Plan.

89 See Australian Drinking Water Guidelines (2004), USEPA Guidelines, World Health Organisation Guidelines.

90 *QCA Draft Report*, p 114

91 *QCA Draft Report*, p 116

While GAWB has received recent inflows, this does not eliminate the need for GAWB to undertake long-term strategic planning including education on appropriate water use.

Strategic water planning is a fundamental strategic activity for GAWB. Any reduction in emphasis or completion would result in long run inefficiencies to GAWB's operations and would stand in isolation to accepted commercial and regulatory practice. GAWB contends that the above comment is neither informed nor appropriate, but notes that no adjustment has been made in relation to GAWB's proposed expenditure on these items apart from changes in the escalation factors.

Given the paucity of detail that justifies the proposed reduction in operations expenditure, GAWB is constrained in its ability to respond further.

9.5.2 Escalation factors

As outlined in 9.2.1, GAWB does not agree with the Authority's recommendation in regards to escalation factors because there is no consideration as to the nature of individual accounts or expenditure drivers that constitute operations expenditure.

In summary, GAWB submits that the operations expenditure forecasts provided by GAWB represent an efficient position and that:

- expenditure cuts proposed by Davwil and accepted by the Authority are neither appropriate or reasonable and
- GAWB's use of escalation factors is appropriate for the nature of the individual expenditure accounts that constitute operations expenditure.

9.6 Maintenance

The following table summarises the Authority's allowance for maintenance expenditure.

Table 10 - Comparison of GAWB-proposed and Authority-recommended maintenance expenditure

	2010/11 $'000	2011/12 $'000	2012/13 $'000	2013/14 $'000	2014/15 $'000	5yr Total $'000
Maintenance						
GAWB	2,993	3,074	2,577	2,798	2,795	**14,237**
Authority	2,450	2,107	1,860	2,428	2,331	**11,176**
Variance	**543**	**967**	**717**	**370**	**464**	**3,061**
% variance	**18.14%**	**31.46%**	**27.82%**	**13.22%**	**16.60%**	**21.50%**

The Authority has made two recommendations in relation to GAWB's forecast maintenance expenditure namely:

1. The Authority has accepted Davwil's recommendations in relation to reducing GAWB's forecast maintenance expenditure.
2. As outlined in Recommendation 19, all maintenance expenditure should be escalated using CPI as an escalation factor.

GAWB does not accept these recommendations as being reasonable or appropriate.

9.6.1 Regular maintenance

As outlined in GAWB's submissions to the Authority[92], GAWB (with expert assistance from GHD), has prepared forward looking preventative maintenance schedules based on maintenance requirements for Awoonga Dam and delivery infrastructure. These schedules were developed over an 18 month timeframe. The activities in the delivery network schedules were reviewed by Hunter Water Australia (HWA) for the appropriateness and frequency of tasks. GAWB is currently implementing these maintenance schedules.

Davwil has stated in its report that '*Hunter Water Australia….concluded that their preventative maintenance program was satisfactory in terms of the frequency of most items, but GAWB should look more closely at what is done for large pipeline assets.*' Davwil has incorrectly paraphrased the HWA report. The conclusion reached by HWA, as stated in page 7 of its report, was that '*the frequency of maintenance tasks is at an appropriate and reasonable level for different types of equipment and structure based on the information made available.*'

Davwil has also attempted to forecast maintenance expenditure by looking at prior year expenditure and adding a 1.25% per annum infrastructure ageing factor. GAWB contends that while the quantum of ongoing maintenance is not significantly different, the approach used by Davwil is flawed because it is not based on the activities required to be undertaken. GAWB contends that the allowance for regular maintenance should reflect that included by GAWB in its submissions.

9.6.2 Specific maintenance projects

GAWB accepts the Authority's recommendations.

9.6.3 Escalation factors

As outlined in section 9.2.2, GAWB does not agree with the Authority's recommendation in regards to escalation factors.

9.7 Electricity

The following table summarises the Authority's allowance for electricity.

Table 11 - Comparison of GAWB-proposed and Authority-recommended electricity expenditure

	2010/11 $'000	2011/12 $'000	2012/13 $'000	2013/14 $'000	2014/15 $'000	5yr Total $'000
Electricity						
GAWB	1,286	1,350	1,464	1,587	1,721	**7,408**
Authority	1,202	1,232	1,303	1,418	1,543	**6,698**
Variance	84	118	161	169	178	**710**
Variance %	**6.53%**	**8.74%**	**11.00%**	**10.65%**	**10.34%**	9.58%

The Authority has stated in its report that they have accepted GAWB's forecast electricity expenditure for 2010/11 as well as proposed escalation factors. The Authority has also stated that Davwil has adjusted GAWB's electricity expenditure to reflect the Authority's demand projections – a demand greater than that proposed by GAWB from 2011/12. No details have been provided in the Davwil report as to how they determined the electricity values.

Given these factors, GAWB queries why the electricity allowance outlined in table 8.13 of the Authority's report and reproduced in this section is less than that proposed by GAWB. GAWB can only conclude that the adjustment made was in fact an error.

92 GAWB *Expenditure Proposals* submission, pp 38–39

Taking into account the additional demand forecast by the Authority, GAWB submits that the appropriate electricity allowance for the 2010 to 2015 regulatory control period should be that set out in **Table 12**.

Table 12 - GAWB-calculated electricity expenditure using Authority recommendation

	2010-11 $'000	2011-12 $'000	2012-13 $'000	2013-14 $'000	2014-15 $'000	5yr Total $'000
GAWB-calculated electricity expenditure	1,286	1,390	1,521	1,667	1,826	**7,690**
Authority	1,202	1,232	1,303	1,418	1,543	**6,698**
Variance	**84**	**158**	**218**	**249**	**283**	**992**

The Authority has also noted that GAWB's actual electricity expenditure has been lower than forecast in the 2005 investigation. These efficiency savings have been generated by GAWB through matching pumping regimes with off-peak electricity rates where possible and securing supply through appropriate forward supply contracts.

GAWB's electricity expenditure for 2009/10 financial year will however be considerably greater than that budgeted ($1.1m) and more close to the QCA forecast of $1.3m. The additional costs will be incurred by GAWB due to a necessary short-term change in the pumping regime to allow for critical maintenance to occur. Notwithstanding this, GAWB's forecasts are based on using GAWB's standard off-peak pumping regime.

In summary, GAWB submits that the updated electricity expenditure forecasts as outlined in **Table 12**, based on the increased forecast demand determined by the QCA, should be accepted for the purpose of the Final Report. As GAWB already implements an efficient pumping regime, specifically designed to minimise pumping costs, any reduction in the allowance for electricity will impact GAWB's ability to earn its permitted return on assets.

9.8 Chemicals

The following table summarises the Authority's allowance for chemicals.

Table 13 - Comparison of GAWB-proposed and Authority-recommended chemicals expenditure

	2010/11 $'000	2011/12 $'000	2012/13 $'000	2013/14 $'000	2014/15 $'000	5yr Total $'000
Chemicals						
GAWB	866	926	990	1,059	1,132	**4,973**
Authority	847	885	925	967	1,011	**4,635**
Variance	19	41	65	92	121	**338**
% variance	**2.19%**	**4.43%**	**6.57%**	**8.69%**	**10.69%**	**6.80%**

The Authority has made two recommendations in regards to forecast chemical expenditure:

1. The Authority has accepted Davwil's analysis of GAWB's proposed forecast chemical costs.
2. As outlined in Recommendation 19, all forecast chemicals expenditure should be escalated using CPI as an escalation factor.

GAWB does not agree with the Authority's recommendation regarding the escalation factor – please refer to Section 9.2.3 for further details on this issue.

9.9 Other expenditure

The following table summarises the Authority's position in relation to GAWB's other expenditure.

Table 14 - Comparison of GAWB-proposed and Authority-recommended other expenditure

	2010/11 $'000	2011/12 $'000	2012/13 $'000	2013/14 $'000	2014/15 $'000	5yr Total $'000
Other						
GAWB	2,347	2,321	2,302	2,822	3,005	**12,797**
Authority	2,000	2,000	2,000	2,250	2,250	**10,500**
Variance	**347**	**321**	**302**	**572**	**755**	**2 297**
% variance	**14.78%**	**13.83%**	**13.12%**	**20.27%**	**25.12%**	**17.95%**

The Authority has recommended that in relation to other expenditure:

- cost of $2m per annum is reasonable and
- an additional $250,000 per annum is allowed in 2013/14 and 2014/15 for costs associated with the next price review.

On this material and important category of expenditure, GAWB cannot accept the Authority's recommendations or the arbitrary approach adopted. GAWB further contends that there is no basis for reducing GAWB's forecasts and questions how the Authority determined that an allowance, excluding price review costs, of $2m per annum is reasonable. GAWB also notes that the Authority has not allowed for any escalation of this expenditure in the regulatory control period.

It is difficult for GAWB to respond to the Authority's recommendation given that it seems to have been made in isolation to GAWB's detailed submissions and the Authority's own consultant's report. While GAWB contends that detailed other expenditure forecasts proposed are appropriate and efficient going forward, without any further information from the Authority on how it reached its decision, can only comment on:

- the findings of Davwil and
- regulatory pricing costs.

9.9.1 Comments on Davwil's analysis

The Authority has stated that: '*Davwil recommended an overall $380,000 or 12.5% savings could be achieved by 2014/15, by reducing regulatory pricing costs by 20%, reducing specific advice (legal, accounting, tax etc) by 20%, reducing other costs by 15%, reducing board meeting fees by 10%, reducing accommodation and travel by 10%, reducing minor asset purchases by 10% and reducing both internal/external audits and telephone expenses by 5%. Davwil concluded that the 12.5% cost reduction could be applied from 2010/11, rather than using a staged approach.*'

GAWB is unsure as to the Authority's interpretation of Davwil's recommendations including the forecasts which underpin those recommendations. This misunderstanding includes how Davwil intended savings to be generated. The Authority has stated in its report that 'Davwil *concluded that the 12.5% cost reduction could be applied from 2010/11, rather than using a staged approach'*. Davwil's conclusion, as outlined in its report[93], was '*Proposed 2.5% in 2010/11, 5% in 2011/12, 7.5% in 2012/13, 10% in 2013/14 and 12.5% in 2014/15 & onwards.*'

93 *Davwil report* p 116

Davwil has reached a proposed cost reduction value of $380,000 in 2014/15 as per the following table:

Table 15 – Davwil other cost reductions

Other Cost Component	Potential % Reduction
Telephone	5%
Rent	0%
Minor Asset Purchases	10%
Accommodation & Travel	10%
Internal & External Audit	5%
Regulatory pricing	20%
Survey expenditure	0%
Board Meeting Fees	10%
Specialise advice (legal accounting, tax etc)	20%
Engineering advice	0%
Asset valuations	0%
Software Support & maintenance charges	0%
Specialist IT Support	0%
Other	15%
Total	-12.2% (say 12.5%)
	Potential Cost reduction $0.38m

In particular, GAWB is unsure whether the Authority arrived at its annual $2m allowance for other expenditure by taking this $380,000 of savings into account. If the Authority has tried to apply this cost saving to each year of the 2010 to 2015 regulatory control period, they have done so on a flawed basis as each yearly forecast prepared by GAWB is unique. That is, the forecast is simply not a roll forward of the 2010/11 budget. The savings proposed by Davwil will therefore not occur equally through the next regulatory control period. This is evidenced by GAWB's proposed cost reductions in regulatory price of 20%. Greater costs are forecast in years four and five of the next regulatory control period for the 2015 price review. This type of savings is not possible through years one to three given the considerable portion of the expenditure relates to the annual Authority regulation fee.

9.9.2 Quantum of reductions

As shown in **Table 15** above, Davwil has recommended potential cost reductions that, in its opinion, could be achieved by 2014/15. While GAWB has provided considerable detail to Davwil and the Authority on its forecast expenditure, Davwil has only made general recommendations without undertaking an in-depth review. This is evidence by Davwil's statement '*specific reductions which would require a much more in depth review.*'

The quantum of reductions adopted by the Authority based upon superficial and/or flawed analysis (in preference to the detailed and credible forecast that GAWB provided) allocates inappropriate risk to GAWB in the delivery of its essential services.

Telephone – GAWB contends that efficient telephone costs have been included in the forecasts. There is no analysis that has been advanced by Davwil or the Authority that disputes the efficiency of this expenditure.

Minor asset purchases – GAWB contends that the forecast costs relating to minor asset purchases are appropriate and reasonable. There is no analysis that has been advanced by Davwil or the Authority that disputes the efficiency of this expenditure. Forecast costs in 2015 are similar to that forecast in 2011.

Accommodation and travel – As a regionally based business, GAWB's staff and directors are required to travel on regular occasions to attend to their duties. This travel includes attending Board meetings, interactions with government departments and agencies based in Brisbane (Treasury, DERM, DIP, QTC, etc), liaising with specialist consultants located outside the region (including tax, accounting, legal, insurance, environmental; communication; finance, recruitment, engineering, economic advisors, etc), liaising with the regulators (environmental, water quality, economic etc) and attending necessary specialised training.

In short the quantum of travel is linked with the level of activity in GAWB's business. The forecasts that GAWB provided were based upon actual expenditure in recent years, adjusted for changes in expected activity and movements in the CPI. Davwil (and the Authority) have not published nor provided GAWB with any analysis contesting these forecasts nor the basis upon which they were made.

GAWB notes that it has strong management systems relating to the authorisation of travel expenditure with all applications requiring endorsement by the line manager and authorisation by the CEO (ie. all travel applications have 3 signatures, staff, manager and CEO). Travel only occurs when it is considered necessary.

While some reduction (via efficiencies) is conceivable, the suggested reduction of 10% by Davwil is entirely speculative.

There is no analysis that has been advanced by Davwil or the Authority that disputes the efficiency of this expenditure. This is another example illustrating GAWB's concern that the Authority has relied on a superficial analysis undertaken by Davwil.

Internal and external audit – GAWB's external audit function is mandated under legislation and administered by the Queensland Audit Office (QAO). This is non-discretionary expenditure and GAWB has limited ability to influence the level of fees charged by the QAO for GAWB's external audit.[94]

The failure by Davwil to comprehend the legislative constraints in which GAWB operates provides another example of the Authority's reliance upon a superficial analysis.

GAWB has also established an internal audit function in the current regulatory period. Internal audit is an essential component of a sound corporate governance framework. GAWB has outsourced its internal audit function, through a competitive procurement process, which is efficient given the size of GAWB and the specialised skills required for the activity. The internal audit function promotes efficient behaviour by ensuring systems, policies and procedures are being followed and is consistent with best appropriate practice for corporate governance. GAWB's internal audit function is in accordance with the guidelines outlined in the *Financial and Performance Management Standard 2009*. Any reduction in costs to this forecast expenditure would impair GAWB's ability to maintain sound corporate governance, satisfy the requirements under the Financial and Performance Management Standard 2009 and appropriately support an efficient external audit.

There is no analysis that has been advanced by Davwil or the Authority that disputes the efficiency of this expenditure.

