



Annexure 8 – Rate of return



QCA Price Monitoring Investigation – Part 2 Submission

Public Release

This Annexure is a key component, and forms part of, the overall Urban Utilities' Part 2 Submission to the Queensland Competition Authority's (QCA) price monitoring investigation for the period 1 July 2026 to 30 June 2030. The Urban Utilities' Part 2 Submission should be read as a whole and, because of the interrelated nature of the subject matter, no part should be read in isolation or taken out of context.

The Executive Narrative provides a summary of the entire Urban Utilities' Part 2 Submission, and this Annexure should be read in conjunction with that narrative.

Amongst other items, the Executive Narrative outlines how this technical Annexure, along with the other Annexures provided with the Part 2 Submission, specifically addresses different elements of the Part 2 Stated Matters of the QCA investigation covering the period FY28–30 (1 July 2027 to 30 June 2030).

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1 Overview

1.1 What is the allowed rate of return?

Regulated infrastructure businesses such as Urban Utilities invest significant amounts of capital in the assets used to deliver valued services to consumers. The providers of the financial capital used to finance these investments require a reasonable return that compensates them for the risks and opportunity costs they bear when committing funds to the firm. Those investors will be unwilling to commit funds unless the business can provide them with a return that at least covers their required return on capital.

That is reflected in the Ministerial referral, which provides for Urban Utilities' Maximum Allowable Revenue to include such a return on assets.¹

Operating under the Queensland Competition Authority Act (1997), the Queensland Competition Authority (QCA) accepts the principle that capital will not be provided unless a reasonable rate of return is available. In this regard, the QCA has stated that the prices charged by the businesses it regulates should be at least sufficient to cover the minimum return on capital required by investors. The QCA has explained the following:

The rate of return compensates investors for the time value of money and risk that they face in providing the assets that deliver the services that are subject to the regulatory regime. If we set a rate of return that is too low (relative to an effectively competitive benchmark), then prices will be too low, causing excess consumption. As a result, such an approach will potentially result in an inefficient amount of the good or service. Moreover, a rate of return that is too low will also lead to investment that is too low (relative to an effectively competitive benchmark), as the firm will not have an incentive to invest at the efficient level. This outcome will therefore compromise dynamic efficiency.²

The QCA determines the allowed rate of return by estimating the Weighted Average Cost of Capital (WACC) for a 'benchmark' business. Consistent with the principles of incentive regulation and competitive neutrality, this means that the allowed rate of return is not set in line with the regulated business's actual cost of capital and its actual financing structure, as this would provide poor incentives for the business to finance itself prudently and efficiently.

The QCA's standard approach is to estimate a nominal vanilla WACC as follows:³

$$WACC = (1 - g) \times r_e + g \times r_d,$$

where:

- g is the benchmark level of gearing;
- r_e is an estimate of the nominal post-tax return on equity; and
- r_d is an estimate of the nominal pre-tax return on debt.

¹ Referral by Hon. J Bleijie MP, 24 September 2025, p. 1-2.

² QCA, Rate of return review, September 2024, p. 10.

³ QCA, Rate of return review, September 2024, p. 16.

All these parameters are for a benchmark efficient business providing the regulated services.

Urban Utilities has adopted this approach when estimating its indicative rate of return allowance for the FY28-30 price monitoring period.

1.2 Urban Utilities has adopted nearly all aspects of the QCA's rate of return method

The QCA has set out, in detail, its preferred method for estimating the allowed rate of return, following a process of public consultation. As Table 1-1 shows, in this submission we have adopted nearly all aspects of the QCA's method for estimating the allowed rate of return.

Table 1-1: Comparison of QCA and Urban Utilities' estimation methods

	QCA approach	Urban Utilities approach
Form of WACC	Nominal vanilla	Nominal vanilla
Model for estimating cost of equity	Capital Asset Pricing Model (CAPM)	CAPM
Risk-free rate	CGS yield 10-year term 20-60 business day average	CGS yield 10-year term 60 business day average
Market risk premium	100% weight on Ibbotson estimate	100% weight on Ibbotson estimate
Asset beta	• Estimated empirically at each price review. • Using a sample of water and energy comparators in developed countries. • Comparators must pass size/liquidity filter. • $\geq 70\%$ of revenue must derive from water/energy network activities. • Primary weight on 10-year estimation period. • Weekly returns data. • Mean estimate for sample.	• Estimated empirically for the FY28-30 price monitoring period. • Using an expanded sample of only water comparators in developed countries. • Comparators must pass size/liquidity filter. • $\geq 70\%$ of revenue must derive from water network activities. • Primary weight on 10-year estimation period. • Weekly returns data. • Mean estimate for sample.
Debt beta	0.12	0.12
Equity beta	Re-lever asset beta using benchmark gearing, debt beta and Brealey-Myers formula.	Re-lever asset beta using benchmark gearing, debt beta and Brealey-Myers formula.
Gearing	60%	60%
Cost of debt	Simple 10-year trailing average 10-year BBB rated corporate debt	Simple 10-year trailing average 10-year BBB rated corporate debt
Gamma	0.484	0.484

For reasons explained below, Urban Utilities has derived its indicative estimate of the asset beta using a sample of water comparator firms (rather than a sample of energy and water firms) because Urban Utilities considers that energy networks are not suitable comparators for the purposes of estimating the asset beta of a water business.

In all other respects, Urban Utilities has adopted the QCA's rate of return method.

1.3 Our rate of return

For the Part 2 submission, Urban Utilities is required to estimate a rate of return for the FY28-30 price monitoring period. Based on current market data (to end June 2026), Urban Utilities' indicative rate of return allowance for FY28, which is the first year of the price monitoring period, is 6.95% (nominal, vanilla).

