Review of QCA's WACC assessment in its Draft Report for GAWB's 2025-30 pricing period

Advice prepared for Gladstone Area Water Board

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Purpose

On 12 December 2024, the QCA publicly released its draft decision for GAWB for the 2025-30 pricing period

The purpose of this short report is to respond to the WACC component of the QCA's Draft Report, particularly in relation to its asset beta estimate, and present an updated WACC estimate as of 31 December 2024.

QCA's assessment of GAWB's proposed WACC

In general, the QCA was receptive to GAWB's proposed WACC approach and input parameters (based on Synergies' WACC report) except for the asset beta estimate. The QCA applied an asset beta estimate of 0.39 compared to maintaining the current value of 0.45 as proposed by GAWB, which flows through to a lower equity beta estimate (0.66 compared to 0.78) in the cost of equity estimate.

It appears the QCA has changed its position on GAWB's asset beta from the approach it has applied in previous price investigations, including its assessment of GAWB's risk profile relative to Seqwater (and other urban water utilities).

Specifically, the QCA's discussion about GAWB's beta risk downplays volume risk and a concentrated industrial customer base to suggest that GAWB is more like Seqwater and other similar water utilities (like Icon and SA Water), arguments which are used to reduce GAWB's asset beta. In our view, this is a change in QCA's position on GAWB's asset beta more so than a data estimation issue, although the QCA has used lower 10-year beta estimates compared to the 5-year estimates proposed by Synergies in the comparable companies' analysis.

The other WACC input parameter values proposed by the QCA are very close to what Synergies proposed in our WACC report, including the market risk premium and cost of debt.

Synergies updated post-tax nominal vanilla WACC estimate for GAWB of **7.62%** as of December 2024 compares to our original estimate of **7.88%**, with the difference driven by a materially lower debt risk premium reducing the cost of debt. This compares to the QCA's Draft Report WACC of 7.39%.

QCA's asset beta assessment

The QCA noted two key issues in the asset beta estimate presented in Synergies' WACC report. First, the sample asset beta estimate reflected a 5-year estimate, compared to the

QCA's preferred 10-year estimate.[1] Second, the QCA changed the de-levering formula applied to determine its asset and equity beta estimates.

QCA's approach and rejection of past risk-profile factors

The QCA's Rate of Return Report (Version 4)[2] applies a relatively simple two-step approach to beta determination as follows:

- First, it conducts a first principles analysis to determine the regulated firm's risk profile and to identify suitable comparators.
- Second, it produces beta estimates based on market data for the comparator set using 10-year weekly observations and de-levering the raw beta estimates using the Brealey-Myers formula and a debt beta of 0.12. It notes that the empirical beta estimates are not determinative in the process.

However, the QCA does not appear to have followed this approach in determining GAWB's WACC in its Draft Report for the 2025-30 pricing period.

First, the QCA appears to have applied the sample estimates of beta as a determinative value (refer to our table of updated asset beta estimates in Attachment A), with limited contextual first principles analysis regarding GAWB's risk profile considered.

Second, in our WACC report, it was noted that GAWB possesses a number of risk profile factors that result in a material difference to other water service providers, such as Seqwater and urban water utilities, which the QCA has previously accepted in determining GAWB's beta but now rejects, considering them to be mitigable.

Third, the QCA places a heavier weighting on the betas for other regulated water service providers (Seqwater, Sunwater, SA Water, Icon Water and TasWater) than it does for its own past GAWB decisions.

QCA's beta analysis

The QCA noted that the additional risk factors that GAWB faces compared to its peers (including its small and highly concentrated industrial customer base, and future exposure to the emerging hydrogen industry) were mitigated by GAWB's monopoly in urban water supply, price monitoring framework, contractual supply arrangements and the perceived demand resilience of GAWB's customer base.

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[1] The QCA's Rate of Return Final Report indicates the QCA will consider using 5-year beta estimates in certain circumstances.

[2] QCA (2024), Rate of return review, Version 4, September, pp 76-95.

It is our view that these additional risk factors are relevant to the beta determination and present a material risk that is not captured in the lower beta estimate applied by the QCA.

Most importantly, there has been no change in these risk factors that the QCA previously accepted as the basis for a higher beta for GAWB compared to Seqwater (and other urban water utilities) in the 2020-25, 2015-20 and 2010-15 pricing periods.

In terms of different risk profiles, most important is GAWB's small and primarily industrial customer base compared to Seqwater and the urban water service providers, which the QCA uses to benchmark GAWB's asset beta. Around 80% of GAWB's water volume is supplied to its industrial customers. In contrast, around 75% of water supplied by Seqwater is used for residential purposes. Hence, GAWB's monopoly in urban water supply noted by the QCA as a risk mitigant is dwarfed by its industrial customer risk exposure and indicates the very different customer-focussed risk characteristics between GAWB and Seqwater.