Board meeting fees – This recommendation appears to be made without any regard to the framework that governs the payment of director's fees. Under Section 624 of the *Water Act 2000,* a director is entitled to be paid fees and allowances as approved by the Minister. The Minister approves that the Chairperson and Directors receive fees and allowances in accordance with the remuneration Category Level C1 set out in the Department of Justice and Attorney-General '*Remuneration of Part Time Chairs and Members of Government Boards, Committees and Statutory Authorities'* document (last updated 26 February 2010). The meeting payment approval is clearly advised in all directors letters of appointment when forwarded to directors by the Director-General of DERM after the Governor in Council has approved the appointment.

94 GAWB can only reduce QAO fees to the extent that GAWB can improve underlying processes to make them simpler to audit and to extent the QAO can or will rely on improving internal audit activity.

GAWB has no discretion as to the quantum of meeting fees. The Chairperson is paid an annual fee (salary) and the other directors receive a meeting fee – the quantum of which relatively low (less than $500 per day). Also councillors of the Gladstone Regional Council are ineligible to receive fees. The only potential to reduce costs is to reduce the level of meetings, which is an inappropriate consideration for the Board of Directors in determining its meeting schedule. In any event, any reduction in the number of meetings would only have a modest overall impact given the already modest fees of the remunerated directors.

There is no suggestion by Davwil (or the Authority) of any analysis having been undertaken as to the frequency of Board (or Committee) meetings, let alone any suggestion that GAWB's efficient operation requires less board meetings (ie. less supervision).

This is another example of the basis of GAWB's concerns relating to the Authority's reliance upon the superficial and flawed analysis undertaken by Davwil.

Specialist advice – No indication is provided by Davwil as to what advice GAWB should no longer seek or indeed any suggestion that GAWB's submissions had been considered, let alone dismissed.

Expenditure associated with the receipt of specialist advice is linked with the level of activity in GAWB's business. The forecasts that GAWB provided were based upon actual expenditure in recent years, adjusted for changes in expected activity and movements in the CPI. Davwil (and the Authority) have not published nor provided GAWB with any analysis contesting these forecasts nor the basis upon which they were made. While some reductions (via efficiencies) are conceivable, the suggested reduction of 20% by Davwil is entirely speculative.

There is no analysis that has been advanced by Davwil or the Authority that disputes the efficiency of this expenditure. This is another example of the Authority's reliance upon a superficial analysis undertaken by Davwil.

Regulatory pricing – GAWB's prices are set against the backdrop of a unique regulatory environment – this lends itself to its own inefficiencies. The forecast cost of the 2010 price review will be in excess of $1.2m. GAWB has forecast the 2015 price review to cost $947,000 over the period 2013-2015. Any reduction in this expenditure allowance will deny natural justice and the ability to achieve reasonable outcomes under the price review process.

Other – GAWB is unable to provide direct comment against this proposed reduction in costs given the broad nature of the recommendation. There is no analysis that has been advanced by Davwil or the Authority that disputes the efficiency of this expenditure. Davwil was provided with considerable detail and explanations as part of its review and as such, GAWB cannot accept how Davwil arrived at this proposed cost reduction.

9.10 Staffing

GAWB does not accept the Authority's recommendations related to reducing staff numbers.

The Authority summarised Davwil's recommendations as follows:[95]

> *Davwil recommended that a restructure of its organisation would enable GAWB to achieve cost savings. This could be achieved through a review of business priorities, position description adjustments, multi-skilling where appropriate, streamlining processes and judicious outsourcing.*

GAWB emphatically rejects this assessment.

95 *QCA Draft Report*, p123

GAWB is lean and its history is of gradual staff growth on an "as needed" basis. The benchmarking presented in GAWB's Expenditure Proposals submission supports the conclusion that GAWB has low staffing compared with its peers.

For example, the former Hobart Water was a similar organisation to GAWB. Hobart Water supplied bulk water to council-owned retailers in the southern region of Tasmania and some bulk customers. The scale of the businesses is similar – Hobart Water delivered 47,000ML of water in 2007/08 from assets with a DORC value of $325m. GAWB will deliver 50,000ML of water in 2010/11 from assets with a DORC value of $462m. In 2007/08 Hobart Water employed 90 FTEs. GAWB proposes to increase from 54.9 FTEs to 57.9 FTEs over the next regulatory control period. That is, even after recent in-sourcing and the proposed staff increases, GAWB will employ fewer than two-thirds of the staff roll of the former Hobart Water.[96]

GHD's detailed review of staffing levels recommended increasing staffing. GAWB submits that the Authority's recommended substantial reduction to an already lean organisation will cause harm.

GAWB also notes that long-run efficiencies are not necessarily consistent with cost minimisation or staffing minimisation today.

The Authority and Davwil suggest that GAWB could achieve efficiencies by restructuring the organisation, reviewing processes and outsourcing. GAWB does not consider that material savings are possible. GAWB management and governance already carefully:

- review staff levels
- consider opportunities to cross-skill staff and
- assess which functions should be outsourced and which functions should be performed by GAWB staff. For example, GAWB recently in-sourced operation of the water treatment plants. This change resulted in higher staffing levels, lower overall costs and an improved organisational risk profile.

With GAWB's small size come issues around critical mass. Furthermore, there is considerable doubt as to whether fractional FTEs are possible given the nature of the roles and the region's employment market. Other proposed reductions have a similar significant impact. The proposed reductions would dramatically reduce organisational capability, increase risk associated with concentration of expertise in a few individuals, and may result in important work being deferred or (as was the case in the current regulatory period) undertaken without being funded through prices.

Ongoing restructuring of roles to provide cross-skilling already occurs. However there is a limit to the efficiencies that can be achieved through this approach. Cross-skilling of staff to take on broader roles is successful when roles are redesigned in such a way that they are complementary to the staff member's core skills and aligned with their career aspirations and personal development needs.

The Davwil report provides almost no justification for any of the proposed staff reductions. The lack of justification itself makes responding difficult.

GAWB engaged GHD to review the analysis undertaken by Davwil including the recommendations accepted by the Authority. A copy of this report has been included in Appendix 6. As highlighted in GHD's key findings, there are concerns over the approach adopted by Davwil including the interpretation of reports and GAWB's submissions. GHD's key findings are reproduced below:

- *The FTE numbers of 32 in June 2005 does not necessarily reflect an efficient resource base for GAWB to discharge its responsibilities and undertake the activities required of it at the time. It is important to not assume the 2005 FTE numbers were correct, as there is no documentation in the 2005 QCA Final Report to support such an assumption. Therefore, to make comments on the 2010 FTE numbers and proposed FTE numbers by 2014/15 by assuming the 2005 FTE numbers may be an accurate starting point could be misleading;*

96 Hobart Water data from Marchment Hill Consulting report included as Appendix 22 of GAWB's *Expenditure Proposals* submission and Hobart Water's 2007/08 annual report

- *The GAWB organisation of 2010 is significantly different to that in 2005, in that it is has significantly invested in IT infrastructure to replace legacy issues, developed and negotiated specific customer contracts with their major customers, increased their capital program to secure water supplies to the region and developed a service delivery model to improve operations and maintenance of their assets;*

- *The sustainable reduction of FTE numbers up to 2015 and beyond requires GAWB to increase FTE numbers in the short term in line with their pricing submission to leverage the long term benefits of their IT investment, process improvement initiatives and service delivery model;*

- *Davwil's Final Report indicates GAWB's FTE numbers were 55.92 in February 2010, compared with GAWB's actual for 2009/10 of 55.9 FTE's. Upon closer examination of the FTE's tabled in Davwil's Final Report Appendix I, Davwil's distribution of FTE numbers across GAWB's Business Units when compared with GAWB's organisational structure appear to be misaligned. The allocation of FTE's across GAWB's Business Units needs to be clearly understood before any reduction can be agreed;*

- *FTEs will increase modestly during the pricing period once adjustments as described in this report have been completed;*

- *GAWB's overall FTE numbers by July 2015 and following adjustments as described in this report will be 57.9 FTE's. This is based on GHD's review of GAWB's determined positions;*

- *Any Opex reduction based on FTE's should be calculated on the basis of the actual opex cost to be saved and not an averaged amount which has the potential to overstate opex savings;*

- *FTEs to be capitalised will have no impact on reducing overall GAWB FTE numbers;*

- *Any job redesign must satisfy some basic principles and that includes making sure the new job is meaningful and satisfying for the staff who will occupy these roles as well as delivering GAWB long term financial and nonfinancial benefits. Creating jobs that bring together a raft of diverse activities with no comparable skills, provides little opportunity for personal growth and does not align with employee aspirations will not serve GAWB in the long run as it will be difficult for GAWB to keep and attract staff to such roles; and*

- *While timing of different peak workloads to improve resource utilisation is supported, when one reviews the field based roles in GAWB, treatment plant operations, hatchery, ranger, land officer, mechanical fitters and electricians, these roles are very diverse requiring different skill sets and their respective peaks are not necessary such that activities could be grouped to create a "new and complete job" to better manage peaks.*

GAWB also contends that Davwil has misquoted the GHD report, that in turn has influenced its recommendations that were accepted by the Authority. As noted by the Authority[97]:

> *'Davwil noted that the GHD report stated that GAWB staff levels have increased to a critical mass. As a result, Davwil concluded that GAWB's staffing levels have reached a point where it can handle its critical operations needs within risk parameters, efficiently manage and process cost business functions, and maintain appropriate knowledge and skills in house, whilst outsourcing some functions to cover peak workloads or skills that cannot be efficiently provided within the business.'*

97 QCA Draft Report Page 123

As outlined in GHD's response[98] this statement is incorrect. GHD has further commented that:

> *There is a significant difference between concluding staff levels have reached a critical mass" against "staff levels are* ***approaching a critical mass*** *(emphasis added)".*
>
> *GHD agrees with the QCA that once staff numbers* ***reach*** *(emphasis added) a critical mass further efficiencies can be delivered. However before further efficiencies can be delivered, systems and process must be embedded in the business and working as designed, then that opportunity to redesign roles, re-align the organisational structure and multiskill staff to undertake a broader range of functions become possible and more importantly sustainable without* ***introducing unwanted risk in the transition process*** *(emphasis added).'*

GAWB submits that neither the Authority's general contention that staffing levels are higher than an efficient level or the specific reductions proposed have been demonstrated to be reasonable. This conclusion is supported by the detailed analysis undertaken by GHD contained in in Appendix 27 of GAWB's Expenditure Proposals submission and GHD's response to the Davwil and Authority's analysis included at Appendix 6. GAWB has responded to the specific recommended staff reductions in the following section.

9.10.1 Specific reductions recommended by QCA and Davwil

GAWB has responded to the specific reductions recommended by the Authority and Davwil in a confidential submission to the Authority. This confidential submission also includes Table 2 of GHD's report referred to in Appendix 6.

9.10.2 Davwil errors

As a matter of concern, GAWB notes that Davwil has made a series of errors in calculating the number of FTEs that GAWB has proposed. This level of error is, by itself, instructive as to the quality of the recommendations made by Davwil concerning appropriate levels of staffing.

While Davwil's FTE number at February 2010 is similar to GAWB's, there is considerable variance in FTE proportions for individual positions. GAWB submits that any reductions in staffing made by the Authority in its final recommendations should recognise GAWB's actual staffing levels, not an arbitary assessment of the staffing levels as reported by Davwil.

9.10.3 Cost savings from reducing staff numbers

GAWB understands that the Authority has adopted Davwil's simplification of reducing operating expenses by $100,000 per reduced FTE. Davwil stated[99]:

> *'Instead of removing specific position costs an average organisational cost per position (excluding Branch managers and CEO) of $100,000 per staff has been used. Accordingly, Opex effective staff cost reduction in 2009/10 dollars terms is $1.1m.'*

This reduction is greater than the cost saving associated with removing the specific positions recommended. Both Davwil and the Authority have been provided with GAWB's detailed staff costing files.

Even if the Authority continues to recommend a reduced staffing level (which GAWB submits is inappropriate), the cost reduction (from GAWB's expenditure proposals) associated with the recommended staffing level should be correctly calculated and based upon the actual costs that have been included in GAWB's operating expenditure forecasts. The arbitary basis proposed by Davwil and accepted by the Authority bears no resemblance to GAWB's staffing costs for these positions.

98 Appendix 6 Table 1, p 1
99 *Davwil report*, p 117

9.10.4 Reallocation of staff costs to capital expenditure

The Authority recommends capitalising the cost of certain employees. GAWB submits that this approach will have the effect of reducing operating expenditure and increasing capital expenditure.

9.10.4.1 Recommendation has minimal effect on price

Because GAWB's pricing practices involve the setting of prices to recover the net present value of 20 years of economic costs, there is little pricing difference between treating the staff costs as expensed or capitalised expenditure. The recommended approach has limited impact on prices and is more complex than the current approach, therefore GAWB submits that the Authority should allow GAWB to retain the current approach.

9.10.4.2 Error in the potentially capitalised FTE calculation

GAWB believes that Davwil has made errors in concluding that the costs of 2.2 FTE can appropriately be capitalised. Davwil proposes capitalising some costs that GAWB considers should, by their nature, not be capitalised. Davwil has also miscalculated the FTE count for one role. The following table sets out GAWB's assessment of the maximum amount that could possibly be capitalised.

Positions transferred to capital	Davwil	GAWB	Comment
Programmer/Scheduler	0.1	0.0	Admin function, should not be capitalised
Works & construction supervisor	0.7	0.7	
Senior engineering specialist	0.5	0.5	
Projects Administrator	0.1	0.0	Admin function, should not be capitalised
Engineering Officer	0.8	0.5	Should be 0.5 FTE, not 0.8
	2.2	1.7	

9.10.4.3 Capital expenditure not increased

From GAWB's review of the pricing model inputs, it appears that the Authority has reduced the operating costs as per Davwil's recommendations, but not transferred the capital component to the capital investment program. If the Authority continues to recommend capitalisation of these costs, then a corresponding increase amount should be allowed in GAWB's capital expenditure forecasts.

9.10.5 Conclusion on staffing

GAWB submits that it has not been demonstrated that any of the recommended staff reductions are achievable, prudent or efficient. Davwil has not provided information indicating that GAWB's proposals are inefficient (such as evidence that a similar functionality is performed at lower cost in a comparable organisation).

GAWB considers that making the proposed staff reductions would damage the business and, in some cases, give rise to adverse safety and business risk outcomes. GAWB will be faced with the decision to either:

- implement reductions and accept adverse safety and risk outcomes or
- retain staff, unfunded through prices, and accept a lower than target return on investment.

GAWB acknowledges that making cost efficiencies is always possible and it is appropriate for an economic regulator to attempt to drive efficiencies in the absence of normal competitive pressure. However, the regulatory regime itself provides incentives for making efficiencies because GAWB captures the value of cost savings made for a limited period of time (less than five years). These efficiencies are then passed to customers in the form of lower prices at the next regulatory review. GAWB strongly argues that the Authority should rely on the regulatory regime to deliver efficiencies rather than require speculative (and potentially damaging) staff reductions in operating expenditure forecasts.

GAWB submits that the Authority should adopt GAWB's proposed staffing levels, which are efficient and prudent.

