

19 August 2019

Adam Wilson Chief Executive Officer Essential Services Commission of South Australia GPO Box 2605 Adelaide SA 5001

Dear Adam

## Submission on Guidance Papers 6 and 7 for the SA Water Regulatory Determination 2020

SA Water wishes to make a submission to ESCOSA in response to the two Guidance Papers on 'the treatment of inflation in the regulatory rate of return' and 'the averaging period of the risk-free rate'.

In reviewing the Guidance Papers, SA Water wishes to highlight the importance of considering the overall impact that the different parameters have on the final rate of return. Whilst the guidance papers focus on the accuracy of alternate methods to forecast each of the rate of return parameters (risk-free rate and inflation), it is important that the forecast for these parameters also be considered for reasonableness in the context of current economic conditions. This is further discussed in Appendix A.

We have also noted your alternate suggestion to address the issues around forecasting errors by applying an annual reset to the rate of return. However, the guidance papers have not provided any detail on how such a mechanism would work in practice. Hence, we have undertaken internal modelling on this and, based on this modelling, we do not believe an annual reset approach to be suitable. It does not allow prices to be forecast over the regulatory period and the annual adjustments themselves can create significant uncertainty on both prices for customers and returns to the owner.

In closing, we wish to stress the importance that the final outcome of the rate of return be assessed against a financial viability assessment. As the return on the regulated asset base (RAB) is the largest component in the building block model, the impact on SA Water's financial viability will be significant and this would limit the ability of SA Water to invest to meet customer service expectations.

Based upon this proposed methodology we don't believe the Essential Services Commission is fulfilling its obligations under the *Essential Services Commission Act 2002*, in terms of maintaining the financial viability of the regulated entity or promoting consistency in regulation with other jurisdictions. As the methodology will have a significant impact on both customers and SA Water, we would welcome a prompt resolution on this matter.

Yours sincerel

Mark Gobbie Acting Chief Executive



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# Appendix A

## 1. Reasonableness of Parameters

- 1.1. We specifically wish to highlight the inappropriateness of the outcome of the inflation forecasting methodology given the current economic environment and when considering the other parameters (10-year risk-free rate) used to calculate the rate of return.
- 1.2. The guidance paper explains, using a long-term estimate of inflation is consistent with the term of the market instruments used to arrive at the nominal rate of return. However, it should be noted that for the risk-free rate (10-year Commonwealth Government Bonds (CGB)), although the tenor of the instrument is 10-years, the rate used in the model is a point in time (20-day average). This creates an inherent inconsistency with the inflation expectation embedded in the CGB rate and that of the long-term inflation expectation used in the methodology.
- 1.3. This is highlighted in Figure 1, the 10-year CGB (nominal) as June 2019 is 1.32%. Using an inflation estimate of 2.45% (current ESCOSA inflation estimation method) implies the real risk-free interest rate for the next regulatory period is negative 1.12%.



#### Figure 1 – Inflation vs risk free rate

Source: RBA and ABS

1.4. The assumption of a negative real risk-free rate of approximately 1.2% is not supported by historic information as seen in Figure 2. We see a large difference between the real risk-free rate implied in the methodology and the only directly observable 10-year real risk-free rate (i.e. Commonwealth Government Inflation Indexed Bonds). We conceded that these bonds may suffer from different biases and premiums (as detailed in your guidance paper), however we should not totally discount this information when considering the appropriateness of the inflation estimate for the next regulatory period. (movement of inflation indexed bonds maturing in 2027 & 2030 is portrayed in Figure 3).





Source: RBA and ABS





Source: RBA

- 1.5. The reasonableness of the inflation estimate of 2.45% for the next regulatory period needs to be considered against the current economic environment. When discussing current monetary policy and inflation targeting on 25 July 2019, the RBA Governor noted while the Monetary Board is strongly committed to delivering an average rate of inflation between 2 and 3 per cent, it would be some time before inflation is comfortably back within the target range1.
- 1.6. In addition to this, it should be noted that although the long-term average for inflation since the RBA commenced inflation targeting is close to 2.5%, the average is lower when shorter time frames are considered (refer Figure 4). This is consistent with current global trends, as discussed by the RBA Governor, where three-quarters of advanced economies have a core inflation rate below 2 per cent, and one-third have a core inflation rate below 1 per cent. (refer Figure 5).