In this regard, while GAWB has contractual arrangements with some of its industrial customers, GAWB's counterparty risk is still diversified across a much smaller pool of customers than Seqwater and the urban water service providers identified by the QCA. Hence GAWB remains exposed to a large revenue risk associated with a single large customer disconnecting from its distribution network.

Further, the potential addition of a small number of new hydrogen customers in the 2025-30 pricing period does not materially improve GAWB's risk profile. Rather, the newly connecting hydrogen customers have a higher risk profile than existing customers given the nascent status of the green hydrogen industry in Gladstone (and internationally). Synergies recommended asset beta estimate of 0.45 does not specifically account for (or depend on) this higher risk profile of the connecting hydrogen customers.

Ultimately, GAWB's ability to recover revenue from its industrial customers in the long-term depends on their continued commercial viability, which is closely correlated to economic activity. In contrast, Seqwater with its very large residential customer base is less sensitive to economic activity justifying a lower beta than GAWB.

The ongoing investments that GAWB makes, including periodic lumpy large investments, such as the Fitzroy to Gladstone Pipeline, do not diversify GAWB's operations or service offering to mitigate the concentrated nature of its customer base. Nor does it mitigate the long-term revenue risk associated with recovery of the cost of these investments, including the risk that existing water supply contracts are not renewed.

The QCA argues that GAWB's relatively stable water demand and hybrid revenue cap (plus water supply contracts) largely mitigates GAWB's volume risk associated with its concentrated customer base. However, the QCA over-estimates the significance of these risk mitigants. Ultimately, it is not certain that if one or two large industrial customers ceased operations and disconnected their water supply, that GAWB would be able to fully recover its costs from all remaining customers on a long-term basis, regardless of the hybrid revenue cap. Hence, this volume risk mitigant identified by the QCA is not sufficient to align GAWB's asset beta with Seqwater.

GAWB is subject to a hybrid revenue cap where it currently must bear the first 10% of variations in its annual revenue compared to the forecast used to set prices (noting that GAWB has demonstrated that its revenue at risk remains material even if that deadband is reduced to 5%). Seqwater is subject to a pure revenue cap with a sustained increasing water demand reflecting SEQ population growth, which provides significantly stronger volume and revenue risk mitigation compared to GAWB.

For the above reasons, an equity beta of 0.66 for GAWB compared to Seqwater's equity beta of 0.64 cannot be justified given their fundamentally different risk profiles. For this reason, the QCA's argument that its proposed equity beta for GAWB is at the top of its sample range of Seqwater and several urban water service providers and by implication is reasonable, is an irrelevant and invalid comparison.

QCA's use of beta de-levering/re-levering formula

The QCA argues that the asset beta estimate applied for the 2020-25 period used a different de-levering/re-levering formula to the current pricing review and as such the two beta estimates are dissimilar.

The QCA is correct that in the 2020-25 price monitoring investigation, the Conine de-levering/re-levering formula was applied and the QCA has since adopted the Brealey-Myers formula.[3] However, rejection of GAWB's proposed asset beta on these grounds is not quantitatively valid. Nor should use of a different de-levering/re-levering formula result in a material change in beta, which rather should be reflective of a material change in GAWB's systematic risk exposure.

In practice, the beta outcomes applying the two different approaches is minor. Application of the Conine formula on the current beta sample only results in an approximately 5% increase (average based on the comparator sample) in the asset beta

[3] The only difference between the approaches is the Conine formula includes a tax adjustment whereas the Brealey-Myers formula does not.

estimate. For example, using the Conine formula would increase a Brealey-Myers beta estimate of 0.42 to 0.43.

Hence, the difference between the QCA's beta estimates for GAWB's 2020-25 and 2025-30 pricing periods relates to its fundamental change in position on GAWB's risk profile, not because of its use of a different de-levering/re-levering formula.

Updated GAWB WACC estimates

Table 1 presents GAWB's updated WACC estimates based on market data as of 31 December 2024, including retention of a 0.45 asset beta estimate. The QCA's WACC in its Draft Report is presented for comparison.