In line with the QCA's approach, the return on equity allowance, once finalised based on data closer to the start of the FY28-30 price monitoring period, will remain fixed for the duration of the FY28-30 period, but the return on debt allowance will be updated annually using the QCA's preferred 10-year trailing average approach. Consequently, the overall allowed rate of return will also be updated each year through the FY28-30 price-setting period.

The individual parameter estimates underpinning our indicative rate of return are summarised in Table 1-2 below. The time-based estimates are currently placeholders as of 30 June 2026 and will be updated closer to the start of the FY28-30 price monitoring period to ensure they reflect the latest available information and market conditions.

Table 1-2: Parameter estimates underpinning Urban Utilities' indicative rate of return for FY28

Parameter	Indicative values as of 30 June 2026
Risk-free rate	4.99%
Market risk premium	6.38%
Asset beta	0.364
Debt beta	0.12
Equity beta	0.73
Return on equity	9.64%
Gearing	60%
Debt raising costs	0.10%
Return on debt	5.15%
WACC	6.95%
Gamma	0.484

Notes: The risk-free rate, asset beta and trailing average return on debt are estimated using data to 30 June 2026. The market risk premium is estimated using data to 31 December 2025. The return on debt is estimated using 10 equal-weighted historical tranches, each estimated by taking the simple average of month-end observations [REDACTED] of Australian BBB corporate bond yields in each historical year.

Urban Utilities will update the time-varying parameters before the commencement of the FY28-30 price monitoring period, as per the timing outlined in Table 1-3.

Table 1-3: Time-varying WACC parameters update schedule for the 2028-30 period

Parameter	Estimation Period
Market risk premium	
Asset beta and equity beta	
Risk-free rate	
Return on debt	

The remainder of this annexure explains in further detail how each of the parameters in Table 1-2 were estimated.

2 Return on equity

2.1 Foundation model

The QCA's approach is to use the Capital Asset Pricing Model (CAPM) as the foundation model to estimate the required return on equity.⁴ The CAPM has the following form:

$$r_e = r_f + \beta_e \times MRP,$$

where:

- r_f is the risk-free rate – the return on a riskless asset;
- β_e is the equity beta – a measure of the systematic risk of the investment in question; and
- MRP is the market risk premium, the return a fully diversified investor can expect to earn over and above the risk-free rate.

In the context of the CAPM, the MRP is the additional return (over and above the risk-free rate) that investors would require to compensate them for an investment of average risk, and the beta parameter indicates the extent to which the particular investment (a water utility in this case) has a risk above or below the average.

Consistent with the QCA approach, Urban Utilities has adopted the CAPM to estimate the required return on equity.

2.2 Risk-free rate

The QCA's standard approach is to estimate the risk-free rate using:⁵

- 10-year Australian Government bond yields published by the Reserve Bank of Australia (RBA); and
- An averaging period nominated by regulated business that is between 20 to 60 business days in length, ending as close as reasonably possible to the commencement of the price monitoring period.

Our method is consistent with this approach. For the purposes of this submission, we have estimated the risk-free rate using yields on 10-year Australian Government Bonds and a 60-business-day averaging period ending 30 June 2026. This results in a risk-free estimate of 4.99%. This estimate is indicative only and will be updated as per the schedule outlined in Table 1-3.

⁴ QCA, Rate of return review, September 2024, section 6.2.

⁵ QCA, Rate of return review, September 2024, section 6.6.

2.3 Market risk premium

The QCA has historically combined estimates from a number of different methods—including the Ibbotson, Siegel, Dividend Growth Model and Wright methods, as well as surveys—to estimate the market risk premium.

However, in its most recent guidance on its WACC method, the QCA has clarified that it intends to use the Ibbotson method exclusively to determine the MRP allowance for future reviews.⁶

The Ibbotson approach involves calculating the historical average excess return on the market and assumes that investors have regard to the long-run average market risk premium when making investment decisions.

When implementing the Ibbotson approach, the QCA:

- Relies exclusively on excess returns data from 1958 onwards – since this was the first year in which the Sydney All Ordinary Shares price index was calculated on a daily, rather than a retrospective basis. 1958 is also (approximately) the first year for which marketable short-term government securities were issued;⁷ and
- Uses the arithmetic (rather than the geometric) mean of historical excess returns.⁸

For the purposes of the FY28-30 period, we have adopted the QCA's method for estimating the MRP. Using excess returns data from 1 January 1958 to 31 December 2025 results in an indicative MRP estimate of 6.38%. This estimate is indicative only and will be updated as per the schedule outlined in Table 1-3.

2.4 Equity beta

The equity beta is a measure of a business's exposure to non-diversifiable (or 'systematic') risk. The equity beta cannot be observed directly; it must be estimated using statistical analysis. The beta estimation process involves the following steps:

1. Compile a sample of 'comparator firms.' These are listed companies that share similar risk exposure to the business being regulated.
2. Calculate the total historical returns for each comparator firm.
3. Regress the total returns of each comparator firm on the total market returns of the main stock market index of the country in which that firm is listed.⁹ The estimated coefficient of the total return on the market is an estimate of the equity beta for that comparator firm.
4. De-lever the estimated equity beta for each comparator to obtain an 'asset beta' estimate for that company. The de-levering process removes the effect of leverage on the firm's equity beta and allows asset betas to be compared on a 'like-with-like' basis across firms.

⁶ QCA, Rate of return review, September 2024, p. 65.

