

23 January 2015

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Dear Mr Wilson

**SA Water Regulatory Rate of Return 2016 – 2020 Draft Report to the Treasurer  
(Draft Report)**

Thank you for the opportunity to provide input into the proposed approaches to the estimation parameters to calculate the rate of return to apply from 1 July 2016.

Enclosed is SA Water's response to the Draft Report.

We would welcome the opportunity to discuss the matters raised in more detail.

Yours sincerely



John Ringham  
**CHIEF EXECUTIVE**



# SA Water Regulatory Rate of Return 2016 - 2020

*Draft Report to the Treasurer*

## Public Response

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## Contents

<b>Glossary of Terms</b> .....	<b>3</b>
<b>1 Executive Summary</b> .....	<b>4</b>
<b>2 Background</b> .....	<b>8</b>
2.1 Regulatory Rate of Return Framework .....	8
2.2 ESCOSA’s Proposed Methodology .....	9
<b>3 ESCOSA’s Draft Report</b> .....	<b>10</b>
3.1 Inconsistent with Interstate Regulatory Precedent .....	10
3.2 Not Reflective of an Efficient Business .....	10
3.3 Internally Inconsistent .....	11
3.4 Sets Unrealistic Expectations for Customers .....	11
3.5 Creates Price Volatility for Customers .....	12
<b>4 Interstate Regulatory Precedent</b> .....	<b>13</b>
4.1 Background and Context .....	13
4.2 Relevant Regulatory Precedents .....	14
4.3 Regulatory Precedents not Relevant to SA Water .....	14
4.4 Balance of Regulatory Precedent .....	15
<b>5 Long Term Interests of Customers</b> .....	<b>17</b>
5.1 Price Stability - Avoidable Significant Price Volatility .....	17
5.2 Safe and Reliable Service .....	19
5.3 A Financially Viable SA Water .....	19
<b>6 SA Water’s Proposed Methodology</b> .....	<b>20</b>
6.1 Summary of Proposed Methodology .....	20
6.2 Comparison to ESCOSA’s Draft Report .....	20
<b>7 Averaging periods</b> .....	<b>22</b>
7.1 Short Term Approach Shortcomings .....	22
7.2 Better Outcomes for Customers .....	22
7.3 Funding Costs for an Efficient Utility .....	24
7.4 Risk Management Concerns .....	25
7.5 Alignment to Regulatory Objectives .....	26
7.6 Regulatory Support .....	27
<b>8 Term to Maturity</b> .....	<b>28</b>
8.1 ESCOSA’s Proposed Approach .....	28
8.2 Shortcomings with Adopting a 4 year Term to Maturity Assumption .....	28
8.3 Regulatory Support .....	30
<b>9 Cost of Equity Estimate</b> .....	<b>32</b>
9.1 Consistent and Stable Outcomes .....	32
<b>10 Transitional Approaches</b> .....	<b>33</b>
<b>Appendix 1 – ESCOSA and SA Water Proposed Methodologies</b> .....	<b>34</b>

## Glossary of Terms

<b>AEMC</b>	Australian Energy Market Commission
<b>AER</b>	Australian Energy Regulator
<b>CAPM</b>	Capital Asset Pricing Model
<b>CGB</b>	Commonwealth Government Bond
<b>CPI</b>	Consumer Price Index
<b>DRP</b>	Debt Risk Premium
<b>ESCOSA</b>	Essential Services Commission of South Australia
<b>ERA</b>	Economic Regulation Authority of Western Australia
<b>ESCV</b>	Essential Services Commission of Victoria
<b>GFC</b>	Global Financial Crisis
<b>ICRC</b>	Independent Competition and Regulatory Commission
<b>IPART</b>	Independent Pricing & Regulatory Tribunal, NSW
<b>MRP</b>	Market Risk Premium
<b>NERA</b>	NERA Economic Consulting
<b>NWIPP</b>	National Water Initiative Pricing Principles
<b>OFGEM</b>	The Office of Gas and Electricity Markets (UK)
<b>OFWAT</b>	The Water Services Regulation Authority (England and Wales)
<b>QCA</b>	Queensland Competition Authority
<b>QTC</b>	Queensland Treasury Corporation
<b>RBA</b>	Reserve Bank of Australia
<b>SAFA</b>	South Australian Government Financing Authority
<b>TCorp</b>	Treasury Corporation of New South Wales
<b>WACC</b>	Weighted Average Cost of Capital
<b>WATC</b>	Western Australian Treasury Corporation