9.11 Insurance

GAWB notes the Authority's acceptance of its proposal.

9.12 Rates

GAWB notes the Authority's acceptance of its proposal.

> With the exceptions of electricity costs and specific maintenance projects, GAWB submits that the Authority should adopt the operating expenditure proposals set out in its Expenditure Proposals.
>
> Electricity costs should be based on the per unit cost assumptions set out in GAWB's Expenditure Proposals, with total cost updated to reflect the pumping necessary to deliver the quantity of water included in the Authority's revised demand forecast.
>
> GAWB accepts the Authority's recommendations related to specific maintenance projects.

9.13 Self insurance

At Recommendation 43, the Authority states:

> *The Authority considers that self insurance is not an appropriate mechanism for GAWB to mitigate the identified risks.*

At the 2005 price review, GAWB requested the Authority incorporate an appropriate level of self insurance costs in operating expenditure forecasts. This request was not accepted by the Authority as[100]:

> *'GAWB has been unable to provide estimates of costs for self-insurance……Indeed, it is for GAWB to substantiate its claims.'*

GAWB contends that self insurance is an appropriate mechanism to mitigate the identified risks and that the self insurance premium proposed is appropriate and reasonable. GAWB further contends that the Authority's consultant (PriceWaterhouseCoopers – PWC):

- did not have full consideration of the Authority's own framework when assessing GAWB's proposal. GAWB's self insurance proposal is consistent with the Authority's self insurance framework and
- did not appropriately consider the regulatory environment in which GAWB operates.

GAWB also notes that the recommendation made by the Authority differs with the recommendations in the PWC report in that:

- PWC identified $129,300 per annum of GAWB's self insurance premium that should be covered as part of operating costs rather than a self insurance premium. While GAWB has recorded this in the expenditure category 'self-insurance premium' it is effectively treated as operating expenditure for pricing purposes. GAWB understands that the Authority has not included this amount in GAWB's operating expenditure forecasts.

  GAWB therefore submits that if this amount is to be excluded from the self-insurance expenditure category, the amount must be included as other operating expenditure.

100 QCA Final Report 2005, p 144

- The $35,400 approved as a self-insurance premium was not allowed by the Authority on the basis that a self insurance fund is an inefficient administrative approach. GAWB contends that simplified administration arrangements could be established by GAWB to manage this premium if required by the Authority.

GAWB will also be providing a further confidential submission to the Authority responding to the Authority's recommendation on self insurance.

GAWB contends that self insurance is an appropriate mechanism to mitigate the identified risks and that the self insurance premium proposed by GAWB is appropriate and reasonable.

In any event, GAWB submits the Authority should include the PWC-recommended $129,300 operating cost allowance.

GAWB further submits that the PWC-calculated $35,400 self insurance premium in the operating cost allowance (accompanied by simplified administration arrangements if necessary).

10 Ongoing Regulatory Pricing Arrangements and Pricing Implications

10.1 Cost pass through

At Recommendation 44, the Authority states:

> *The Authority recommends that changes in expected costs that are beyond GAWB's control be passed through to customers. Costs associated with changes in taxation and changes in government charges may be passed through as they are incurred and without reference to materiality, subject to the translation into prices of the increases being subject to approval by the Authority. Costs arising from changes in compliance requirements or changes in law should be passed through subject to materiality and approval by the Authority. A material change is considered to be one which affects the annual revenue requirement by more than 1%.*

GAWB supports this recommendation

10.2 Review triggers

At Recommendation 45, the Authority states:

> *The Authority considers that a price review should be triggered if there is, or expected to be, a sustained variation in aggregate revenues of at least 15%.*

GAWB supports this recommendation.

10.3 CPI definition

At Recommendation 46, the Authority states:

> *The Authority recommends that a CPI measure based on the Brisbane All Groups classification should be used for the purpose of annual price adjustments between price reviews.*

GAWB supports this recommendation.

10.4 Inter–period cash flow adjustments

At Recommendation 47, the Authority states:

> *The Authority recommends that, where prices are smoothed over a planning period longer than the regulatory period, prices in the nest regulatory period incorporate an adjustment to account for the under-recovery. The Authority proposes to include an amount of $13.9 million for price modelling purposes pending further discussion with GAWB.*

GAWB supports the first sentence in the recommendation, however does not accept the Authority's $13.9m quantification.

The inter-period cash flow adjustment for the 2010 to 2015 regulatory control period is based on modelled costs and revenues forecast for the 2005 to 2010 regulatory control period. These cash flows were established when prices were set in July 2005.

GAWB did not provide details of the inter-period cash flow adjustment because both the methodology and quantity of the adjustment were determined by the recommendations of the Authority's 2005 price review.

GAWB calculated the adjustment to be $38.2m (2010/11 dollars). The Authority calculated the adjustment to be $13.9m (2009/10 dollars). We understand that, after re-examining its calculation and finding an error, the Authority now accepts GAWB's calculation.

GAWB submits that cross-calibration of pricing models (or indeed a common GAWB/QCA pricing model) be investigated for future reviews. GAWB also requests that a mechanism be provided for GAWB to check the Authority's modelling for errors before final recommendations are made.

GAWB submits the Authority should adopt GAWB's inter-period cash flow adjustment of $38.2m (2010/11 dollars).

Appendices

Appendix	Title
Appendix 1	Summary of GAWB's responses to the Authority's recommendations
Appendix 2	Nera Economic Consulting – Form of regulation for GAWB
Appendix 3	Price differentiation for contract length
Appendix 4	Synergies Economic Consulting – Response to the QCA's draft decision on WACC
Appendix 5	Marchment Hill Consulting – Response 2010 pricing investigation
Appendix 6	GHD – Response to 2010 price review draft report: operating costs staffing

Appendix 1

Summary of GAWB's responses to the Authority's recommendations

Appendix 1 – Summary of GAWB's responses to the Authority's recommendations

QCA draft recommendation	GAWB's position	Section
Recommendation 1 (page 12) The Authority recommends that price cap regulation be maintained for GAWB with appropriate mechanisms to manage GAWB's exposure to downside revenue risk	Not accepted	2.1
Recommendation 2 (page 15) The Authority recommends that a 20-year planning period is appropriate for GAWB	Accepted with reservation	2.2
Recommendation 3 (page 16) The Authority recommends that a five-year regulatory period apply to GAWB.	Accepted	2.3
Recommendation 4 (page 18) The Authority recommends no change to the current pricing practices, that: (a) prices should reflect LRMC; (b) LRMC be estimated using the Average Incremental Cost (AIC) method; and (c) GAWB should apply a two-part tariff for each of storage and delivery services, with the components of the structure held constant over the regulatory period.	Accepted	3.1
Recommendation 5 (page 18) The Authority recommends no change to the current pricing practices, that: (a) the storage volumetric charge be based on LRMC, and applied to volumes sourced from Awoonga Dam; (b) the storage access charge be based on contracted demand and constitute the residual amount not recovered through the LRMC-based usage charge; and (c) where LRMC exceeds the current cost of storage services, surplus revenues may be rebated to customers at a later date through a form unrelated to volumetric charges, or may be used as a contribution to future capital costs and offset against future charges.	Parts (a) and (b) accepted Part (c) not accepted.	3.2
Recommendation 6 (page 24) For the current review, the Authority recommends that GAWB's maximum indicative prices continue to be based on contracted volumes for delivery purposes. The Authority also recommends that GAWB should undertake data collection and further investigations on the merits of IFR pricing, including implications for individual customers well before the next review, in order that the proposals can be implemented as from the next review.	Current regulatory period recommendation accepted Further investigation of IFR not accepted	3.3

Recommendation 7 (page 26) The Authority recommends that GAWB retain the current methodology for determining over-run or penalty charges where: (a) actual demand exceeds the contracted/reservation volume for industrial customers, unless otherwise negotiated with GAWB, an additional load factor or surcharge of: (i) 25% applies to the total charge for incremental volumes where actual consumption is between 110% and 125% of the contracted amount (first over-run charge); and (ii) 50% applies to the total charge for incremental volumes where actual consumption is higher than 125% of the contracted amount (second over-run charge); and (b) actual demand exceeds the contracted/reservation volume for Local Government Authority customers, unless otherwise negotiated with GAWB, a load factor or surcharge of 10% will apply to the total charge for incremental volumes where actual consumption exceeds 125% of the contracted volume. The Authority also recommends that: (a) GAWB apply discretion in applying over-run charges in extraordinary circumstances or where there is no consequential cost impact on GAWB; and (b) details of how these over-run charges would apply in relation to proposals for the introduction of IFR charging should be addressed as part of GAWB's review of the framework for IFR charging.	Accepted except for recommendation on IFR over-run which is not accepted	3.4
Recommendation 8 (page 27) The Authority recommends that GAWB should charge the relevant zonal prices for GRC connections.	Accepted	3.5
Recommendation 9 (page 32) The Authority recommends that prices be differentiated for all customers according to their utilisation of specific components of GAWB's infrastructure network in accordance with zones proposed by Davwil Consulting.	Accepted	3.6

Recommendation 10 (page 35) The Authority recommends that, as a general principle, the cost of common infrastructure should be allocated to all existing and future new customers. The Authority notes this 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 in a manner which does conflict with the overarching principle for the pricing of common infrastructure.	Accepted	3.7
Recommendation 11 (page 38) The Authority recommends that, as a general principle, prices should reflect service quality to the extent this involves cost differentials. GAWB should continue to monitor customer demand for the scope for water supply products to be differentiated on the basis of reliability, including through an 'opt-in/opt-out' approach where additional supply can be provided from new sources.	Not accepted	3.8
Recommendation 12 (page 41) The Authority recommends that: (a) GAWB provide justification for the proposed level of the surcharge, with reference to the costs/risks likely to be incurred as a result of shorter contract terms; and (b) any revenues gained from this surcharge that exceed additional previously unexpected costs should be taken into account in setting future prices.	Part (a) not accepted. Part (b) accepted	3.9

Recommendation 13 (page 44) In relation to contributed assets, the Authority recommends no change to its previous statement of pricing principles in that: (a) contributed assets should be recognised where there is appropriate evidence of a contractual or policy nature, and provided the contribution is not a prepayment for services, has not been fully repaid or rebated, and the associated assets have not expired or have been replaced at the service provider's expense; and (b) where contributed assets are recognised, they should be included in the asset base for the purpose of determining the revenue requirement and prices with an appropriate rebate provided to the customer(s) making the contribution. The Authority further recommends that GAWB's proposals to the following effect be adopted: (a) unless otherwise agreed with the contributor, rebates for future contributed assets should include return-on-capital and return-of-capital components, provided their contribution was intended to reduce prices in this manner; (b) in some circumstances, particularly where contracts stipulate, the rebate may be equal to the return on capital component only; (c) where the capital contribution attracts a tax liability, this would be included in customers' charges; and (d) where customers use assets contributed by another customer, GAWB should ensure that the price paid by that customer includes recovery of a return on and of capital in respect of the assets contributed by the other customer.	Accepted	3.10

Recommendation 14 (page 47) The Authority recommends: (a) no change to the current pricing principle that the direct costs of GAWB's drought contingencies should be included in the revenue requirement as they represent a real cost to GAWB, provided the risks to which they relate are commercially relevant, GAWB has acted prudently and is the most appropriate party to bear the risk and the response is cost-effective; (b) scarcity pricing not be considered at this time but that GAWB should re-evaluate the potential for scarcity pricing in future; and (c) when supply restrictions are triggered, the volumetric charge for storage and delivery services be adjusted to maintain revenues for GAWB and to recoup any efficient drought related costs incurred that were not already incorporated in prices.	Accepted with reservation	3.11
Recommendation 15 (page 48) In relation to counterparty risk, the Authority recommends that: (a) price differentiation on the basis of credit risk is appropriate to the extent that the proposed response is commensurate with the cost/risk of the service provision; and (b) loss of revenue resulting from a counterparty becoming insolvent should not be recovered from existing customers. The risk of counterparty default can be commercially managed by appropriate contractual arrangements within GAWB's control.	Accepted with reservation	3.12
Recommendation 16 (page 50) The Authority recommends that planning and prices for services provided by Awoonga Dam be based on a HNFY of 78,000ML.	Accepted with reservation	4.1
Recommendation 17 (page 57) The Authority recommends that, for pricing purposes, the demand scenario for the regulatory pricing period commencing 1 July 2010 should reflect existing contracted volumes, anticipated contracted volumes and a component to reflect expected long term growth as outlined in Table 5.3.	Not Accepted	4.2
Recommendation 18 (page 58) The Authority recommends that infrastructure assets continue to be valued at DORC, land be valued at market value, and easements be valued at indexed historical cost.	Accepted	5.1
Recommendation 19 (page 60) The Authority concurs with GAWB that a roll-forward approach is appropriate for the 2010-15 regulatory period, rather than a full revaluation.	Accepted	5.2

Recommendation 20 (page 62) The Authority recommends that the opening asset value (as at 1 July 2005) remain unchanged from that adopted in the 2005 review (approximately $356 million).	Not accepted	5.3
Recommendation 21 (page 63) The Authority recommends that the CPI be used to roll-forward 2005 asset values.	Accepted	5.4
Recommendation 22 (page 63) The Authority recommends that assets be depreciated on a straight-line basis using the remaining lives determined in the 2005 revaluation.	Accepted	5.5
Recommendation 23 (page 64) The Authority recommends that the Boat Creek Reservoir be reinstated into the regulatory asset base for the 2010 price investigation.	Accepted	5.6
Recommendation 24 (page 73) The Authority recommends an indicative estimate of capex to the value of $35.654 million be included in the asset base and rolled forward to 1 July 2010.	Partially accepted	5.7
Recommendation 25 (page 73) The Authority recommends that land to the value of $3.05 million be removed from the regulatory asset base as of 30 June 2010.	Accepted	5.8
Recommendation 26 (page 84) The Authority recommends estimated capital expenditure of $50.5 million over the 2010-15 period be included for pricing purposes.	Partially accepted	6.1
Recommendation 27 (page 86) The Authority recommends that estimated capital expenditure of $34 million over the 2015-30 period be included for price modelling purposes. The Authority recommends that no expenditure be included for the contingent supply strategy.	Partially accepted	6.2
Recommendation 28 (page 87) The Authority recommends that: (a) GAWB review the basis for escalating capital costs over the 2010-15 regulatory period, with CPI being used until a more appropriate escalation basis is determined; and (b) CPI should be applied to capex over 2015-30.	Partially accepted	6.3
Recommendation 29 (page 87) The Authority recommends that working capital be determined on the basis of debtors (accounts receivable) less creditors (accounts payable) plus inventories. An indicative estimate of $2.355 million is considered appropriate.	Accepted	6.4