⁷ QCA, Rate of return review, September 2024, p. 71.

⁸ QCA, Rate of return review, September 2024, p. 72.

⁹ This regression analysis is typically performed using a statistical technique known as Ordinary Least Squares (OLS) analysis.

5. Calculate the average (e.g., mean or median) asset beta for the sample. This represents an estimate of the asset beta of the regulated business.
6. Re-lever the estimated asset beta using the benchmark gearing assumption adopted by the regulator to obtain an estimate of the equity beta for the regulated business.

2.4.1 Estimation approach

The QCA's current approach to beta estimation involves use of:

- 10 historical years of weekly returns data;
- The mean of the comparator sample;¹⁰
- The Brealey-Myers formula, and a debt beta of 0.12, when de-levering and re-levering; and
- A benchmark gearing ratio of 60% when re-levering to obtain the equity beta estimate.

We explain below that we intend to follow all the above aspects of the QCA's estimation approach, but applied to an expanded set of water utility comparator businesses.

Choice of comparator sample

The QCA's current practice is to estimate the beta for regulated water companies using a sample of listed, international water and energy network companies on the grounds that firms in these two industries "are likely to face similar risk profiles."¹¹ The QCA's main considerations when selecting these two industries is that they contain firms that:

- Do not face material competition (i.e., they are natural monopolies); and
- Have mechanisms to pass through to consumers costs where they differ from forecast levels.

The QCA applies the following screening criteria when selecting comparators from these two industries:

- Water companies – at least 70% of revenue must be derived from activities such as storage, distribution and treatment;
- Energy networks – at least 70% of revenue must be derived from transmission, distribution, and retail services;
- Liquidity – the firm must have a market capitalisation of US\$150 million or greater. The QCA excludes companies below this size threshold because the stocks of small companies tend to be illiquid. There is significant empirical evidence that the beta estimates of illiquid companies are downwardly biased; and
- Country of origin – the QCA has a general preference for firms listed in developed economies as the former are more likely to operate within a more stable political and business environment and are subject to a well-developed system of property rights and legal protections. However, the QCA explains that it will consider firms listed in developing economies if the sample of firms from developed economies is too

¹⁰ QCA, Gladstone Area Water Board price monitoring investigation 2025-30, Final report, April 2025, p. 79.

¹¹ QCA, Rate of return review, September 2024, p. 85.

small—provided there are no country-specific factors that may make the inclusion of those firms unsuitable.

Based on those criteria, the QCA published in September 2024 its preferred comparator sample for use in water pricing decisions, comprising 10 water companies and 29 energy networks.

The QCA's basis for including energy networks in the sample of comparators used to determine a beta estimate for water businesses is the assumption that water companies and energy networks have similar risk profiles. However, Urban Utilities contends that there is little basis for such an assumption other than the fact that firms in these two industries tend to deliver essential services and operate as natural monopolies. This overlooks the possibility that the systematic risk of water and energy networks could differ materially on any number of other dimensions.

Indeed, the empirical evidence suggests that water and energy networks have materially different exposure to systematic risk. This can be seen from Figure 2-1, which plots the mean rolling 10-year asset beta estimates for the water and energy comparators in the QCA's sample. As Figure 2-1 shows, the average asset beta estimate for the QCA's energy network comparators is systematically lower than the average asset beta estimate for the QCA's water network comparators. In some periods the difference between the average water and energy network beta is as large as 0.072. The equivalent difference in the average equity beta estimates is 0.179, assuming 60% gearing.

If, as the QCA suggests, water and energy networks have similar exposure to systematic risk, one would expect the differences between the two curves in Figure 2-1 to be much smaller than they in fact are. One would also expect the curves to 'criss-cross' (due to random variation), rather than for one curve to consistently sit higher than the other.

Figure 2-1: Mean rolling 10-year asset beta estimates for QCA's water and energy comparators

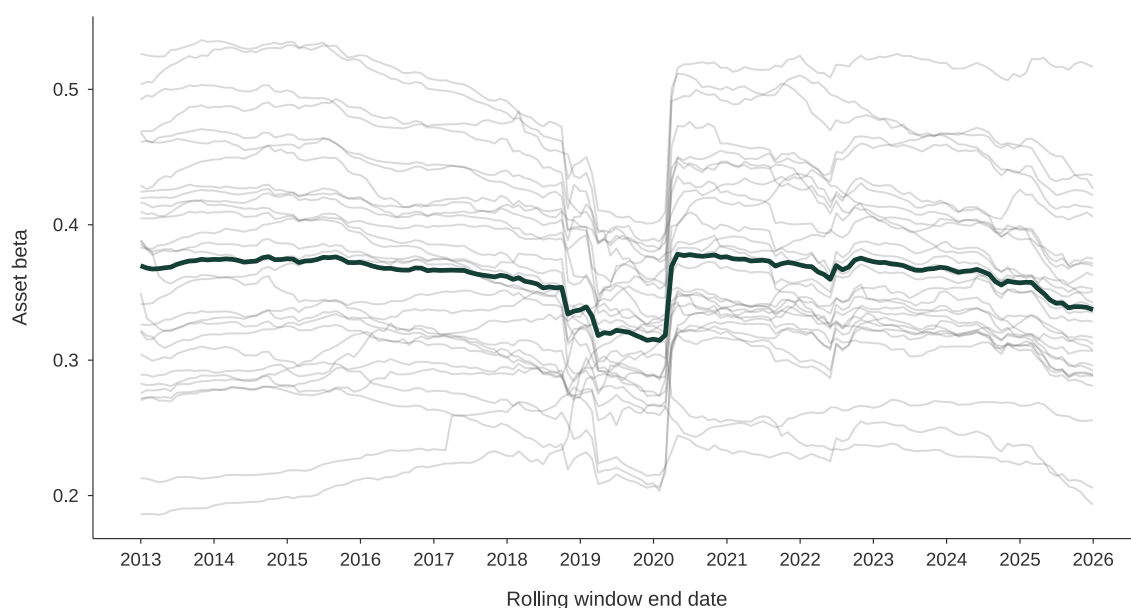


Source: Urban Utilities analysis.