Table 1 Updated GAWB WACC estimate and comparison to QCA's Draft Report

Parameter	Synergies' December 2024 estimate	QCA Draft Decision	Difference to Draft Decision
Risk-free rate	4.36%	4.31%	5 bps
Gearing	50%	50%	-
Corporate Tax Rate	30%	30%	-
Gamma	0.484	0.484	-
Equity Parameters			
Asset beta	0.45	0.39	0.06
Equity beta	0.78	0.66	0.12
Market risk premium	6.5%	6.3%	20 bps
Cost of Equity	**9.43%**	**8.47%**	**96 bps**
Debt parameters			
Debt risk premium	1.35%	1.91%	-56 bps
Debt raising costs	0.10%	0.10%	-
Cost of Debt	**5.81%**	**6.32%**	**-51 bps**
Nominal vanilla post-tax WACC	**7.62%**	**7.39%**	**23 bps**

Source: Synergies Modelling; QCA

Synergies updated WACC estimate for GAWB of 7.62% compares to our original estimate of 7.88%, with a lower cost of debt the main reason for this decline, caused by a materially lower debt risk premium. Our original cost of debt estimate was 6.37% compared to an updated estimate of 5.81%. Our original cost of equity estimate of 9.38% compares to our updated estimate of 9.43%.

If the QCA's Draft Report was to be updated for market data (risk free rate and market risk premium) as of December 2024, it would result in a nominal post tax vanilla WACC estimate of 7.24% (comprising an 8.65% cost of equity and 5.81% cost of debt).[4]

[4] Based on the historical broadly inverse relationship between movements in the risk free rate and debt risk premium, we have assumed no change in the cost of debt.

A. Updated asset beta estimates

Table 2 presents asset beta estimates for the QCA's preferred comparator sample as of 31 December 2024. The QCA's asset beta estimate in its Draft Decision appears to be based on the 10-year monthly/weekly average estimates (valid comparators), compared to the Synergies 5-year monthly/weekly estimates (valid comparators).

Table 2 Asset beta estimates as of 31 December 2024

Comparator	10-year Weekly	10-year Monthly	5-year Weekly	5-year Monthly
Alliant Energy Corporation	0.34	0.37	0.42	0.44
Ameren Corporation	0.31	0.28	0.38	0.33
American Electric Power Company, Inc.	0.28*	0.30	0.35	0.38
APA Group	0.38	0.35	0.36	0.27
Avista Corporation	0.3*	0.31	0.35	0.33
Black Hills Corporation	0.43	0.37	0.51	0.46
Canadian Utilities Limited	0.45	0.40	0.48	0.43
CMS Energy Corporation	0.27*	0.23*	0.35	0.29
Consolidated Edison, Inc.	0.22*	0.21*	0.27*	0.27*
Dominion Energy, Inc.	0.28*	0.30	0.40	0.39
Duke Energy Corporation	0.28	0.26	0.36	0.34
Edison International	0.42	0.46	0.49	0.56
Emera Incorporated	0.33	0.26	0.39	0.27
Eversource Energy	0.32*	0.35	0.39	0.42
FirstEnergy Corp.	0.32	0.27	0.38	0.34
Fortis Inc.	0.32	0.19*	0.32	0.22
IDACORP, Inc.	0.32	0.39	0.40	0.50
MGE Energy, Inc.	0.41*	0.52	0.52	0.63
National Grid plc	0.33	0.29*	0.31	0.26*
NorthWestern Energy Group, Inc.	0.35	0.28	0.43	0.34
TXNM Energy, Inc.[a]	0.33	0.23*	0.41	0.25*
Portland General Electric Company	0.32	0.31	0.39	0.39
PPL Corporation	0.45	0.50	0.54	0.57
Sempra	0.50	0.47	0.59	0.54
The Southern Company	0.31	0.28	0.40	0.35
WEC Energy Group, Inc.	0.27*	0.26*	0.34*	0.36
Xcel Energy Inc.	0.3*	0.25*	0.39	0.31
American Water Works Company, Inc.	0.43	0.40	0.57	0.55
American States Water Company	0.34*	0.3*	0.46	0.46
Artesian Resources Corporation	0.3*	0.18*	0.35*	0.22*
California Water Service Group	0.34*	0.32*	0.45	0.43
Middlesex Water Company	0.55	0.59	0.61	0.75

Comparator	10-year Weekly	10-year Monthly	5-year Weekly	5-year Monthly
SJW Group	0.31*	0.33*	0.39	0.44
Essential Utilities, Inc.	0.48	0.51	0.64	0.63
The York Water Company	0.39*	0.33*	0.51	0.52
Severn Trent PLC	0.33	0.37	0.30	0.29
United Utilities Group PLC	0.36	0.31	0.34	0.25
Average (all comparators)	**0.35**	**0.33**	**0.42**	**0.40**
Median (all comparators)	**0.33**	**0.31**	**0.39**	**0.38**
Average (valid comparators)	**0.38**	**0.37**	**0.43**	**0.42**
Median (valid comparators)	**0.34**	**0.35**	**0.40**	**0.39**

a Formerly PNM Resources Inc, recent name change.

***** Indicates the company does not pass the relevant statistical strength tests (i.e. t-stat < 1.96 and/or r-squared < 0.1)

Source: S&P Capital IQ Pro, Synergies modelling