Recommendation 30 (page 89) The Authority recommends that return of capital be based on straight line depreciation for all GAWB's assets, taking into account the expected lives of specific assets or groups of assets.	Accepted	7
Recommendation 31 (page 91) The Authority continues to recommend the WACC/CAPM approach using the Officer CAPM for determining the cost of equity capital, in nominal post-tax terms (Officer's WACC 3). The Authority also proposes to continue using the Conine beta levering formula.	Accepted	8.1
Recommendation 32 (page 93) The Authority recommends that the risk-free rate be based on the 5 year Commonwealth bond averaged over 20 trading days. An indicative estimate using the 20 trading days ending 23 February 2010 is 5.19%.	Accepted	8.2
Recommendation 33 (page 95) The Authority recommends that the WACC for GAWB be based on an MRP of 6%.	Accepted	8.2
Recommendation 34 (page 96) The Authority recommends a capital structure of 50% debt and 50% equity, with an associated BBB credit rating.	Accepted	8.2
Recommendation 35 (page 98) The Authority recommends a debt beta of 0.11.	Accepted	8.2
Recommendation 36 (page 99) The Authority recommends an asset beta of 0.4 corresponding to an equity beta of 0.65.	Accepted	8.2
Recommendation 37 (page 102) The Authority recommends that the cost of debt be based on the BBB margin above the risk free rate for five-year corporate bonds. As at 23 February 2010, this translates into a cost of debt of 8.79% based on a debt margin of 347 basis points plus a margin for transactions costs of 12.5 basis points.	Accepted	8.2
Recommendation 38 (page 103) The Authority recommends a gamma 0.5 for GAWB.	Accepted	8.2
Recommendation 39 (page 104) For the purpose of the Draft Report inflation has been estimated at 2.5%.	Accepted	8.2
Recommendation 40 (page 108) The Authority recommends that: (a) GAWB's general administrative costs be allocated to customers on the basis of the relative administrative effort required to provide storage, raw water and treated water services; and (b) GAWB undertake an activity based analysis of overhead costs and develop an approach based on key drivers, in consultation with its customers.	Part (a) accepted Part (b) not accepted	9.1

Recommendation 41 (page 109) The Authority recommends that: (a) GAWB review the basis for escalating the costs of operations, maintenance and chemicals costs over the 2010-2015 regulatory period, with CPI being used until a more appropriate escalation basis is determined; and (b) Operating costs be escalated using CPI during the period 2015-2030.	Part (a) not accepted Part (b) accepted	9.2
Recommendation 42 (page 126) The Authority recommends that efficient operational expenditure as identified in Table 8.13 be included for indicative pricing purposes.	Partially accepted	9.3 to 9.12
Recommendation 43 (page 130) The Authority considers that self insurance is not an appropriate mechanism for GAWB to mitigate the identified risks.	Not accepted	9.13
Recommendation 44 (page 133) The Authority recommends that changes in expected costs that are beyond GAWB's control be passed through to customers. Costs associated with changes in taxation and changes in government charges may be passed through as they are incurred and without reference to materiality, subject to the translation into prices of the increases being subject to approval by the Authority. Costs arising from changes in compliance requirements or changes in law should be passed through subject to materiality and approval by the Authority. A material change is considered to be one which affects the annual revenue requirement by more than 1%.	Accepted	10.1
Recommendation 45 (page 134) The Authority considers that a price review should be triggered if there is, or expected to be, a sustained variation in aggregate revenues of at least 15%.	Accepted	10.2
Recommendation 46 (page 135) The Authority recommends that a CPI measure based on the Brisbane All Groups classification should be used for the purpose of annual price adjustments between price reviews.	Accepted	10.3
Recommendation 47 (page 136) The Authority recommends that, where prices are smoothed over a planning period longer than the regulatory period, prices in the nest regulatory period incorporate an adjustment to account for the under-recovery. The Authority proposes to include an amount of $13.9 million for price modelling purposes pending further discussion with GAWB.	Concept accepted Authority's calculation not accepted	10.4

Appendix 2

Nera Economic Consulting – Form of regulation for GAWB

NERA
Economic Consulting

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14 May 2010

Mr Jim Grayson
Chief Executive Officer
Gladstone Area Water Board
P O Box 466
Gladstone QLD 4680

Dear Jim

Form of Regulation for GAWB

This letter responds to your request for my comment on the Queensland Competition Authority's (QCA) recommendation in the Form of Regulation section of its Draft Report[1] that price cap regulation be maintained for Gladstone Area Water Board (GAWB). In preparing these comments I have also reviewed GAWB's Commercial Framework and Pricing Principles, as submitted to QCA in September 2009, and its submission in response to QCA's draft recommendation.

QCA's stated reasons for favouring a price cap over a revenue cap form of regulation can be distilled as follows:

- a revenue cap would pass on to existing customers the costs of current spare capacity resulting from the raising of the Awoonga Dam and GAWB, not customers, should bear the costs of that excess capacity;[2]
- a revenue cap might encourage GAWB to invest in additional capacity that is not underwritten by long-term contracted demand and GAWB, not customers, should bear the costs of any resulting surplus capacity;[3] and
- a price cap would result in a more appropriate allocation of the risks and attendant costs between GAWB and its customers.[4]

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1 Queensland Competition Authority, *Draft Report: Gladstone Area Water Board: Investigation of Pricing Practices*, March 2010 (hereafter: 'QCA Draft Report').

2 QCA Draft Report 2010, p.10.

3 Ibid.

In my opinion, these reasons do not provide any meaningful support to the price cap recommendation that QCA makes on the form of regulation. I provide my comments on each element of QCA's reasoning below.

A price cap is not needed to prevent customers from paying too much for GAWB's existing spare capacity. QCA has already considered and satisfactorily dealt with this potential concern elsewhere in its various investigations of GAWB's pricing practices. In previous investigations QCA has determined that the depreciated optimised replacement cost of the current capacity of the Awoonga Dam should be included in GAWB's asset base, notwithstanding the fact that its historic no failure yield exceeded then current annual water demand. Sizing the most recent augmentation to cater for growth in water demand was at that time taken to be efficient from the perspective of both current and prospective customers. The basic reason is that the alternative capacity augmentation would have involved a series of smaller, relatively more expensive initiatives, and higher prices. Customers cannot therefore be said to be paying for an inefficient or uneconomic investment. More importantly, the extent of spare capacity that customers might or might not be asked to pay for is fundamentally governed by the decision on whether and at what value assets should be included in GAWB's asset base, and not by whether a price or revenue cap form of regulation is applied.

QCA has also addressed the inter-temporal question of how to allocate the cost of GAWB's temporarily surplus capacity between existing and future customers. It did so by deriving prices over a twenty year planning period, rather than the standard five year regulatory period. This decision cannot now be unsettled by the choice between a price or a revenue cap. Neither form of regulation will materially affect decisions on how to recover the cost of the current surplus capacity over time. In other words, moving to a revenue cap would not result in existing customers paying too much for the existing surplus capacity. In my opinion, QCA cannot reasonably justify the retention of a price cap by reference to these considerations.

Similarly, a price cap is unlikely to be effective in discouraging GWAB from investing in additional capacity that is not underwritten by long-term contracted demand; indeed, a revenue cap is clearly superior on this consideration. As I understand it, GAWB has a stated policy of not investing in additional capacity unless this is underwritten by long-term contracted demand. Nevertheless, if GAWB were minded to depart from that intention, the most effective form of regulatory sanction would be for QCA to decline to include that incremental capital expenditure in GAWB's future regulatory asset base. A revenue cap may also assist in discouraging GAWB from building additional capacity, since it would have no means of securing compensation (in the form of incremental sales revenue) for the services provided by that capacity within the same regulatory period.

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[4] QCA Draft Report 2010, p.12.

One disadvantage of revenue caps is that firms operating under them may be less motivated to provide additional services – particularly, if this requires new investment – when customers demand them. If QCA holds the view that GAWB should be discouraged from investing in new capacity because it may turn out to be surplus to requirements, a revenue cap is more likely to assist this objective than a price cap. Nevertheless, it needs to be emphasised that the more important form of discouragement of such conduct is that provided by the scope for QCA not to roll such capital spending into GAWB's asset base.

In contrast to the reasons cited by QCA, my understanding is that GAWB's principal motivation for proposing a revenue cap is to address uncertainties arising from the imprecise timing and scale of demand from new large customers who will be in a position to take substantial quantities of additional water over the next five to twenty years. Given its existing surplus storage capacity, the principal implication of such developments is that GAWB's revenues would increase, with only modest cost consequences beyond the variable operating cost of supplying additional water volumes and developing incremental delivery infrastructure. The number, scale and timing of such projects will ultimately be determined by macroeconomic variables, and so GAWB will have little or no control over when it must supply additional volumes. This is critical because, under a price cap, if volumes differ to those on which the cap is based, the revenue consequences (of either overly-optimistic or overly-pessimistic demand forecasts) will be borne by GAWB. Indeed, QCA itself has acknowledged that:[5]

> '[A] price cap places particular emphasis on getting 'volume' estimates right, a task that is particularly difficult for GAWB, given the lumpiness of demand increments in both volumes and timing.'

Because GAWB does not know when it will need to provide for such new large customers it has no meaningful ability to mitigate the substantial revenue risks that are intrinsic to a price cap in such circumstances. The advantage of revenue caps in precisely these circumstances was discussed in the report (of which I was a co-author) to the Ministerial Council on Energy by the Expert Panel on Energy Access Pricing, where it stated: [6]

> 'Revenue caps… can be usefully applied when there is considerable uncertainty about future demand for services.'

The decision by QCA to alter GAWB's best estimate of contracted demand for the next regulatory period illustrates the potential adverse consequences of such risks. The revised estimate recommended by QCA includes forecast new demand that is not contracted. It exceeds

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5 QCA Draft Report 2010, p.12.

6 Expert Panel on Energy Access Pricing, Report to the Ministerial Council on Energy, April 2006

the estimate proposed by GAWB, but the basis for that revision has not been disclosed. The result is that GAWB is encumbered with additional downside revenue risk that it has no meaningful ability to manage.[7] Moving to a revenue cap would mitigate those risks to GAWB, without compromising the long-term interests of customers.

The third main reason cited by QCA in favour of price caps (that they result in a more appropriate allocation of the risks and attendant costs between a service provider and its customers) only has meaningful application when the relationship between changes in output and changes in costs is strong.[8] In such circumstances, price caps assist in ensuring a service provider takes appropriate steps to manage short-term fluctuations in demand, such as may arise from drought or changes in the consumption patterns of existing customers.

I agree that circumstances may well arise where it is appropriate to use a price cap to provide a water supplier with stronger incentives manage these risks. However, the circumstances that apply to GAWB are quite different since, as I understand it, GAWB has only limited risk exposure to variations in demand from existing customers, because its tariffs have been structured by reference to long-run marginal cost principles.[9]

A price cap appears not to be needed to ensure that GAWB's customers are appropriately insulated from short-term volume fluctuations. Those risks are already properly and adequately managed by means of the tariff structure and the contractual arrangements that GAWB has in place with its existing customers (and has stated that it intends to put in place with future customers). From GAWB's perspective (as distinct from its customers) if variation in demand from existing customers was the principal risk it faced, a price cap might well be its preferred regulatory mechanism. The reason that GAWB proposes to move to a revenue cap is to address the much more substantial risks (in relation to new large customer demand) that it is not well placed to manage.

Recognising that there is a trade-off between the relatively modest risks associated with variations in demand from existing customers (which favour a price cap) and the substantial financial risk as to whether or not new customer demand will materialise (which favours a revenue cap), one option that perhaps should be explored is to implement a hybrid form of regulation that incorporated aspects of both a price and revenue cap. Such an arrangement could

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7 In effect, GAWB is being asked to accept lower prices on the basis of an altered demand forecast to which it is not privy, and to accept the entire risk that such demand may not materialise.

8 See: Expert Panel on Energy Access Pricing, Report to the Ministerial Council on Energy, April 2006, page 114.

9 The majority of its revenue is recovered by means of fixed access charges, with the volume-dependent component of tariffs primarily reflecting the variable cost of additional water supply. This reflects the fact that most of GAWB's costs are fixed for the foreseeable future. In consequence, it there is little risk to GAWB arising from variations in demand from existing customers over the next regulatory period.

operate by applying a revenue cap to the fixed access component of GAWB's tariffs, and a price cap to the volumetric element. A form of regulation designed in this way would have the benefit of removing the substantial proportion of short term demand forecasting risk, while still leaving GAWB exposed to the revenue risk of not properly responding to changes in the volumetric element of changes in demand for both new and existing customers.[10]

To conclude, in my opinion the analysis and reasoning set out in QCA's Draft Report do not support its conclusion that a price cap form of control should be retained for GAWB in the forthcoming regulatory period. QCA appears to give disproportionate emphasis to the perceived need to provide incentives for GAWB to respond to short term fluctuations in demand, when that need is largely already addressed by means of its existing tariff structure. By contrast, QCA's analysis appears not to give sufficient weight to the considerable risks arising from the demand uncertainty that GAWB faces or that GAWB has no meaningful ability to mitigate those risks. QCA also appears not to recognise that it has effectively already been decided that medium term demand risks should be borne by customers, who enjoy a long term cost advantages in return. Finally, to the extent that QCA is concerned that GAWB may not respond to variations in existing or new customer demand under a revenue cap, the appropriate response would be to develop a hybrid that provided for variability in that small proportion of its tariff structure (and so revenues) that are volume-related.

Yours sincerely

Greg Houston

Greg Houston
Director

[10] Any hybrid arrangement ideally should recognise the additional costs of un-forecast additional demand, where this exceeds significantly the incremental volumetric revenue recovered.

Appendix 3

Price differentiation for contract length

Appendix 3 - Price Differentiation for Contract Length

Background

As outlined in GAWB's *Commercial Framework* submission to the Authority[1], GAWB has proposed to differentiate prices on the basis of length of contract. A price differentiation surcharge was proposed to apply to all reservation and storage and delivery contracts that are defined as short-term contracts from 1 July 2010. A short-term contract is one which has an original term from less than two years to 20 years.

GAWB has proposed to apply the following surcharges to prices from 1 July 2010:

Table 1 – Proposed Short Duration Contract Price Surcharge

	Contract Length				
	Less than 2 years (incl. uncontracted)	2 to <5 Years	5 to <10 Years	10 to <15 Years	15 to <20 Years
Price Surcharge	25%	20%	10%	5%	3%

In its Commercial Framework submission, GAWB proposed specific price surcharges for short-duration contracts. That submission set out the basis for quantifying the surcharge as follows:[2]

> GAWB has set the proposed schedule of surcharges to support its ability to efficiently conduct its long-run operations by reference to several factors, including:
>
> - GAWB's desire to provide incentives to customers to sign long-term contracts (providing customers with reasonable incentives to enter long-term contracts benefits all customers by ensuring that GAWB is best able to plan to meet customers' needs at least cost)
> - the security of GAWB's long-run operations, recognising the high concentration of GAWB's demand in a relatively small number of non-municipal customers with the attendant risk that they may cease operations (and terminate their demand) at short notice in response to the prevailing condition of domestic and international markets
> - matching the duration of price averaging with the contract term (using the 2005 – 2010 regulatory control period model) and
> - quantum of price-duration relationship observed in other markets.

[1] GAWB Commercial Framework submission, p48-37
[2] GAWB Commercial Framework submission, p35

Several customers requested further details of the methodology for calculating the surcharges. The rest of this appendix sets out that detail.