Figure 2-1 also shows that the energy and water networks' asset betas responded very differently to large shocks, such as the financial market disruption caused by the onset of the Covid-19 pandemic in early 2020. Specifically, the average energy beta estimate increased by 0.051 in March 2020, whereas the average water beta increased by just 0.008.

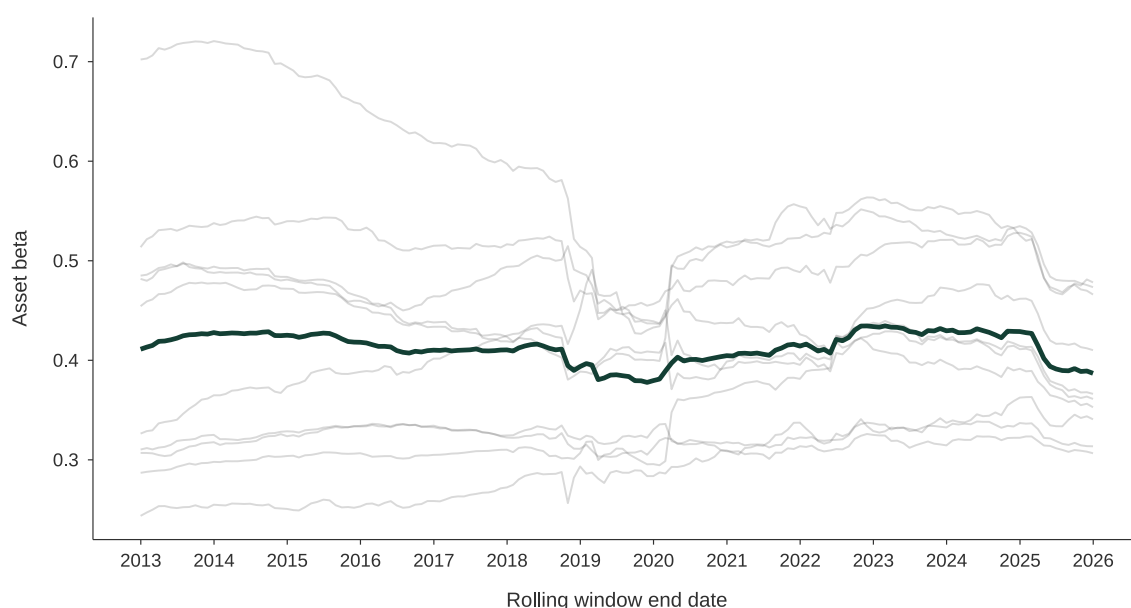
The differences between energy and water network betas are even more evident from the comparison of Figure 2-2 (which plots the rolling beta estimates for the QCA's energy comparators and the mean estimate) and Figure 2-3 (which plots the rolling beta estimates for the QCA's water comparators and the mean estimate).

Figure 2-2: Rolling 10-year asset beta estimates for QCA's energy comparators



Source: Urban Utilities analysis.

Figure 2-3: Rolling 10-year asset beta estimates for QCA's water comparators



Source: Urban Utilities analysis.

As these figures show, the estimated asset betas for almost all the energy comparators in the QCA's sample increased materially at the start of the Covid-19 pandemic. By sharp contrast, the asset beta estimates for most of the water comparators increased only modestly or declined at start of the Covid-19 pandemic; very few water comparators exhibited a large increase in their estimated asset betas.

Material changes in beta estimates occur as influential observations enter and exit the estimation window. For example, in early 2020 stock returns were generally sharply negative, reflecting concerns about the emerging global pandemic. Weekly observations in which the return on a particular stock and the return on the broad market index are both sharply negative will have the effect of increasing beta estimates. And, similarly, when both returns are sharply positive it will have the effect of increasing beta estimates.

Indeed, these sorts of observations are the most informative when estimating beta – given that beta seeks to measure the extent to which a particular investment moves in line with a diversified portfolio of investments. Large movements in the diversified “market” portfolio, and the corresponding movement in an individual stock, provide the clearest evidence of the association between the two that the beta parameter seeks to quantify. This is why it is important to estimate beta over longer periods of 10 years or more – to ensure that there are sufficient number of such informative data points in the estimation window.

The evidence above shows that:

- The beta estimates from the QCA's sample of water utilities are consistently and materially higher than the estimates from the QCA's sample of electricity networks; and
- The estimates for the electricity networks are relatively more volatile.

These two observations indicate that the two sub-samples have tended to respond differently to both:

- Significant movements in the broad stock market index, such as that at the beginning of the Covid period in early 2020; and to
- Moderate changes in the broad stock market index that might occur from week to week.

Moreover, Urban Utilities notes that neither the Australian Energy Regulator (AER) nor the Economic Regulation Authority (ERA) of Western Australia (the two regulators of energy networks in Australia) use water comparators to set a beta allowance for the networks they regulate. Both of those regulators estimate beta for energy network businesses using (exclusively) energy network comparators.