# 1 Executive Summary

The regulatory rate of return is a key element in the setting of prices for water and sewerage services. The rate of return can impact the overall cost to customers, the incentive to invest in new infrastructure and the variability of costs to customers over time.

In setting a rate of return for each pricing determination, we consider in principle that the Essential Services Commission of South Australia's (**ESCOSA**) rate of return framework must:

- Provide an adequate investment incentive over the medium term so there is not over or under investment in infrastructure and an incentive for private sector investment;
- Encourage, not distort, the prudent and efficient debt management practices and not drive unnecessary hedging and/or refinancing risks;
- Not expose our business and the South Australian Government to unnecessarily heightened and inefficient financial risk;
- Provide our owner, the South Australian Government (and by extension the people of South Australia), with a return consistent with businesses subject to similar risks;
- Provide for greater regulatory certainty; allowing us to align our cost of debt and equity with the regulatory rate of return (within acceptable bounds);
- Be consistent with general regulatory precedent; and
- Provide price stability over time to avoid future price volatility for customers.

A number of the elements in ESCOSA's *SA Water Regulatory Rate of Return 2016 – 2020, Draft Report to the Treasurer (Draft Report)*, are reasonably consistent with general regulatory precedent:

- Adoption of the Reserve Bank of Australia's (**RBA**) series of credit spreads for estimating the debt risk premium (**DRP**); and
- Retention of the existing generally accepted regulatory assumptions for gearing (60% debt), credit rating (BBB), equity beta (0.80), the market risk premium (MRP) (6.0%) and the value of imputation credits (gamma – 0.50).

In principle, we are supportive of the above elements of the methodology; however they should be commensurate with the level of risk associated with the overall rate of return methodology. This is not the case when considering the following elements of ESCOSA's proposed approach:

- Moving from a 10 year to a 4 year term to maturity assumption; and
- Continuing to use a 20 day averaging period, rather than transitioning to a longer term averaging assumption.

These elements of ESCOSA's methodology do not align with the requirements for a rate of return framework, as previously listed. Particularly, they do not provide price stability for customers and they expose our business to inefficient financial risk. We therefore do not support these elements and have suggested an alternative approach.

Rate of return estimates undertaken by regulators since the Global Financial Crisis (**GFC**) have highlighted issues with the ongoing use of short term averaging periods for estimating the efficient cost of financing. Numerous Australian regulators have reviewed and developed updated rate of return methodologies since ESCOSA's First Price Determination in 2013. ESCOSA's proposal is not consistent with this recent regulatory precedent.

We have proposed an approach that is consistent with recent regulatory precedent, addresses the increased risk of the short term averaging and maturity periods and supports the remaining elements of ESCOSA's proposed methodology.

While our proposed approach significantly reduces the risk of future price volatility to customers, transition arrangements are proposed to ensure that customers are not disadvantaged in the short term as a result of the change in methodology and the current level of market interest rates.

### Regulatory Precedent and Regulatory Certainty

There are significant benefits for customers, utilities and the broader economy in having consistency between regulatory jurisdictions and between determination periods. Uncertainty and inconsistency creates disincentives for appropriate levels of investment and distorts investment behaviour, creating inefficiency and cost. Ongoing changes to regulatory models and key assumptions are costly for both regulators and regulated entities, with those costs borne by regulated customers.