<sup>&</sup>lt;sup>1</sup> https://www.rba.gov.au/speeches/2019/sp-gov-2019-07-25.html





Figure 4 – Distribution of inflation



Sources: OECD; RBA

# 2. Impact on Financial Viability

- 2.1. We wish to re-elaborate that under the objectives set out in the Essential Services Commission Act of 2002 (ESC Act)<sup>2</sup>, the commission must have regards to;
  - Facilitate the maintenance of the financial viability of the regulated industries and incentive for long term investment; and
  - Promote consistency in regulation with other jurisdictions.
- 2.2. In line with the objectives set out under the ESC Act, we strongly believe that the reasonableness of the rate of return outcome be verified against a financial viability assessment benchmarking a BBB entity as per the assumption used to determine the parameters in the rate of return. We further advocate that irrespective of the rate of return outcome based on the current rate of return methodology, a minimum rate of return be set using a financial viability assessment.
- 2.3. As the Commission has not provided any guidance on how financial viability should be assessed, we continue to utilise our financial viability assessment which is based on the credit rating benchmarks published by Moody's.
- 2.4. Based on our assessment, the rate of return outcome under the current methodology (using June 2019 inputs) results in an equivalent rating of BB+ in the third regulatory period. Further analysis indicates a minimum rate of return of around 3.50% would be required to remain within the acceptable benchmark during the third regulatory period (this assessment is based at a point in time and the minimum requirement may change based on changes to other factors such as expenditure etc.).

## 3. Comparison with other jurisdictions that use a Real Pre-Tax Rate of Return

- 3.1. When comparing ESCOSA's current methodology against recent rate of return outcomes of other regulators in Australia that calculate a real post-tax rate of return (i.e. IPART and ESCV), the ESOCSA methodology delivers notably lower outcomes (refer Table 1 and Figure 5).
- 3.2. It should be noted that although both IPART and ESCV use a real pre-tax rate of return, the rate of return is adjusted annually for the cost of debt.
- 3.3. Further, ESCV do not use the Sharpe-Lintner CAP model to determine the cost of equity. Instead they use the PREMO framework to determine the cost of equity for the relevant utility.

<sup>&</sup>lt;sup>2</sup>https://www.legislation.sa.gov.au/LZ/C/A/ESSENTIAL%20SERVICES%20COMMISSION%20ACT%202002/CURRENT/2002.14.AUTH.PDF

## Table 1 - Comparison with other Regulators

Regulator	Rate of Return	Market Data	Rate of Return under ESOCSA method
IPART model	3.80%	Up to 31 Jul 2019	2.45%
IPART – Sydney Water pricing proposal <sup>3</sup>	4.10%	Up to 31 Jan 2019	3.11%
ESCV – Goulburn Valley Water determination⁴	4.29%	Up to 31 Mar 2018	3.20%
ESCV – Yarra Valley Water determination <sup>5</sup>	4.13%	Up to 31 Mar 2018	3.20%

### Figure 5 – Comparison of rate of return determinations



## 4. Annual adjustments to the rate of return

- 4.1. In the two guidance papers, an alternate method, that is to update the rate of return annually has been suggested. However, details of how such a mechanism would be implemented have not been provided in the relevant guidance papers.
- 4.2. Hence, we have undertaken internal modelling on this to understand the feasibility of this suggestion. Based on this modelling we are not in favour of this approach as it does not allow prices to be set for the full regulatory period and the annual adjustments can create significant volatility to prices.