On the basis of this evidence, Urban Utilities submits that the QCA should determine a beta allowance for the FY28-30 period by reference to water network comparators only; the energy networks should be excluded from the estimation exercise. This approach would also be consistent with that adopted by the regulators of electricity network businesses – who clearly do not consider that water utilities are relevant comparators for electricity networks.

Urban Utilities recognises that exclusion of the energy networks from the QCA's comparator sample would result in a significant reduction in the size of the QCA's comparator sample. The beta estimates of individual companies tend to be subject to considerable statistical uncertainty. Most regulators in Australia accept that increasing the comparator size improves the precision of the overall beta estimate because much of the statistical noise associated with the beta estimates of individual firms is eliminated when the estimates are averaged over a larger number of comparable firms.

However, expanding the sample size has a drawback if the expanded sample includes firms that do not face sufficiently similar risks to the firm in question. That appears to be the case in this instance, with the inclusion of energy networks in the comparator sample used to estimate a beta for a water business. A number of regulators have similarly observed that expanding the sample to include poor comparators is likely to introduce bias in the beta estimates.

For example, when developing its current approach to beta estimation, the Independent Pricing and Regulatory Tribunal (IPART) noted the following:

All submissions suggested we consider expanding the set of proxy firms we examine. Frontier Economics made a specific suggestion about the use of alternative industry classification schemes to identify suitable new firms, and we have looked into that suggestion. Sydney Water and some other submitters suggested that we consider including Australian non-water infrastructure firms in the sample.

We agree with Frontier's submission that it is important to recognise that the reliability of an estimate depends on both its statistical precision and the comparability of the firms used to derive that estimate. However, there is usually a trade-off between achieving statistical precision and comparability. Generally, the larger the sample, the greater the statistical precision of estimates.

However, if the size of a comparator sample is expanded beyond a certain point, the comparability of the firms within the sample may diminish. This, in turn, may reduce the reliability of the resulting beta estimate, notwithstanding the improvement in precision from a purely statistical point of view. Conversely, if the sample size is narrowed to permit only the most comparable firms, then the resulting sample is likely to be very small and come at the cost of greater statistical imprecision and variability in estimates over time.¹²

It is noteworthy that during the IPART consultation process one stakeholder, Sydney Water, proposed that IPART should expand its comparator sample to include non-water infrastructure firms (e.g., energy networks). However, due to concerns that doing so would result in the inclusion of firms with different risk exposure to water networks, IPART did not accept Sydney Water's proposal.

To the extent that the QCA is concerned that its sample of water networks may be too small, it should seek to expand that comparator sample to include additional water networks, rather than add energy networks to the sample that would bias the beta estimated due to the difference in systematic risk exposure of water and energy networks.

With that in mind, Urban Utilities investigated whether the number of water comparators could be expanded sufficiently to warrant excluding the energy networks from the comparator sample. IPART has developed a systematic method for identifying relevant comparator firms for the purposes of beta estimation.¹³ Using that method, Urban Utilities identified a total of 26 candidate listed water businesses. All 10 of the water companies used by the QCA were within this sample.

We then investigated the latest published financial accounts of each of these 26 companies to assess whether 70% or more of revenues derive from activities such as water storage, distribution and treatment (one of the selection criteria specified by the QCA). In addition to the 10 water companies used by the QCA, we identified a further nine companies that satisfied this QCA requirement (see Table 2-1).

Table 2-1: Additional water companies identified

Company name	Bloomberg ticker	Market
Aguas Andinas SA	AGUAS/A CI EQUITY	Chile
China Water Affairs Group Ltd	855 HK EQUITY	Hong Kong
Cia de Saneamento Basico do Es	SBSP3 BZ EQUITY	Brazil
Cia de Saneamento de Minas Ger	CSMG3 BZ EQUITY	Brazil
Cia De Sanena Do Parana	SAPR4 BZ EQUITY	Brazil

¹² IPART, Estimating equity beta for the weighted average cost of capital, Draft report, March 2020, p. 6.

¹³ IPART's method for selecting comparators may be inferred using model code that IPART has published: <https://www.ipart.nsw.gov.au/documents/information-request/updated-equity-beta-r-model-november-2022>.

Company name	Bloomberg ticker	Market
Inversiones Aguas Metropolitan	IAM CI EQUITY	Chile
Pennon Group PLC	PNN LN EQUITY	United Kingdom
TTW PCL	TTW TB EQUITY	Thailand
WHA Utilities and Power PCL	WHAUP TB EQUITY	Thailand

Source: Urban Utilities analysis.

Urban Utilities then confirmed that all nine of the additional water companies identified have market capitalisation of at least US\$150 million—a selection criterion the QCA applies to screen out low liquidity stocks.

Table 2-2 below presents the beta estimates for QCA water comparators and the additional water comparators that we identified based on data to 30 June 2026.

Table 2-2: Asset beta estimates of QCA water comparators and additional water comparators – derived using 10-year weekly returns

Company name	Asset beta estimate
QCA water comparators	
American Water Works Co Inc	0.404
American States Water Co	0.352
Artesian Resources Corp	0.295
California Water Service Group	0.355
Middlesex Water Co	0.465
H2O America	0.340
Essential Utilities Inc	0.459
York Water Co/The	0.430
Severn Trent PLC	0.309
United Utilities Group PLC	0.318
Mean – QCA comparators	0.373
Additional water comparators	
Aguas Andinas SA	0.549
China Water Affairs Group Ltd	0.305
Cia de Saneamento Basico do Es	0.714
Cia de Saneamento de Minas Ger	0.584

Company name	Asset beta estimate
Cia De Sanena Do Parana	0.508
Inversiones Aguas Metropolitan	0.334
Pennon Group PLC	0.335
TTW PCL	0.326
WHA Utilities and Power PCL	0.618
Mean – Additional water comparators	0.475
Overall mean of expanded water sample	0.421

Notes: Urban Utilities analysis

As the Table 2-2 shows, the average beta estimate of the additional water companies Urban Utilities identified (0.475) was materially higher than the average asset beta of the water firms in the QCA's sample (0.373). As a result, the average asset beta estimate of the expanded water sample (0.421) is also higher than the average estimate of the water firms in the QCA's sample.