Matching the duration of price averaging with the contract term

One method for calculating the price for short-duration contracts is based on the matching the duration of price averaging with the contract duration. Under the QCA-recommended pricing practices, prices are calculated with reference to a 20-year planning horizon. Using a 20-year planning horizon allows current customers to benefit from expected future demand growth. Because demand is expected to grow over time, the longer period considered the greater the demand available over which to spread the largely fixed costs of GAWB's business. That is, the longer the planning period, the lower the price that is calculated (provided that demand growth does not trigger expensive source augmentation).

Customers that are unwilling to sign long-term contracts should not benefit from the price reduction caused by demand growth expected to occur after their short-duration contract has expired.

2005 Pricing Model

At the time the Commercial Framework submission was drafted, the 2010 Pricing Model was still under development. Therefore GAWB used the 2005 Pricing Model to assess the effect of the duration of price averaging.

Figure 1 shows the effect of shorter demand averaging periods on price for the Awoonga Zone using GAWB's 2005 pricing model.[3]

[3] This analysis uses the standard building blocks from the 2005 pricing model but excludes the revenue carryover from previous regulatory periods. It is not reasonable for short-duration customers to pay the building block price for the duration of their contract and contribute to recovery of building block revenue from previous regulatory control periods. While the revenue carryover for Awoonga zone comprised only 3% of the 20-year price, the effect of including the revenue carryover would be to significantly increase the price for short duration contracts.

Figure 1 - Awoonga Zone Price by Price Averaging Period

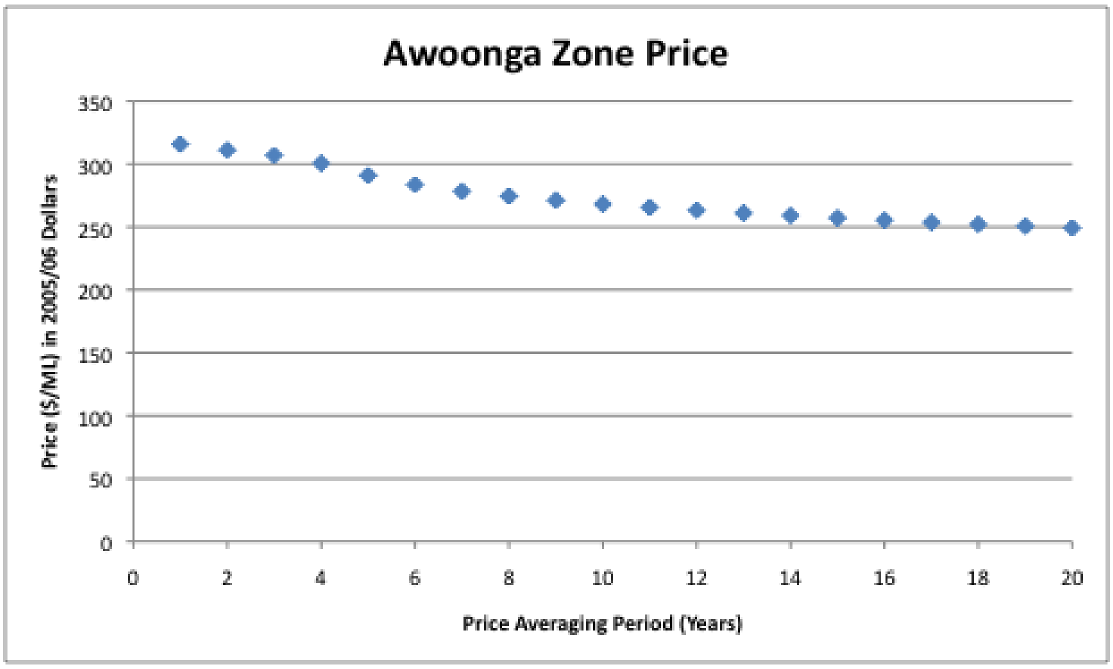
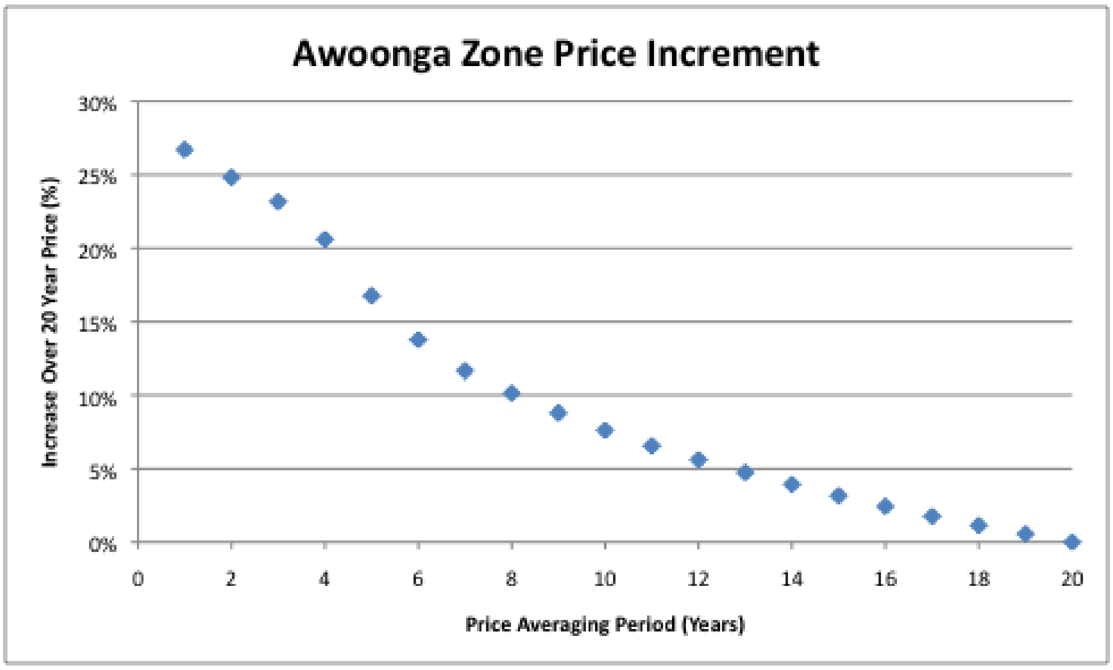


Figure 2 shows the percentage increase in zone price that would occur if a shorter price-averaging period were adopted. Other shared network raw water zones have a similar profile. Whilst it would be possible to calculate a specific price averaging period chart at each point in the network, in the interests of simplicity GAWB proposes to use the Awoonga zone price-averaging characteristic to establish general surcharges for short-duration contracts to apply to all connections.

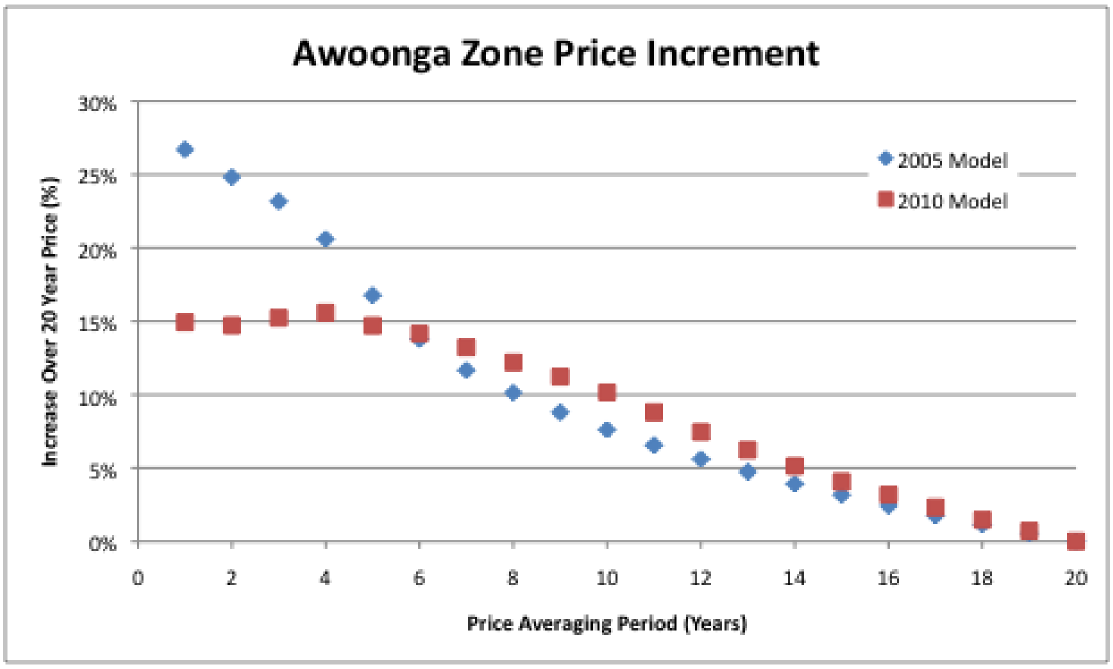
Figure 2 - Awoonga Zone Price Increase by Price Averaging Period



2010 Pricing Model

The 2010 Pricing Model has now been developed. GAWB can sense check the previous analysis using the expenditure and demand forecast included in GAWB's Expenditure Proposals submission (see Figure 3).

Figure 3 – Updated Awoonga Zone Price Increase by Price Averaging Period



The curve developed from the 2010 Model is "flatter" than that from the 2005 Model because:

- the rate of growth of demand is lower in the 2010 Model; and
- there is additional capital expenditure in the first few years of the 2010 Model.

We note that the Draft Report recommendations made by the Authority to reduce GAWB's expenditure proposals and increase the forecast demand in the first five years' of the period, will result in price surcharges more similar to the 2005 Model surcharges.

Summary

GAWB's proposed levels of surcharge were influenced by the above price-averaging analysis but also had regard to the other factors discussed in the "Background" section above. In particular GAWB requires surcharge levels for very short duration customers to be sufficient to incentivise customers to sign long duration contracts, which enhances efficiency of the system.

Using the price-averaging period as a starting point for setting the surcharges is a conservative mechanism for pricing short-duration contracts. GAWB has not inflated prices with additional costs of short-duration contracts; it merely requires that prices for customers on short-duration contracts recover the building block cost of supply over the term of their contracts.

GAWB submits that the proposed surcharges are appropriate because:

- the above analysis is conservative (it shows only the effect of the price averaging period, it does not add additional costs associated with short-duration contracts)
- the proposed surcharges will provide required incentives for long-duration contracting
- notwithstanding that the inputs to the 2010 Model have not yet been finalised, the updated analysis shows the figures calculated using the 2005 Model are reasonable and
- surcharges calculated by sole reference to price averaging are sensitive to changes in expenditure and demand at each review but customers deserve greater pricing stability (so surcharges should not be set based on the price averaging characteristic at a single review).

Finally, we note again that it would be long-duration contract customers (not GAWB) that receive the financial benefit from short-duration contract surcharges. That is because surcharge revenue will be returned to customers in subsequent years in the form of lower prices.

Appendix 4

Synergies Economic Consulting – Response to the QCA's draft decision on WACC

Gladstone Area Water Board

Response to the QCA's Draft Decision on Weighted Average Cost of Capital

May 2010

Synergies Economic Consulting Pty Ltd
www.synergies.com.au

Disclaimer

Synergies Economic Consulting (Synergies) has prepared this advice exclusively for the use of the party or parties specified in the report (the client) and for the purposes specified in the report. The report is supplied in good faith and reflects the knowledge, expertise and experience of the consultants involved. Synergies accepts no responsibility whatsoever for any loss suffered by any person taking action or refraining from taking action as a result of reliance on the report, other than the client.

In conducting the analysis in the report Synergies has used information available at the date of publication, noting that the intention of this work is to provide material relevant to the development of policy rather than definitive guidance as to the appropriate level of pricing to be specified for particular circumstance.

Mark Christensen

Mark Christensen, a Member and Deputy Chairperson of the Queensland Competition Authority, is also an Associate of Synergies. We can confirm that Mark has had no involvement in the development of this report.

Purpose

The Queensland Competition Authority (the QCA) released its Draft Decision for Gladstone Area Water Board (GAWB) in April 2010. Synergies Economic Consulting prepared a report to accompany GAWB's original submission, and we have been asked to provide comments on the Draft Decision in relation to the Weighted Average Cost of Capital (WACC).

Overview of the Draft Decision

In general, the QCA's discussion of GAWB's submission on WACC in the Draft Decision is relatively brief. In a number of areas reference is made to the QCA's Draft Decision for QR Network, which was published in December 2009. This reference is not unexpected given the consistency that the QCA would seek to apply in relation to parameters that are not specific to the business or industry.

Particularly given the influence that decision has had on the Draft Decision for GAWB, it is expected that the QCA's Final Decision for QR Network will heavily influence its final outcomes in relation to GAWB. It is not considered appropriate to respond to QR Network's Draft Decision in detail here. Given most of our concerns in relation to GAWB's Draft Decision have arisen from the QR Network decision, this response is therefore relatively brief. However we will refer to some of the key arguments that have been made in that forum, particularly in relation to matters such as the term of the risk-free rate. We have also only been asked to respond to matters that are or could be material to the outcome and we have therefore not sought to respond to all of the comments made by the QCA (and its consultant) in this report.

In summary, the key differences between the QCA's decision and GAWB's submission are as follows:

- the QCA rejected GAWB's use of a ten year term to maturity for the purpose of estimating the risk-free rate and debt margin, and proposes to use five years. This is a significant change from QCA precedent that arose from the QR Network decision and is a key driver of the difference between GAWB's submission and the outcome in the Draft Decision;
- the QCA rejected GAWB's proposed 6.5% for the market risk premium (MRP) in favour of 6%;
- while GAWB did not propose a review of its asset beta, it proposed a debt beta of zero, resulting in a different equity beta (albeit not materially different from its previous equity beta). The QCA rejected the use of a zero debt beta;

- the QCA rejected GAWB's proposed gamma of zero, in favour of 0.5.

GAWB's proposed parameters have been updated for the risk-free rate and debt margin prevailing over the same averaging period used by the QCA in its Draft Decision (being the twenty trading days ending 23rd of February 2010), maintaining a ten year term to maturity for both. The outcome is shown in the following table.

Table 1 WACC Comparisons

Parameter	GAWB's original submission (averaging period 20 days to 30 June 2009)	QCA Draft Decision (averaging period 20 days to 23rd February 2010)	GAWB's submission, updated (averaging period 20 days to 23rd February 2010)
Risk-free rate	5.61%	5.19%	5.53%
Debt to total value	50%	50%	50%
Equity to total value	50%	50%	50%
Debt margin	4.34%[a]	3.6%	4.1%[b]
Debt raising costs	0.125%	0.125%	0.125%
Market risk premium	6.5%	6%	6.5%
Gamma	0	0.5	0
Tax rate	30%	30%	30%
Asset beta	0.4	0.4	0.4
Debt beta	0	0.11	0
Equity beta	0.68	0.65	0.68
Cost of equity	10.03%	9.07%	9.95%
Cost of debt	10.07%	8.79%	9.75%
Post-tax nominal WACC	10.05%	8.93%	9.85%

a Average of: (1) Bloomberg 20 day average for 8 year BBB bonds plus the margin between and A-rated 8 and 10 year bond, and (2) 20 day average of CBA Spectrum's fair value BBB yield curve. Before debt-raising costs.

b Average of: (1) Bloomberg 20 day average for 7 year BBB bonds, extrapolated to a ten year rate based on the difference between the yields on 5 and 7 year BBB bonds, and (2) 20 day average of CBA Spectrum's fair value BBB yield curve. Before debt-raising costs.