Recent practice for relevant regulators in Australia has been to introduce longer term trailing averages to estimate observable market inputs, consistent with well-established regulated environments in the United Kingdom. As an example, the Australian Energy Regulator (**AER**) and Independent Pricing & Regulatory Tribunal (**IPART**) have both introduced longer term averages (i.e. over a 10 year period) into their regulatory models in response to increased market volatility which impacts customer prices and the financial viability of regulated utilities.

Maintaining the 10 year bond term for the risk free rate (of which a Commonwealth Government Bond (**CGB**) yield is a suitable proxy), as adopted by ESCOSA in the First Price Determination, is in line with current practice for the majority of regulators in Australia, who are either maintaining or adopting this approach.

### Adequate Investment Incentive and Reflective of an Efficient Business

ESCOSA's proposed methodology does not align the rate of return with efficient financing costs for a commercial utility.

Adopting a 4 year term and maintaining the use of short term averaging periods means that the rate of return proposed by ESCOSA in its Draft Report is one of the lowest set in Australia.

If the rate of return is lower than the true cost of finance it provides a disincentive for investing in infrastructure and is a disincentive for private sector investment in the South Australian water industry. This would ultimately result in a drop in the level of service received by customers and an increase in operating costs (which could increase prices in the longer term, as increases in operational costs have a direct impact on the cost of the service to customers).

### Misalignment with Efficient Funding Costs

Efficient commercial businesses apply a portfolio methodology to manage their debt, whereby only a portion of total debt matures and reprices each year and where instruments with medium to long terms to maturity are used. This reduces financial risks to an acceptable level and minimises the risk of organisational failure.

Combining a 4 year term to maturity and 20 day averaging period assumes that a regulated business will refinance all of its debt and equity at the time of the regulatory reset. Based upon our level of debt and equity (\$11 billion) it is not realistically possible to refinance in this way without incurring considerable risk. This is inconsistent with prudent financial risk management and does not reflect the true costs of financing a regulated business. Several government borrowing authorities have publicly expressed their concerns over the risks introduced by regulators using short term averaging periods and term assumptions.

Shortening the term assumption from 10 to 4 years could have a material influence on the State Government's credit rating, as it would significantly increase our annual borrowing requirements and lead to a deterioration in financial credit metrics. This is not in the long term interests of customers and the South Australian community.

While the use of long term debt instruments attracts a premium over shorter term instruments, this essentially acts as insurance against organisational failure and if not used would likely result in borrowing costs being higher as investors require compensation for the higher organisational risk.

We are greatly concerned that the 'low case' rate of return estimate outlined in ESCOSA's Draft Report (using short term estimates) is significantly below our projected efficiently incurred financing costs for the period 2016-2020. This violates a key regulatory objective insofar that we, an efficiently operating business, will not have the opportunity to earn a rate of return equal to our estimated cost of capital.

### Price Stability

The preferred approach proposed in the Draft Report would not deliver the customer requirements in ESCOSA's legislation and does not meet ESCOSA's primary objective, "*protection of the long term interests of South Australian consumers with respect to price, quality and reliability of essential services*"<sup>1</sup>, as it creates the risk of ongoing price volatility between regulatory periods.

Based upon historical data, the use of a 20 day average for observable inputs could result in a price movement by as much as 30% from one regulatory period to the next.

### Consultative Process

We would like to commend ESCOSA for adopting an open and consultative approach. While we do not agree with all of ESCOSA's conclusions in its Draft Report, the ability to engage in debate about regulatory practice as it evolves is a valuable exercise and we would encourage ESCOSA to maintain similar processes in the future.