One notable observation is that, except for two firms (China Water Affairs Group Ltd, which is listed in Hong Kong; and Pennon Group Plc, which is listed in the United Kingdom), all of the other additional firms we identified are listed in developing economies (i.e., Chile, Brazil and Thailand).

As noted above, the QCA states that its preference is to use comparators listed in developed economies, but that it would consider firms from developing economies if the size of its comparator sample is too small:

Generally, we consider that firms originating from developed countries are preferable to those from developing or emerging economies, as the former are more likely to operate within a more stable political and business environment and are subject to a well-developed system of property rights and legal protections. However, if after reviewing firms operating in developed countries, we are still concerned with the size of our industry sample, we will turn to investigate firms operating in developing countries to potentially generate a larger sample. In investigating firms operating in developing countries, we will have particular regard to country-specific factors that may make inclusion of certain firms unsuitable.¹⁴

If the QCA considers a sample of 10 water companies is too small, then it could reasonably expand the sample to include all nine additional companies Urban Utilities has identified, by relaxing its requirement that only firms from developed economies should be considered. However, Urban Utilities accepts that a case could be made that the systematic risk exposure of the comparators from Brazil, Chile and Thailand are sufficiently different from

¹⁴ QCA, Rate of return review, September 2024, p. 85.

the risk exposure of the comparators drawn from developed economies (and from Urban Utilities' risk exposure) that those companies should be excluded.

However, there is a compelling case that the two remaining companies—listed in Hong Kong and the United Kingdom—are sufficiently comparable and relevant to warrant their inclusion in the QCA's comparator sample. These two companies are engaged in relevant activities to Urban Utilities and operated in developed economies. Their inclusion would increase the water comparator sample from 10 firms to 12.

Urban Utilities submits that this is a sufficiently large sample for the purposes of estimating beta. Urban Utilities also notes that IPART's 2025 price decisions for Sydney Water, Hunter Water and WaterNSW relied on a total of 13 companies—a very similarly sized comparator sample to the one Urban Utilities proposes.

The addition of China Water Affairs Group Ltd and Pennon Group PLC would result in:

- A beta comparator sample of 12 firms; and
- An asset beta estimate of 0.364 (which, if re-levered using a benchmark gearing of 60% and a debt beta estimate of 0.12, would produce an equity beta estimate of 0.730). This is lower than the asset beta of 0.373 that would be produced using the QCA's 10 water comparators alone.

In summary, Urban Utilities submits that:

- The best set of comparators for a water business is other water businesses—not energy networks.
- The AER and ERA do not use water companies. The AER has considered this issue and rejected water companies as valid comparators for energy networks.
- Adding two new water companies that satisfy all the QCA's criteria increases the sample from 10 to 12, which is a reasonable number of comparators and consistent with the number of comparators used by IPART when regulating water businesses.
- Using data to 30 June 2026, the mean asset beta estimate of the expanded 10+2 water sample is 0.364, which produces an equity beta of 0.730 (re-levering using 60% gearing).

Based on data to 30 June 2026, the indicative asset beta estimate is 0.364 (equity beta of 0.730). This estimate is indicative only and will be updated as per the schedule outlined in .

Urban Utilities submits that this estimate is conservative as it is lower than the beta allowances adopted in recent QCA determinations. For example:

- The QCA's April 2025 decision for the Gladstone Area Water Board adopted an asset beta estimate of 0.39 (equity beta of 0.795 if re-levered using 60% gearing and a debt beta of 0.12);¹⁵
- The QCA's January 2025 decision for Seqwater's rural irrigation price review adopted an equity beta of 0.755 (assuming gearing of 60%); and

¹⁵ QCA, Gladstone Area Water Board price monitoring investigation 2025–30, Final report, April 2025, p. 75.

- The QCA's March 2022 decision for Seqwater's bulk water price review adopted an equity beta estimate of 0.766 (assuming 60% gearing), although in that decision the QCA found that the empirical evidence at the time supported an asset beta of 0.39 and an equity beta of 0.795 (assuming 60% gearing).¹⁶

¹⁶ QCA, Seqwater Bulk Water Price Review 2022–26, Final report, March 2022, p. 65.

3 Gearing

Gearing is the proportion of the total capital of the firm that is financed in the form of debt. When providing the return on capital allowance, the QCA does not use the actual gearing of the regulated business. Rather, the QCA estimates the gearing of an efficient benchmark entity, to provide the regulated business with incentives to finance itself prudently and efficiently.

The QCA has explained that, when estimating a benchmark level of gearing, it will:

*use the current regulatory gearing as a starting point. If there is persuasive evidence that the current benchmark no longer represents efficient gearing, we will determine a new benchmark, having regard to factors such as Australian regulatory precedent, the firm's current risk profile and the gearing of comparator firms.*¹⁷

When regulating water businesses, the QCA has typically adopted a benchmark level of gearing of 60%. The exception to this is when the QCA sets the allowed rate of return for the Gladstone Area Water Board. In those pricing decisions, the QCA has generally adopted a benchmark level of gearing of 50% because the QCA has concluded the Gladstone Area Water Board faces a higher degree of risk and can therefore support less debt within its capital structure, than other water businesses.