Since GAWB's submission was lodged, Bloomberg has ceased publishing all of the key inputs that were used to estimate the ten year BBB rate, being the yields on eight year BBB bonds, and eight and ten year A bonds. A substitute method has therefore been used. This is discussed further below.

It is understood that the risk-free rate and debt margin will be reset prior to the Final Decision.

Key issues

Term of the risk-free rate

The most significant concern that we have with the Draft Decision is the QCA's proposal to base the term of the risk-free rate on the length of the regulatory period. Fundamental to this is the assumption that this is required in order to obtain a 'NPV equals zero' outcome, which was originally based on the work of Lally (2002)[1].

A number of problems have been identified with this in responses to the QR Network decision. In particular, it exposes the business to significant refinancing risk. The simplified framework on which Lally's conclusions are based only acknowledged interest rate risk - it ignored refinancing risk. If the cost of debt and equity are set with reference to a five year term to maturity, this implies that the business is funding itself with five year debt that is refinanced over the same period that the risk-free rate and debt margin are reset.

In its Draft Decision in relation to QR Network, the QCA acknowledged that "using borrowings which have an average term in excess of the regulatory period"[2] will give rise to a mismatch and that:[3]

> Using borrowings which have a term that closely matches the regulatory term will avoid this mismatch, and potential risk, provided that the costs of refinancing debt are adequately met.

First, the QCA has not proposed to provide GAWB with any allowance for the costs of refinancing debt. Second, and more importantly, we do not consider it appropriate that the regulatory regime effectively forces the regulated business to employ a debt management strategy that is inconsistent with prudent and efficient commercial practice. As the developer and owner of infrastructure that has very long economic lives (with some of the dam assets having an economic life of 100 or more years)[4], the most prudent financing strategy for GAWB is to fund its infrastructure with long term

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1 Lally, M. (2002). Determining the Risk Free Rate for Regulated Companies, Paper Prepared for the Australian Competition and Consumer Commission, August.

2 Queensland Competition Authority (2009). Draft Decision: QR Network 2009 Draft Access Undertaking, December, p.12.

3 Queensland Competition Authority (2009). p.12.

4 Queensland Competition Authority (2005). Final Report. Gladstone Area Water Board: Investigation of Pricing Practices, March, p.139.

debt (with appropriate portfolio diversification to manage interest rate and refinancing risks). As highlighted by QR Network:

> The regulatory framework should not be dictating how businesses fund themselves. Overall, the regulatory regime should complement the prudent commercial risk management practices that would be employed by the efficient benchmark firm, rather than drive this behaviour.[5]

These concerns have also been supported by the Queensland Treasury Corporation (QTC):

> In following this suggestion a regulated business will significantly increase its refinancing risk by concentrating the maturity of its borrowings around the end of the regulatory period and holding these borrowings to maturity. This strategy is totally inconsistent with sound financial risk management principles. The disruptions and lack of liquidity experienced in the debt markets during the global financial crises support our claim. Any business with a large borrowing requirement should not have all its debts falling due on or around the same date, yet this is what the Authority recommends...These risks can be better managed if a 10 year term is used.

QTC also highlights that the QCA's proposal will not result in a 'NPV equals zero' outcome given it also fails to take into account of the risks associated with undertaking new borrowings during the course of the regulatory period, which will almost certainly be undertaken at an interest rate that is different from the regulated cost of debt.[6]

In any case, as also highlighted by QR Network, a business has a responsibility to its shareholders to create value and the 'NPV equals zero' principle contradicts this goal. As highlighted by Professor Robert G. Bowman in a submission to the New Zealand Commerce Commission, Lally's model is more consistent with strict rate of return regulation, where businesses exactly earn the WACC set by the regulator. He states:

> No regulatory environment corresponds to that described by Associate Professor Lally. Once we enter a world where investment in long-term assets is not a riskless activity it is critical to consider the opportunity cost of the investment and the fact that investors are financing a long-term investment for which the majority of the value is in future regulatory periods. In such an environment it is best to adopt the

[5] QR Network (2010). QR Network's Access Undertaking (2009), Response to QCA Draft Decision. Volume 2 – Pricing Related Matters, February, p.13.

[6] Indeed, if the yield curve is upward sloping the implied forward interest rates are higher than current spot rates.

> standard commercial practice of matching the term of risk free rate with the life of the asset – after all this is the most important economic decision being driven by the choice of the risk free rate.[7]

A key responsibility of a regulator is to prevent the exploitation of market power to enable the business to extract monopoly rents. It may be considered that ensuring that 'NPV equals zero' is consistent with preventing the extraction of monopoly rents. Creating value for shareholders by undertaking investments that have a positive net present value is very different from earning monopoly rents, recognising that as these decisions generally involve risk, over time some of these investments will prove NPV positive, while others will prove NPV negative. In any case, the QCA's proposed model will only result in a 'NPV equals zero' outcome if it recognises all of the risks and (efficient) costs faced by the business over the course of the regulatory period and provides compensation for those costs. That is not the case here.

Finally, the QCA also acknowledges the potential inconsistency between the use of a five year term to maturity for the risk-free rate, and relying on estimates of the MRP that have been based on a ten year rate. It does not consider that any adjustment is necessary given there is already some 'headroom' in the MRP. Particularly given that in our view, this estimate is taken from the lower bound of a reasonable range for the long-term MRP, we do not consider that it is appropriate to assume that such 'headroom' exists. More importantly, it is not considered appropriate to entrench a known inconsistency that could increase the risk of error, especially when the implications for the MRP of adopting a five year rate should be able to be readily quantified.

In conclusion, we therefore consider that a ten year term to maturity for the risk-free rate and debt margin should be applied to GAWB. If it continues to apply a five year rate, the MRP should be adjusted accordingly.

Debt margin

The QCA has proposed the use of Bloomberg to estimate a five year debt margin. While liquidity problems are still evident even in this part of the yield curve given the limited issuance activity for BBB corporate debt, they are particularly significant for longer terms. As the QCA has determined that a five year term to maturity will be applied, the problem of estimating a ten year rate based on very limited market data has not been addressed in the Draft Decision.

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7 Bowman, R. (2005). Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital. Report Prepared for Powerco, December, p.14.

Bloomberg versus CBA Spectrum

GAWB had originally proposed a debt margin based on an average of CBA Spectrum and Bloomberg estimates, with a significant divergence between the two observed at the time of its submission. The QCA's consultant, PricewaterhouseCoopers (PWC), reviewed the use of the two methods, noting that the estimates produced by each had converged since GAWB's submission was lodged. PWC also concluded that Bloomberg was likely to be the better estimate, because:

> …it is based on more information, is a more transparent framework than CBA Spectrum, and it often follows the data more closely…[8]

We believe it is problematic to conclude which method currently provides the 'better' estimate (in other words, which curve provides the 'best fit' based on the limited data available). The Australian Energy Regulator (AER), for example, has determined that in the absence of having sufficient information regarding the methods applied by each service, it will test each method against actual observed yields for each decision. This could result (and has resulted) in the use of Bloomberg, CBA Spectrum or both. For example, in its most recent decision in relation to the gas access arrangements to apply for networks owned by ACTEW AGL and Country Energy (dated March 2010)[9], the AER estimated the debt margin using CBA Spectrum data as its fair value estimates were more closely aligned to observed yields for its sample of bonds.

We also note that while the fair value estimates produced by Bloomberg and CBA Spectrum did converge over the course of 2009, there has been some divergence more recently, at least based on the ten year estimates prevailing over the course of the QCA's averaging period in February 2010. This is discussed further below.

In conclusion, until liquidity materially improves in the market for long-term BBB corporate debt and/or the methods used by both data providers become known, we consider that the most prudent approach is to take an average of the two.

Estimating a Bloomberg BBB rate

The next question is how to estimate a Bloomberg ten year BBB rate, noting that it no longer publishes yields on the three key inputs that were previously used to derive this estimate, being yields on eight year BBB, eight year A and ten year A rated bonds. There are two methods that could be applied. The first is to apply a method that is

8 PricewaterhouseCoopers (2009). Gladstone Area Water Board, Update of Cost of Capital Parameters. Report to Queensland Competition Authority, December.

9 For example, refer: Australian Energy Regulator (2010). Final Decision – Public. Access Arrangement Proposal – Wagga Wagga Natural Gas Distribution Network 1 July 2010 to 30 June 2015, March.

consistent with the approach that has been applied historically, which is to extrapolate based on the next lowest credit rating category for which Bloomberg continues to publish a ten year rate.

The longest available Bloomberg BBB rate is currently seven years. The only credit rating category for which ten year yields are published is AAA. The seven year BBB rate could therefore be extrapolated based on the difference between the ten year and seven year AAA yields.

There are some difficulties in assuming that the term structure of the AAA yield curve can be used to estimate the term structure of the BBB yield curve. This is for two reasons. First, the majority of the sample consists of banks, which previously reflected the Commonwealth Government's guarantee. Now that the guarantee has been lifted, the size and the composition of the sample may change.

Second, the risk facing a lender in advancing funds to a AAA borrower for a ten year term will be seen as considerably less than a loan to a BBB for the same term. If anything, referencing AAA data is more likely to understate the term structure of a BBB rather than overstate it. In saying this, the A curve, that has been utilised for some time in extrapolating the BBB curve, has been extremely flat and we expect that this was driven by the lack of bond issues at this end of the curve. The main advantage of referencing Bloomberg's longer term AAA yields is that they are more likely to be based on actual bond issues and hence reflect actual market data. This approach has been used by the AER.

An alternative method is simple linear interpolation. This assumes that the slope of the yield curve is constant from five years to ten years. For example, based on the BBB data published by Bloomberg, it's indicative seven year rate could be extrapolated to a ten year rate based on the difference between the five and seven year rate.

Each of these methods has its advantages and disadvantages. One approach could be to take an average of the two. However, given the uncertainty regarding the observations that might underpin the AAA sample going forward (particularly in estimating the seven and ten year rates), it may be more appropriate to use the simple linear extrapolation method.

Applying this method over the same averaging period used by the QCA in the Draft Decision (being the twenty trading days ending on the 23rd of February 2010), the margin would be 454 basis points. CBA Spectrum's fair value estimate for ten year BBB is 365 basis points. This is a material difference.

It is not clear why there is such a difference. When our original estimates were calculated in June 2009, the CBA Spectrum margin (511 basis points) was materially above the Bloomberg-based margin (311 basis points). CBA Spectrum is now below Bloomberg. This cannot be explained by the change in the method used to estimate the Bloomberg ten year rate. If we had used our proposed alternative to estimate the Bloomberg ten year rate back in June 2009 (that is, extrapolating the seven year rate based on the difference between the five and seven year rates), the margin would have been 338 basis points.

As outlined above, we consider that the most prudent approach is to continue to apply an average of Bloomberg and CBA Spectrum. Based on the updated data, the average of these two estimates is 410 basis points.

Beta

As outlined in our previous report, we were not asked to undertake an updated beta analysis. We did undertake a high level comparison against other water decisions in Australia. PWC highlighted that GAWB's equity beta could not be directly compared against these decisions because of differences in gearing. In our review, we addressed this by estimating the implied asset beta in these decisions (which also allowed us to consider the impact of different debt beta assumptions).

Based on the high level analysis that we undertook, the key concern that was raised in relation to beta was the QCA's continued assumption of a zero debt beta. This *can* have a material impact on the outcome, particularly when:

- comparing against other regulatory decisions, where different assumptions are applied (noting that most other Australian regulators now apply a debt beta of zero); and
- as highlighted in our report, an asset beta is being set with direct reference to a delevered comparator sample.

The issue that the QCA does not address at all in its Draft Decision is how to reliably estimate the debt beta. It states that it:

> ...does not support GAWB's position that there is 'no accepted methodology of deriving a reliable estimate for the debt beta'...[10]

However, it does not state the methodology that it believes is "accepted." It merely applies the same value that was previously adopted. In our previous report, we acknowledged that a positive value for the debt beta may exist. However, it cannot be reliably measured. Given the asymmetric consequences of error, we consider that the

[10] Queensland Competition Authority (2010). p.97.

more prudent approach would be to assume a value of zero, which is also consistent with the weight of recent regulatory precedent in Australia.

Gamma

The QCA's response to our previous analysis of gamma is reasonably limited (and we note consistent with their position in the QR Network decision). The two key arguments that it makes are:

1. it is not appropriate to consider foreign investors within a domestic CAPM; and

2. gamma is defined by the weighted average utilisation rates of all investors, not just the marginal investor.

These arguments have been challenged in numerous regulatory deliberations. In our previous report we highlighted the reasons why we considered that it was appropriate to recognise the practical presence of foreign investors in the Australian market, noting that the QCA's strict interpretation of a fully segmented market would require all parameters to be re-estimated by somehow excluding their impact on all prices (which is not considered possible). We note that in its WACC guidelines that were developed for electricity distribution and transmission, the AER determined that it would apply a domestic CAPM that recognised the presence of foreign investors, "but only to the extent they invest in the domestic capital market."[11] The AER states:[12]

> While this approach may represent a departure from the 'full segmentation' assumption often associated with the Officer WACC framework, it appears appropriate and reasonable given past regulatory practice and the reality of cross-border capital flows.

In our previous report, we cited a number of studies that had sought to estimate the value of franking credits (being one of the two key inputs into the estimation of gamma). These studies have sought to estimate the value of franking credits using share price data, with these prices reflecting actual trades. The identity of the investors transacting in those shares has no impact on the results themselves, other than forming a potential hypothesis that can be used to interpret these results. One study we cited (by Feuerherdt, Gray and Hall) had sought to estimate the value of franking credits

[11] Australian Energy Regulator (2009). Electricity Transmission and Distribution Network Service Providers. Statement of the Revised WACC Parameters (Transmission). Statement of Regulatory Intent on the Revised WACC Parameters (Distribution), May, p.100.

[12] ibid.

based on the prices of hybrid securities, which tend to be marketed exclusively to domestic investors.[13] This study also found that franking credits have no value.

We believe that the indisputable significant presence of foreign investors in the Australian equity markets is consistent with a gamma of zero. Recognition of the importance of the marginal investor in the price setting process further supports that value. We also believe that the weight of empirical evidence supports a gamma value of zero. At minimum, this value should at least be recognised as being within the bounds of a reasonable range.

13 Feuerherdt, C., Gray, S. and Hall, J. (2008). The Value of Imputation Tax Credits on Australian Hybrid Securities. Working Paper (forthcoming publication in the International Review of Finance).