<sup>1</sup> Essential Service Commission Act 2002

Our proposed approach for the rate of return is discussed in more detail later in this paper. We have structured our submission as follows:

- Section 2 examines the regulatory rate of return framework;
- Section 3 assesses the Draft Report released by ESCOSA;
- Section 4 discusses the interstate and overseas regulatory environments;
- Section 5 discusses the long term interest of customers concept;
- Section 6 provides a high level summary of SA Water's proposed methodology;
- Section 7 discusses the benefits of adopting longer term averaging periods;
- Section 8 discusses setting an appropriate term to maturity assumption;
- Section 9 addresses the cost of equity estimate; and
- Section 10 discusses the available transition approaches.

The approach we have proposed would significantly improve the regulatory environment for us, our customers and ESCOSA. We would be happy to assist ESCOSA if further clarification is required.

## 2 Background

### 2.1 Regulatory Rate of Return Framework

The regulatory rate of return is the largest component of our revenue determination and, under certain regulatory approaches, has the potential to be highly volatile from one regulatory period to the next. This volatility can have a significant impact on customer prices and revenue. Such an outcome is inconsistent with an infrastructure business which invests in long term assets, and finances its activities in an efficient manner (Refer to Section 7.3 for further detail).

ESCOSA's requirements in relation to regulatory rate of return are specified in the National Water Initiative Pricing Principles (**NWIPP**). Unlike the National Electricity Rules, the NWIPP do not provide a detailed approach or limitations for regulators when setting the regulatory rate of return. The only specific guidance provided is that the rate of return should be developed in accordance with the cost of debt and cost of equity derived from the Capital Asset Pricing Model (**CAPM**).

ESCOSA's overall regulatory objectives are set out in Section 6 of the Essential Services Commission Act:

#### ***Essential Services Commission Act: Section 6—Objectives***

In performing ESCOSA's functions, ESCOSA must—

- (a) have as its primary objective protection of the long term interests of South Australian consumers with respect to the price, quality and reliability of essential services; and
- (b) at the same time, have regard to the need to—
  - (i) promote competitive and fair market conduct;
  - (ii) prevent misuse of monopoly or market power;
  - (iii) facilitate entry into relevant markets;
  - (iv) promote economic efficiency;
  - (v) ensure consumers benefit from competition and efficiency;
  - (vi) facilitate maintenance of the financial viability of regulated industries and the incentive for long term investment; and
  - (vii) promote consistency in regulation with other jurisdictions.

As a requirement of the Pricing Order issued on 2 September 2014, ESCOSA is required to provide a report to the Treasurer by 31 March 2015 on its proposed approach for calculating the regulatory rate of return to apply to our assets in the Second Price Determination.

On 21 November 2014, ESCOSA released its Draft Report.

ESCOSA is now seeking responses to the Draft Report prior to finalising its report to the Treasurer.

## 2.2 ESCOSA's Proposed Methodology

ESCOSA's proposed approach in the Draft Report relates to the estimation of various parameters used to calculate the rate of return. Some changes to ESCOSA's previous rate of return methodology have been proposed:

- Data for market-based parameters (risk free rate, DRP and inflation) to be based on a 4-year term to maturity, rather than the 10-year term to maturity used by ESCOSA in the First Price Determination.
- The adoption of the RBA's series of credit spreads (instead of the Bloomberg fair value curve) to estimate the DRP.

The following approaches to estimating parameters have been maintained as per the First Price Determination:

- An averaging period of 20 days to calculate market-based parameters;
- A credit rating assumption of BBB;
- A MRP estimate of 6.0%;
- An equity beta value of 0.80;
- Gearing of 60%;
- A corporate tax rate of 30%; and
- A value for imputation tax credits (Gamma) of 0.50.

### 3 ESCOSA's Draft Report

The methodology suggested in the Draft Report moves away from ESCOSA's previous positions regarding rate of return without a strong case being presented and is inconsistent with recent regulatory precedent.

It is also not in the long term interests of customers, could set unrealistic expectations as to price outcomes from the proposed methodology in the next determination period and increases the potential for significant price volatility for customers in future determination periods.