Specifically, the QCA has accepted that:

- The Gladstone Area Water Board has a highly concentrated industrial customer base;
- There are no other aspects of the Gladstone Area Water Board's services or operations that decrease its systematic risk exposure relative to Seqwater, or the listed water utilities in the comparator set; and
- The Gladstone Area Water Board's exposure to the emerging hydrogen industry in the Gladstone region is likely to increase its systematic risks.

None of these factors apply to Urban Utilities. By contrast, and similar to Seqwater, Urban Utilities' customer base is diversified, and Urban Utilities does not have significant exposure to an emerging industry such as hydrogen.

For these reasons, Urban Utilities has applied the conventional benchmark gearing of 60% when calculating its allowed rate of return.

¹⁷ QCA, Rate of return review, September 2024, p. 26.

4 Return on debt

The QCA's framework for calculating a return on debt allowance involves the following:

- The QCA sets the return on debt allowance for a regulated business by reference to the cost of debt that would be incurred by a benchmark efficient firm, rather than the actual cost of debt of the regulated business;
- The QCA uses a simple (unweighted) 10-year trailing average approach;
- The QCA assumes a 10-year tenor of debt;
- When regulating water businesses, the QCA typically adopts a BBB benchmark credit rating;
- The QCA uses bond yield data for Australian corporations published by the RBA; and
- The QCA applies an allowance for debt raising costs of 10 basis points per annum.

For the purposes of the FY28-30 period, Urban Utilities has adopted all aspects of the QCA's method for calculating the indicative return on debt.

However, Urban Utilities submits that in future price monitoring periods it may be appropriate to consider the application of a weighted (rather than simple) trailing average approach. Urban Utilities expects that in future periods it may need to undertake significantly more capital expenditure than is forecast for the FY28-30 period—to accommodate growth, asset renewals and to enhance the resilience of Urban Utilities' assets to climate risks. Any such new investments, which will in future be required in order to provide safe, reliable and high quality services to Urban Utilities' customers, must all be financed at prevailing market rates. Urban Utilities cannot finance those future investments at the historical rates reflected in the 10-year trailing average allowance.

- If the prevailing market rates at which those investments must be financed are higher than the simple trailing average allowance, then Urban Utilities would have insufficient revenue to cover its cost of debt. This could deter Urban Utilities from pursuing a prudent and efficient level of investment; but
- If the prevailing market rates at which those investments are lower than the simple trailing average, then Urban Utilities may be incentivised to invest more than the prudent and efficient level.

To minimise the risk of imprudent and inefficient investment, the QCA could in future periods (if Urban Utilities' forecast capex increases materially from current levels), consider the adoption of a weighted trailing average approach. Under such an approach:

- The existing RAB would continue to receive the simple trailing average allowance; but
- New capex would receive a return on debt allowance at the prevailing market rate (i.e., the rate that prevailed at the time the new capex is incurred). The allowance each new tranche of capex would then gradually transition (say over 10 years) to the simple trailing average allowance.

The net effect of this approach is that the return on debt allowance in each year is a weighted average of the quantity of benchmark debt that is assumed to be issued

(consistent with the benchmark gearing level) in order to finance the capex that entered the RAB. As the QCA explains:

*A weighted trailing average approach determines the benchmark cost of debt by applying weights to historical tranche rates within the trailing average. For example, the weights could be based on actual debt issuance data. So, greater weights would be applied to years when more debt is issued.*¹⁸

The QCA goes on to explain that:

*Advantages of the weighted trailing average approach are that it minimises the potential mismatch between the regulatory cost of debt allowance and incurred debt costs; therefore, it provides efficient investment signals, as borrowings for new capital expenditure are compensated at the prevailing rate.*¹⁹

Urban Utilities notes that the AER is currently consulting on whether it should adopt a weighted trailing average approach to set the return on debt allowance because it recognises that this approach can result in a closer match between the regulatory allowance and the efficient cost of debt of a benchmark business. This becomes particularly important when the regulated business in question must raise large quantities of new debt to finance a large forward capital program. The AER is consulting on this matter at present because some electricity transmission networks in particular are expected to undertake very significant new investment to support the energy transition. The weighted trailing average will ensure that such businesses are not exposed to large windfall gains or losses.

Urban Utilities does not consider it necessary to pursue the weighted trailing average approach at the present time because the scale of Urban Utilities' forecast capital expenditure over the FY28-30 period is not large enough to warrant a change from the simple trailing average approach. However, the benefits of adopting the weighted trailing average approach should be reviewed in future periods if Urban Utilities' forecast capital expenditure is expected to increase materially. We note, for the price monitoring investigation into GAWB's water security assets, QCA has been directed to apply a weighted trailing average approach (presumably as a result of the significant capital expenditure involved in the Fitzroy to Gladstone pipeline development).²⁰

Table 4-1 presents Urban Utilities' indicative estimate of the simple 10-year trailing average return on debt based on data to 30 June 2026. This allowance will be updated annually as new tranches of debt become available through the price monitoring period.

¹⁸ QCA, Rate of return review, September 2024, p. 52.

¹⁹ QCA, Rate of return review, September 2024, p. 52.