Appendix 5

Marchment Hill Consulting – Response 2010 pricing investigation

MARCHMENT HILL consulting

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FINAL

Friday 23rd April 2010

Anthony Ottaway
Pricing Officer
Gladstone Area Water Board
PO Box 466, Gladstone
QLD 4680

Via email: aottaway@gawb.qld.gov.au

Dear Anthony,

MHC Response – GAWB 2010 Pricing Investigation

We thank you for providing Marchment Hill Consulting (MHC) with an opportunity to respond to the QCA consultant's report on the appropriateness of GAWB's proposed operating costs.

The focus of the response from MHC has been on Pages 99 – 102 of the Davwil report titled *"QCA – Stage 2 (+ Stage 1) – Asset Valuation & Opex Efficiency – GAWB 2010 Pricing Investigation – (Doc.Davwil 310310.1)".* This section of the Davwil report makes comment regarding the GAWB benchmarking analysis conducted by MHC. We have provided our responses in the following areas:

- Comparing Practice benchmarking with process benchmarking, and the applicability of the International Water Association / Water Services Association of Australia (IWA / WSAA) 2008 Asset Management Benchmarking Project to the discussion;
- The datasets used as the basis of the GAWB benchmarking analysis;
- Large versus small water utilities and their respective potential to yield savings opportunities associated with scale;
- The 'normalisation' of benchmarking data to account for the differences between water utilities; and
- The chart of Opex/Water Sales Ratio contained on Page 102.

If you have any questions with respect to our response, please do not hesitate to contact me directly.

Yours sincerely,

Ben Woodman
Managing Consultant
Marchment Hill Consulting

MHC Response – GAWB 2010 Pricing Investigation

Page 100 – Section 5.7.1.1 Benchmarking

Davwil:

"GAWB took part in the International Water Association / Water Services Association of Australia (IWA / WSAA) 2008 Asset Management Benchmarking Project. This benchmarking provides a qualitative assessment of detailed asset management processes compared with other water utilities in the study (42 utilities in Australia and overseas participated in the study). The process benchmarks and recommendations can be used to assist each utility in decision making regarding business improvement in asset and risk management. Process benchmarking is a measure of potential capability, rather than efficiency or effectiveness. A key area where significant improvement can be made is in asset (including maintenance) management strategic development, associated systems and their application particularly in relation to risk and efficient solutions and implementation. GAWB in discussion recognised this area of improvement.

It is noted that this area was identified as a key area to improve at the last price setting in 2005."

MHC Response:

- The author asserts that the IWA-WSAA 2008 Asset Benchmarking Project was a process benchmarking study, and that this provides evidence of potential improvement for GAWB.
- MHC co-delivered the IWA-WSAA 2008 Asset Benchmarking Project with GHD and CH2MHill. Despite WSAA's labelling of the study, it is evident from a cursory exploration of GAWB's report that the fundamental basis of comparison is on *practices* and not *processes*. *Practices benchmarking studies* focus on a comparison of work practices across a peer group and facilitate open and collective learning across the peer group. *Process benchmarking studies* are more complex and tend to focus on a comparison of cost and service level metrics for selected processes, and can provide a direct measure of process efficiency and effectiveness.
- The author asserts that GAWB has opportunities for improvement based on asset management strategic development, systems and applications. While MHC will acknowledge that the IWA-WSAA 2008 Asset Benchmarking Project identified these opportunities for *practice improvements*, MHC would like to state that it is very difficult to infer from this study:
    - that GAWB is currently inefficient or ineffective, and
    - that there are potential savings opportunities
- MHC would also like to point out that the implementation of systems and applications may require *increased* OPEX and CAPEX investment in the short to medium term, which could translate to long term efficiency and effectiveness gains.

Page 100 – Section 5.7.1.1 Benchmarking

Davwil:

"As the high level benchmarking assessment undertaken by Marchment Hill Consulting (MHC) is considered appropriate for the type of water authority GAWB is, then the outcomes must be considered as reasonable high level indications based on the data set of 2007/08 used by MHC in the benchmarking study.

However, in view of the large increase in staff (17 FTEs from 39 FTE's to 56 FTE's or 44%) and a similar increase in Opex expenditure since the 2007/08 adjusted data used by MHC, the benchmarking exercise is not representative of the current status of GAWB."

MHC Response:

- The author's assertion that a dataset based on 2007/08 information was used for the benchmarking analysis is incorrect.
- MHC would like to point out that utilities typically have cyclical investment profiles which are representative of their annual sourcing, resourcing and project delivery strategies. To moderate cyclical variation in expenditure, where practical, MHC averaged data over a 3 year period. More specifically:
  - 'Total OPEX' and 'FTE' figures used in this analysis for GAWB were based on 2008-2009 data, while the average of 2005-2006, 2006-2007 and 2007-2008 data was used for the Peer Group.
  - The 'Total CAPEX' figure used in the analysis is an average of the capital expenditure in the years 2006-2007, 2007-2008 and 2008-2009 for GAWB, and 2005-2006, 2006-2007 and 2007-2008 for the Peer Group.
- It is important to note that GAWB felt that 2008-2009 data was more representative of their 'current business' and their 'business going forward' for OPEX and FTE, and hence made the responsible decision to include 2008-2009 datapoints in their analysis.
- MHC would also like to highlight that the 2008–2009 data reflects more FTEs, higher OPEX and higher CAPEX than previous years, which has tended to increase the average benchmarking ratios for GAWB – reflecting a more conservative benchmarking position. Peer Group average data did not include 2008-2009 as this data was not available at the time of the data collection.
- MHC would like to point out that all of the above points were clearly stated in GAWB's submission.
- It should also be noted that Davwill's comparison of raw FTE does not compare like-for-like:
  - As stated in the assumptions of our report, 39 FTEs is the post-normalisation headcount of GAWB at 2008-2009, being a total headcount of 47, subtracting 8 FTEs dedicated to recreation and hatchery activities.
  - 56 is GAWB's total (i.e. inclusive of staff dedicated to recreation and hatchery activities) FTE count as of February 2010.
  - Hence a comparison of 39 to 56 is not like-for-like and results in an incorrect % increase
- Hence we do not agree with the inference by Davwil that the benchmarking presented provides an inappropriate representation of GAWB's future state – indeed the datasets used were selected on the basis of providing the most appropriate comparison.

Page 100 – Section 5.7.1.1 Benchmarking

Davwil:

"Benchmarking does not necessarily indicate that GAWB is as efficient as it could be. GAWB with its relatively high water volume delivered per customer, very low number of customers, relatively low length of pipe work, offers opportunities for greater efficiencies than high level benchmarking would normally indicate".

MHC Response:

- The author's inference that, given GAWB is small it has greater opportunities for higher efficiency, is generally false. Large water utilities are typically in a stronger position to generate improvements in efficiency and effectiveness through their advantages in economies of scale and scope. These advantages in economies of scale and scope are achieved through more assets (i.e. more water and wastewater treatment plants, longer pipe lengths), more complex plants, increased water throughput and a larger numbers of customers.
- MHC would also note that scale, in terms of more assets, generally translates to more OPEX and CAPEX. This increased level of spend provides large water utilities with greater market leverage to attract savings in OPEX and CAPEX through more elaborate sourcing and resourcing arrangements. The larger, more homogenous work programs of larger utilities also generally allow higher utilisation of field resources, driving greater labour efficiency.
- Caution should also be taken with the author's inferences of the impact on efficiency of GAWB's 'relatively low number of customers'. MHC would note that GAWB has a significant proportion of large commercial customers with complex supply arrangements that drive increased levels of effort associated with their management.

Page 100 – Section 5.7.1.1 Benchmarking

Davwil:

"The MHC study attempts to adjust for some of these factors, but limitations of the model, and differences which are not part of the model, such as topography, mean that comparisons should be viewed with caution."

MHC Response:

- MHC would note that detailed benchmarking studies are typically supported by 'normalisation' (an adjustment technique to account for differences comparative datasets) that in a utility context can be based on adjustors such as internal and external labour rates, labour on-costs, the cost of living, topography, soil type, task difficulty and customer density. Given the commercially sensitive nature of the information required to calculate these normalisation adjustors, detailed benchmarking studies are normally conducted as 'closed' studies (i.e. where information is confidential and individual performance is not revealed to the peer group) and can take considerable time to be delivered. As the author correctly states on Page 100: *"... more detailed or focussed benchmarking studies to assess efficiency .... are not appropriate where there is limited timeframes such as this assessment".*
- High level benchmarking studies similar to that conducted for GAWB are normally conducted as 'open' studies (i.e. where information is extracted from the public domain and participants are clearly identified) and are generally easier to deliver than closed studies. For this benchmarking study, the information for calculating the normalisation adjustors has been limited to the use of public domain information such as water sourced, mains length, water sales and RAB. For high level benchmarking based on public data, this is the most robust and appropriate 'normalisation' approach.
- Recognising the limits of high level benchmarking and the need to gain a reasonably insightful view of GAWB's performance, MHC undertook a broad study that looked at a range of metrics (approximately twenty in total) under the categories of:
  - *Efficiency Ratios:* Measures of a bulk water authorities' spend efficiency (measured in percentage terms); defined as the ratio of their cost (i.e. based on operating expenditure, capital expenditure and total expenditure) relative to their size. For this ratio 'size' was based on financial indicators such as RAB, Water Sales and Total operating expenditure.
  - *Productivity Ratios:* Measures of a bulk water authorities' workforce effectiveness (measured in FTE per size terms); defined as the ratio of their numbers of staff (i.e. based on Total FTEs) relative to their size. For this ratio 'size' was based on RAB, and indicative physical characteristics such as water sourced and mains length.
  - *Cost Ratios:* Measures of a bulk water authorities' effectiveness in the allocation of expenditure (measured in cost per size terms); defined as the ratio of their cost (i.e. based on operating expenditure, capital expenditure and total expenditure) relative to their size. For this ratio 'size' was based on physical indicators such as water sourced and mains length.
  - *Revenue Ratios:* Is a measure of a bulk water authorities' asset utilisation (measured in revenue per size terms), and is defined as the ratio of their sales (i.e. based on water sales) relative to their size. For this ratio 'size' was based on physical indicators such as Total FTEs, water sourced and mains length.
- MHC acknowledges that the author correctly points out that benchmarking comparisons should be viewed with caution and care needs to be taken in the interpretation of results.

Page 102 – Section 5.7.1.1 Benchmarking

Davwil:

"MHC study indicated that GAWB was generally more efficient than weighted average based on 2007/08 data adjusted but when adjusted to 2009/10 data GAWB was less efficient than weighted average".

MHC Response:

- The author's inference that future OPEX levels for GAWB do not hold them in a favourable light in comparison to the participant group needs to be treated with a high degree of caution.
- MHC raises the following points in relation to the chart of Opex/Water Sales Ratio contained on Page 102. Any meaningful comparison of GAWB with its peers based on this analysis would require clarification of the following:
  - The process of adjusting the OPEX figure for GAWB to reflect 2009-2010 data.
  - The process of adjusting the water sales figure for GAWB to reflect 2009-2010 data.
  - Whilst the author points out that GAWB figures appear to be '*less efficient than the weighted average*' this conclusion is entirely dependent upon the outlier position of NW Vic. The sensitivity of the conclusion to a single outlier comparator also raises doubts as to the significance of this finding.
  - Given the limited scope of the author's analysis (i.e. based on a single metric of OPEX / Water Sales Ratio), whether similar analysis been conducted on other ratios. *MHC's benchmarking deliberately investigated a broad range of metrics in order to inform a view on GAWB's performance relative to its peers. Given the relatively unsophisticated normalisation techniques that were employed, benchmarking of any single metric carries a far greater risk of resulting in an unrepresentative comparison of performance*.

Appendix 6

GHD – Response to 2010 price review draft report: operating costs staffing

CLIENTS | PEOPLE | PERFORMANCE

6 May 2010

Mr A Ottaway
Pricing Officer
Gladstone Area Water Board
PO Box 466
GLADSTONE QLD 4680

Our ref: 31/25705/181141
Your ref:

Dear Anthony

Response to QCA 2010 Price Review Draft Report
Operating Costs - Staffing

I refer to our recent discussion and GHD's review of the following documentation as part of your review and response to the QCA's 2010 Price Review Draft Report. GHD understands that the feedback provided in this document may be used in your formal response to the QCA.

Scope of Work

The scope of work requested was to:

» Review the QCA draft report with respect to the operational costs linked to staffing matters;

» Provide further advice that either supports or rejects the recommendations made in the QCA draft report in relation to staffing matters; and

» Correct any errors made in the interpretation of the GHD report titled *"Review of Organizational Resources - October 2009"* which is made either by the QCA or Davwil which influences their recommendations;

Documentation Review

GAWB made the following documents available for review and feedback:

» Queensland Competition Authority, Draft Report Gladstone Area Water Board: Investigation of Pricing Practices, March 2010;

» Davwil's Report, Analysis of Efficient Opex Costs - Staffing Component 2010;

» Appendix 24 - Activities excluded from Benchmarking – Land & Catchment Management, Hatchery & Recreation Area (Gladstone Area Water Board);

» Staff Positions and FTE movement since 2005; and

» Position Descriptions for all roles within GAWB.

These documents were in addition to documents provided by GAWB in relation to the "*Review of Organisational Resources (October 2009)."*

Key Findings

Key findings in reviewing the QCA Draft Report are as follows:

- The FTE numbers of 32 in June 2005 does not necessarily reflect an efficient resource base for GAWB to discharge its responsibilities and undertake the activities required of it at the time. It is important to not assume the 2005 FTE numbers were correct, as there is no documentation in the 2005 QCA Final Report to support such an assumption. Therefore, to make comments on the 2010 FTE numbers and proposed FTE numbers by 2014/15 by assuming the 2005 FTE numbers may be an accurate starting point could be misleading;
- The GAWB organisation of 2010 is significantly different to that in 2005, in that it is has significantly invested in IT infrastructure to replace legacy issues, developed and negotiated specific customer contracts with their major customers, increased their capital program to secure water supplies to the region and developed a service delivery model to improve operations and maintenance of their assets;
- The sustainable reduction of FTE numbers up to 2015 and beyond requires GAWB to increase FTE numbers in the short term in line with their pricing submission to leverage the long term benefits of their IT investment, process improvement initiatives and service delivery model;
- Davwil's Final Report indicates GAWB's FTE numbers were 55.92 in February 2010, compared with GAWB's actual for 2009/10 of 55.9 FTE's. Upon closer examination of the FTE's tabled in Davwil's Final Report - Appendix I, Davwil's distribution of FTE numbers across GAWB's Business Units when compared with GAWB's organisational structure appear to be misaligned. The allocation of FTE's across GAWB's Business Units needs to be clearly understood before any reduction can be agreed;
- FTEs will increase modestly during the pricing period once adjustments as described in this report have been completed;
- GAWB's overall FTE numbers by July 2015 and following adjustments as described in this report will be 57.9 FTE's. This is based on GHD's review of GAWB's determined positions;
- Any Opex reduction based on FTE's should be calculated on the basis of the actual opex cost to be saved and not an averaged amount which has the potential to overstate opex savings;
- FTEs to be capitalised will have no impact on reducing overall GAWB FTE numbers;
- Any job re-design must satisfy some basic principles and that includes making sure the new job is meaningful and satisfying for the staff who will occupy these roles as well as delivering GAWB long term financial and non-financial benefits. Creating jobs that bring together a raft of diverse activities with no comparable skills, provides little opportunity for personal growth and does not align with employee aspirations will not serve GAWB in the long run as it will be difficult for GAWB to keep and attract staff to such roles; and
- While timing of different peak workloads to improve resource utilisation is supported, when one reviews the field based roles in GAWB, treatment plant operations, hatchery, ranger, land officer, mechanical fitters and electricians, these roles are very diverse requiring different skill sets and their respective peaks are not necessary such that activities could be grouped to create a "new and complete job" to better manage peaks.