<sup>&</sup>lt;sup>3</sup> https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-prices-for-sydney-watercorporation-from-1-july-2020/legislative-requirements-prices-for-sydney-water-corporation-from-1-july-2020/sydney-water-pricing-proposal.pdf <sup>4</sup> https://www.esc.vic.gov.au/sites/default/files/documents/2018-water-price-review-goulburn-valley-water-determination-20180619.pdf

<sup>&</sup>lt;sup>5</sup> https://www.esc.vic.gov.au/sites/default/files/documents/Yarra-Valley-Water-determination.pdf

- 4.3. For example, if actual inflation is 0.50% lower than the inflation estimate for the first year of the regulatory period, approximately \$67m in real revenue has to be recovered in the following year. This is before the impact of any adjustment to the cost of debt and equity.
- 4.4. We also have considered a banking mechanism but discounted it on the basis that it is likely to exaggerate the risk of a step change in prices across regulatory periods as not only would there be the impact of the change in rate, but also the need to adjust for any 'banked' revenue. Additionally, it would not address annual profit impacts and, with falling revenue, could be perceived as withholding price reductions from customers.

## 5. SA Water Proposal

5.1. We do not propose any significant changes to how the rate of return is calculated in nominal terms. Our proposal is focussed around the following;

### 5.2. Averaging period of risk-free rate:

- 5.2.1. We propose moving to a 60-day averaging period to determine the risk-free rate when calculating the cost of equity. Based on the analysis and conclusion by ESCOSA, there is little difference between the forecast accuracy of the short-term averaging periods.
- 5.2.2. We believe this method would to some extent smoothen out the volatility experienced in bond markets while ensuring the risk-free rate is still a fair representation of current market rates which is deemed to be the best estimate of future interest rates.

### 5.3. Inflation Estimate:

- 5.3.1. We propose moving from an inflation estimate mainly based on the RBA mid-point for the long-term forecast to the RBA 1-year inflation forecast to determine the real rate of return. To avoid an illogical real risk-free rate that is not positive, we also propose, irrespective of what methodology is used for the inflation estimate, it is capped at 0.15% less than the risk-free rate used in the rate of return calculation (refer Figure 6).
- 5.3.2. This approach would prevent a negative risk free rate and based on June 2019 market inputs it would result in a CPI estimate of 1.48%, which is consistent with current CPIs as well as the market expectation of -CPI (of 1.38% and 1.67% refer Figure 7).
- 5.3.3. Based on market information as at 30 June 2019, the resulting rate of return outcomes under our proposed method is 3.59% (Real Post-Tax). It should be noted that the final rate of return outcome for the third regulatory period will be determined in May 2020 and could vary significantly with market movements.

#### 5.4. Reasonableness of Rate of Return:

- 5.4.1. We propose a minimum threshold for financial returns, and the rate of return is considered in light of a minimum acceptable financial viability. Thus, ensuring the business maintains appropriate financial viability and the incentive for long term investment exists and is consistent with the objectives set out under the ESC Act.
- 5.4.2. Based on our financial viability assessment, we have determined a minimum rate of return of around 3.50% is required. This assessment is based at a point in time and the minimum requirement may change based on changes to other factors such as expenditure etc.
- 5.5. A comparison of the methodology incorporating our proposal and the current ESCOSA methodology is provided in Table 2.





Source: RBA and ABS





Source: RBA and ABS

Parameter	ESCOSA – 2020 Proposed Method	SAW – Proposed method			
COST OF DEBT ESTIMATION					
Debt Risk Premium	10-year BBB Proxy Bond (sourced from the RBA Series of Credit Spreads)	10-year BBB Proxy Bond (sourced from the RBA Series of Credit Spreads)			
Averaging Period	10-year trailing average	10-year trailing average			
Debt Raising Cost	0.125%	0.125%			
COST OF EQUITY ESTIMATION					
Risk Free Rate	10-year CGB (nominal)	10-year CGB (nominal)			
Averaging Period	20 days	60 days			
Market Risk Premium (MRP)	6.0%	6.0%			
Equity Beta	0.60 – 0.70	0.70			
OTHER					
Inflation	10-year average: RBA forecast for first year and mid- point of RBA inflation target band for remaining 9 years (2.5%)	1-year RBA forecast Inflation estimate capped at inputted Risk-Free Rate minus 0.15%.			
Credit Rating	ВВВ	BBB			
Gearing	60%	60%			
Gamma	0.50	0.50			

Table 2 – Comparison of Key parameters in the rate	of return calculation
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