²⁰ QCA, Gladstone Area Water Board price monitoring 2026-30: water security assets, final report, p. 47

Table 4-1: Calculation of the 10-year trailing average return on debt as of 30 June 2026

Historical tranche	Rate
Simple average	5.05%

Notes: Urban Utilities analysis. For each tranche year, the rate is calculated in accordance with the QCA's approach as the simple average of month-end observations [REDACTED] of the 10-year bond yield. The bond yield is measured as the interpolated Australian Government Security yield plus a debt risk premium, where the debt risk premium is defined as the difference between the BBB corporate bond yield and the corresponding 10-year AGS yield, as reported in the RBA's F3 and F16 tables, respectively. The indicative return on debt of 5.05% does not include the debt raising costs of 10 basis points per annum

*. This is an estimated value as of 30 June 2026 and will be updated once actual data becomes available

The indicative return on debt of 5.15% is the sum of debt raising costs of 10 basis points per annum and trailing average return on debt of 5.05%.

5 Gamma

Gamma represents the value that investors attach to imputation tax credits. The QCA's standard approach (consistent with the approach adopted by other Australian regulators) is to assume that some of the total return required by equity investors derives from the value of imputation tax credits, with the remainder of the return deriving from profits paid out in the form of dividends and capital gains. Hence, the QCA makes a deduction to the revenue requirement commensurate with its estimate of the value of imputation tax credits. Gamma is the key parameter that determines the size of that revenue deduction.

Strictly speaking, gamma is not a rate of return parameter. However, given the close conceptual relationship between the revenue deduction to reflect the expected value of imputation tax credits and the total return required by investors, in practice gamma is treated by the QCA as part of its rate of return framework.

The QCA estimates gamma as the product of two parameters, which themselves require estimation:

- the distribution rate: the ratio of distributed imputation credits to company tax paid; and
- the utilisation rate (theta): the rate at which distributed imputation credits are used by investors in the market.

The QCA's current estimate of the distribution rate is 0.88, and its latest estimate of the utilisation rate is 0.55. Taking the product of these two numbers produces a gamma estimate of 0.484.²¹

Urban Utilities has adopted the QCA gamma estimate of 0.484 for the price monitoring period.

²¹ QCA, Rate of return review, September 2024, p. 101.

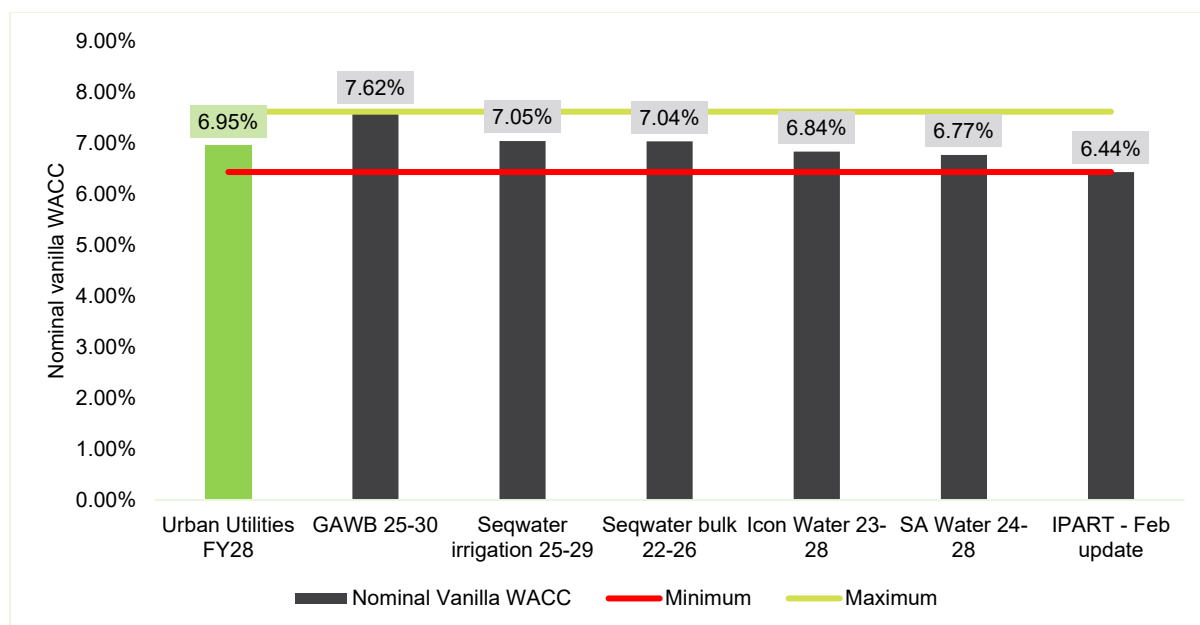
6 Top-down assessment

Consistent with the QCA's approach, a top-down assessment was undertaken to evaluate the reasonableness and robustness of Urban Utilities' indicative bottom-up WACC estimate. This assessment considered recent WACC determinations for Australian water businesses by other economic regulators.

To enable a like-for-like comparison, the time-varying WACC parameters, namely the risk-free rate and cost of debt, were updated, while the non-time-varying parameters, including beta and the market risk premium (MRP), were held constant. The time-varying parameters were updated using market data referenced to the 30 June 2026 period, while maintaining each regulator's adopted estimation methodology and averaging period length.

On a normalised basis, Urban Utilities' indicative bottom-up WACC estimate of 6.95% for FY28 falls within the range of recent WACC determinations for Australian water businesses, providing support for the reasonableness of the estimate (Figure 6-1).

Figure 6-1 Normalised WACC comparisons (%)



Notes: Urban Utilities analysis as of 30 June 2026. GAWB is transitioning from an on-the-day cost of debt approach to a trailing average, resulting in a higher cost of debt parameter compared to other jurisdictions. The IPART WACC is an average of current market data and 10-year historical averages.