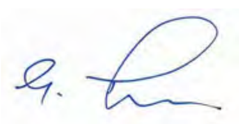
The attachments, Table 1 and Table 2 provide a detailed response to the Draft QCA report on Operating costs, staffing costs and Davwil's Final Report – Activity Review – Staff Roles and Proposed Reductions.

Conclusion

On the basis of the information provided in this report it is suggested GAWB respond to QCA that FTE's by July 2015 will be approximately 57.9.

Should you require any further assistance please feel free to call me on (03) 8687 8803 at your convenience.

Yours sincerely
GHD Pty Ltd



George Theo
Water Operations Business Manager
(03) 8687 8803

Table 1 - Queensland Competition Authority, Chapter 8: Operating Costs, Staffing Costs

Reference	***Statement***	***Comment***
Queensland Competition Authority, Chapter 8: Operating Costs, Staffing Costs, Page 122	"….While advice from GHD indicated that a further 7.5 FTE's were required by 2014-15, GAWB proposed an increase of 3.5 FTE's by 2014/15 to improve asset management planning and to provide information technology support."	GHD understands that the 3.5 FTE's proposed by GAWB is <u>not</u> only to improve asset management planning (1.0 FTE) and to provide information technology support (0.5 FTE) forecast by GAWB for up to 12 months only, but it is also to improve project delivery (1.0 FTE) of GAWB's projects. GAWB has set itself a target to deliver all its Capital and Opex projects on time in 100% of cases. Furthermore, Land Management Officer (0.75 FTE) and Safety and Compliance Support Officer (0.25 FTE) form the balance of the 3.5 FTE's. It is important to note that the remaining 4.0 FTE positions identified by GHD were for the day-to-day operations and maintenance of the mechanical and electrical assets. Although these FTE positions were not included in GAWB's pricing submission at the time, the cost to provide this service however was included in the operations and maintenance line item. **Recommendation:** *The QCA accepts the 3.5 FTE increase determined by GAWB in its pricing submission.*
Queensland Competition Authority, Chapter 8: Operating Costs, Staffing Costs, Page 123	"Davwil noted that the GHD report stated that GAWB staff levels have increased to a critical mass. As a result, Davwil concluded that GAWB's staffing levels have reached a point where it can handle its critical operational needs within risk parameters, efficiently manage and process core business functions, and maintain appropriate	The statement made by QCA in that "GAWB's staff levels have reached a critical mass" is incorrect. This error is further repeated in Davwil's Final Report: QCA -Stage 2 (+Stage1) - Asset Valuation & Opex Efficiency - GAWB 2010 Pricing Investigation, Page 116. GHD's report titled "Review of Organisational Resources"

Reference	***Statement***	***Comment***
	knowledge and skills in house, whilst outsourcing some functions to cover peak workloads or skills that cannot be efficiently provided within the business".	concluded, "staff numbers are approaching a critical mass". There is a significant difference between concluding staff levels "have reached a critical mass" against "staff levels are approaching a critical mass". GHD agrees with the QCA that once staff numbers reach a critical mass further efficiencies can be delivered. However, before further efficiencies can be delivered, systems and process must be embedded in the business and working as designed, then the opportunity to redesign roles, re-align the organisational structure and multiskill staff to undertake a broader range of functions becomes possible and more importantly sustainable without introducing unwanted risk in the transition process. **Recommendation:** *The QCA's and Davwil's reports should be corrected to accurately reflect GHD's statement that "GAWB staff numbers are approaching a critical mass".*
Queensland Competition Authority, Chapter 8: Operating Costs, Staffing Costs, Page 123	"Davwil recommended that a restructure of its organisation would enable GAWB to achieve cost savings. This could be achieved through a review of business priorities, position description adjustments, multi-skilling where appropriate, streamlining processes and judicious outsourcing. In particular, Davwil stated that there is scope to: o Reallocate approximately 2.2 FTEs to capital projects o Achieve a reduction of 8.35 FTEs (which	GHD is of the view that long-term constructive and sustainable reductions in FTE's will only be achieved if GAWB is allowed to complete the program of improvements it has commenced. Furthermore, it is important for the QCA to acknowledge where GAWB is at in its maturity and readiness for further savings. Aggressively pursuing further savings too quickly has the potential to undo the foundation work done to date and setting the organisation back. If this were to occur, it would take GAWB a few years to recover. GHD understands that business priorities are reviewed on an ongoing basis and is part of GAWB's formal annual business

Reference	***Statement***	***Comment***
	includes the discontinuation of 2 FTEs allocated to the CSS) by 2014.	planning process. Furthermore, multiskilling of staff to take on broader roles is successful when the roles are redesigned in such a way that it is complimentary to the staff member's core skills and is aligned with their career aspirations and personal development needs. For example, there would be no benefit for GAWB or the employee in trying to create a role where the hatchery officer was also required to manage GAWB's land holdings with adjacent landowners, as it requires a very different set of skills. GHD understands that GAWB has reviewed its delivery model for services and has outsourced non-core, highly specialist work, and peak workloads to the private sector. GHD is of the view that any further outsourcing will not deliver any significant benefits. While QCA suggests that 2.2 FTE's may be capitalised from a funding perspective (it does not remove the FTE number from the overall FTE's employed by GAWB but serves only to reduce the labour component in the Opex cost. A corresponding increase will be required to the Capex cost. Based on GAWB's further information to GHD it is likely that only 1.7 FTE's can be capitalised. The capitalisation of FTE's is as follows: o Works & construction supervisor, 0.7 FTE (consistent with QCA finding); o Senior Engineering Specialist, 0.5 FTE (consistent with QCA finding); and o Engineering Officer, 0.5 FTE (QCA finding 0.8 FTE). GHD is of the view that it is not appropriate for administration and

Reference	***Statement***	***Comment***
		scheduling type roles to be funded from capital. Of the 8.35 FTE's proposed by QCA for reduction, GHD is of the view that such a quantum reduction is unsustainable and will significantly impact on GAWB's day to day operations. **Recommendation:** *The QCA report should be adjusted to clarify that:* o *1.7 FTE's could be funded from Capex and would therefore reduce GAWB's Opex costs but will increase Capex costs. It will not reduce overall FTE's for GAWB.*
Queensland Competition Authority, Chapter 8: Operating Costs, Staffing Costs, Page 123	"…..In regard to GAWB's proposed increase of 3.5 FTEs between 2010 and 2015, Davwil considered that 1.5 FTEs were required to improve asset management planning and for further development of IT systems."	GHD agrees with this statement. It should be noted however that the 0.5 FTE suggested to improve the IT systems is for a period of up to 12 months only. While Davwil has not supported the additional 2.0 FTE's (Project Delivery – 1.0 FTE, Land Officer - 0.75 FTE, and Safety Officer 0.25 FTE) GHD is of the view that these roles are critical to the ongoing efficient delivery of critical services. The capital and operating programs require efficient delivery and management to prevent "cost blow outs". The safety of the workforce and its contractors on GAWB related activities must remain a high focus. The additional 0.75 FTE support for the management of land related matters, such as agistments, maintaining relationships with customers with land holdings, managing the vegetation and weed programs across 30, 000 ha is not unreasonable. Even though GAWB aligns visits to its customers and the inspection of the vegetation and weed management programs to minimise travel time and ensure ongoing compliance, the reality is

Reference	***Statement***	***Comment***
		that the vast area of land that needs to be frequently inspected cannot be done adequately with 1.0 FTE. Furthermore, GAWB is exposed to significant risk should the existing Land Officer for whatever reason not be available to carry out their duties in the future, as there is little opportunity at the moment for training of another person in this function and more importantly to build relationships with the existing landowners. The additional 0.25 FTE support recommended for the existing 1.0 FTE Safety Supervisor to provide support across all of GAWB's activities in not over the top. It is not unreasonable for an organisation the size of GAWB to have 1.25 FTE's supporting staff and contractors, providing training as required and reporting on overall safety compliance. **Recommendation:** *The QCA report should be adjusted to reflect the:* o *IT support role (0.5 FTE) is for a period of not more than 12 months commencing in 10/11;* o *Project Delivery role (1.0 FTE) is required and critical to delivery of the operating and capital programs; and* o *Land Officer (0.75 FTE) and Safety Officer (0.25 FTE) are critical to ongoing operations.*
Queensland Competition Authority, Chapter 8: Operating Costs, Staffing Costs, Page 123	"The Authority notes that staff numbers of 45-47 FTEs is still significantly higher that the 32 FTEs in place at June 2005. However, the increase can be largely explained by…………"	GHD is of the view that while the increase in FTE's over the period has been explained by QCA based on their review, it should be noted that the initial FTE numbers in June 2005 of 32 does not necessary have any correlation to the work that was required of GAWB in 2005. GHD is of the view that it is misleading to assume

Reference	*Statement*	*Comment*
		that the 32 FTEs in June 2005 reflected an efficient resource number for the work required of GAWB at the time and in the absence of any further documentation to the contrary it should not be relied upon to draw potentially inaccurate conclusions of GAWB's future FTE's. GHD recognises based on its review that GAWB is doing much more to reduce supply risk to the region, better understand the condition and performance of their assets, deliver larger capital and operating programs and meet all its statutory and regulatory obligations in comparison to 2005. **Recommendation:** *The QCA report should acknowledge:* o *The 32 FTE's in June 2005 might not have necessarily reflected an efficient resource number for GAWB's level of activity at the time and should not be relied upon to conclude whether GAWB's proposed FTEs are adequate; and* o *That GAWB's proposed FTE's is based on the level of risk it is managing and its program of initiatives to 2014/15.*
QCA – Stage 2 (+Stage 1) – Asset Valuation 7 Opex Efficiency – GAWB 2010 Pricing Investigation. Staffing Page 116, third pot point.	"The GAWB proposal, to cease 24 hour / 7 day operation of The Gladstone Water Treatment Plant"	GHD understands that the Operations Business Unit is working to achieve this outcome however it requires the Scada system to be fully embedded, maintenance related activities to be optimised and automation of the plants key processes would be required. Any reduction in staff numbers in the interim will impact on the water treatment plants day-to-day operations and would expose

Reference	Statement	Comment
		GAWB to unnecessary compliance risks. Reducing any further labour from the water treatment plant will increase overtime and call outs for the remaining staff; it will also increase fatigue amongst the operators introducing unacceptable work place health and safety risks. **Recommendation:** *The QCA report should note that resources at the Water Treatment Plant would be maintained at current levels.*
QCA – Stage 2 (+Stage 1) – Asset Valuation 7 Opex Efficiency – GAWB 2010 Pricing Investigation. Staffing Page 116.	" In summary the proposed savings are: o 2.2 FTEs staff capitalised o 8.35 FTEs reduction by 2014 from 55.92 (Feb 2010) o Equates to 19% reduction of staff assigned to Opex, although still at 45.37 FTEs some 42% above 2005 staff numbers."	As discussed earlier, the 1.7 FTE's that could be capitalised will not result in a reduction in overall FTE's for GAWB but will simply change the funding source for these positions, i.e. reduce labour Opex and increase Capex costs. The proposed 8.35 FTE reduction by QCA is not supported by the review carried out by GHD. **Recommendation:** *The QCA report should reflect GAWB's response to staffing costs in its report, specifically:* o *Agreement to 1.7 FTEs being capitalised, however no net overall reduction in FTE's.* o *No support for any further reductions in staff numbers as detailed in Table 2.*
QCA – Stage 2 (+Stage 1) – Asset Valuation 7 Opex Efficiency – GAWB 2010 Pricing Investigation. Staffing Page 116.	"Instead of removing specific position costs an average organisational cost per position (excluding Branch Managers and CEO) of $100,000 per staff has been used. Accordingly,	GHD understands the reasons for adopting an average cost when determining labour cost reductions. In GAWB's case however, the average cost adopted by QCA is higher than the actual cost being incurred by GAWB to employ these FTE's.

Reference	*Statement*	*Comment*
	Opex effective staff cost reduction in 2009/10 dollars terms is $1.1M	GHD understands that GAWB has provided detailed costing files for employees to both Davwil and the QCA. Once FTE numbers are agreed and positions identified for reduction the actual saving should be reflected in the final QCA report. **Recommendation:** *The QCA report should reflect the actual Opex labour cost savings to be achieved as a result of any FTE reductions and not an arbitrary $100K per FTE.*
QCA – Stage 2 (+Stage 1) – Asset Valuation 7 Opex Efficiency – GAWB 2010 Pricing Investigation. Staffing Page 117.	"Likewise, the recommendation by GHD to increase staff should be deferred, and these functions accommodated through reassignment of resources and priorities, position description adjustments and multi-skilling, streamlining processes and judicious outsourcing."	GHD is of the view that any reductions in FTE numbers up to 2015 and beyond will have maximum opportunity to be realised if GAWB is able to continue the journey it has embarked upon, that is, to complete the roll out and embed their IT systems, improve their internal business processes, finalise their delivery model for operations and maintenance services and grow the capability of their staff by learning new skills and to have new skills used to undertake broader roles. Reducing FTE's too early will impede GAWB's ability to generate and sustain future savings. ***Recommendation:*** *The QCA report should align with GAWBs proposed FTE increases up to 2015 which will then best position the organisation to reduce their FTE numbers beyond 2015.*
QCA – Stage 2 (+Stage 1) – Asset Valuation 7 Opex Efficiency – GAWB 2010 Pricing Investigation. Staffing Page 117.	"Examples of position redesign could include roles with similar skills, but differently timed work peaks, or field roles where activities with a range of skill requirements could be put together in a work	GHD agrees with the concept suggested by QCA, however the timing of different peak work loads is not practicable in the field as field activities are being predominantly driven by planned maintenance activities in the hatchery, land management and

Reference	***Statement***	***Comment***
	package to minimise travel times. Some GAWB roles already exhibit these features, but there is some scope to make further improvements."	recreation areas. Furthermore, the skills for these roles are not comparable. The mechanical and electrical maintenance areas are being driven by responsive maintenance in the short term making difficult to align peaks and troughs in workloads. Again, the skills for these roles are not comparable. **Recommendation:** While up skilling and job broadening is supported it must add value to the organisation by reducing cost and risk. Furthermore, the redesigned job must be meaningful for the employee and consistent with their aspirations for personal development. Designing jobs that occupy staff time with activity but has little to no relevance for one's career will not be sustainable.

Gladstone Area
Water Board