#### 3.1 Inconsistent with Interstate Regulatory Precedent

ESCOSA contends that the adoption of a 4 year term to maturity and a 20 day averaging period is consistent with regulatory precedent; however this is not the case.

The sample data in the Draft Report does not include the most recent regulatory reviews (such as IPART's methodology review released in December 2013) and does not present the full picture regarding IPART's recent pricing decisions. The inclusion of these precedents would provide a much different picture as to the weight of regulatory precedent.

More relevant and recent regulatory precedent supports the maintenance of 10 year term to maturity instruments and progressive lengthening of averaging periods over time.

Regulatory precedents are discussed in more detail in Section 4.

#### 3.2 Not Reflective of an Efficient Business

Combining a 4 year term to maturity and 20 day averaging period assumes that a regulated business will refinance all its debt and equity just prior to the regulatory reset. This is inconsistent with appropriate financial risk management and therefore does not reflect the true costs of financing a regulated business. This view is supported by government borrowing authorities, who have an intimate knowledge of financial markets, and have made public statements which support our proposed approach:

Treasury Corporation of New South Wales (**TCorp**)

*"The recent falls in the risk free rate highlight the difficulties in estimating debt costs from 20 day averages and 5 year market parameters. A more robust, transparent and internally consistent alternative would calculate debt costs from 10 year averages and 10 year parameters"*<sup>2</sup>

Queensland Treasury Corporation (**QTC**)

*"QTC supports a trailing average portfolio approach to calculate the return on debt. This approach is considered to be reflective of efficient practice provided the benchmark debt tenor and averaging period are an appropriate length, which QTC considers to be 10 years"*<sup>3</sup>

<sup>2</sup> TCorp, *Submission for Sydney Water Final Determination*, 24 January 2012, p1

<sup>3</sup> QTC, *Submission to the Draft Rate of Return Guideline*, 11 October 2013, p1

## Western Australian Treasury Corporation (**WATC**)

*“In line with earlier submissions, WATC remains strongly opposed to the current (short term averaging) approach of fixing the Return on Debt allowance over the regulatory period and continues to endorse a trailing average approach”<sup>4</sup>*

There is a risk that if an inadequate return is provided to cover financing costs, a regulated business may defer or re-profile capital investment as the costs of financing cannot be covered. This is not in the long-term interests of customers.

On page 27 of its Draft Report ESCOSA stated that *“potential price shocks to customers and windfall gains to SA Water are avoided by maintaining the current 20 day approach”*. This is incorrect and misleading as windfall gains do not arise from changes in the regulatory rate of return allowance, rather they arise from differences between the regulatory rate of return and actual costs. Moving to a methodology that is closer to how an efficient business finances its activities would actually reduce the chance of windfall gains. ESCOSA’s proposed methodology provides a greater likelihood of windfall gains occurring.

### **3.3 Internally Inconsistent**

ESCOSA has proposed the use of short term financing assumptions. Arguments are not provided as to what the impact of those assumptions would have on other elements of the rate of return.

An entity refinancing all its borrowings in a short window using short term instruments would have a higher risk profile than an efficiently financed business. An allowance should be made through a higher DRP (i.e. a lower credit rating than the benchmark BBB entity), benchmarked against higher risk entities rather than the market average. A higher equity beta may also be required and an allowance for higher financing administrative and hedging costs would need to be made. Further detail on efficient borrowing practices is provided in Sections 7.3 and 7.4.

All these factors would increase the value of the rate of return.

### **3.4 Sets Unrealistic Expectations for Customers**

The market data utilised in ESCOSA’s Draft Report indicates that there will be a significant fall in customer prices through the adoption of its proposed methodology.

The rate of return is only one element used to set customer prices, and the final impact on customers will be a combination of all elements of the regulatory framework.

We note that due to the inherently volatile nature of taking samples of market data within a short term window, it is equally possible that prices for 2016 – 2020 could increase by the time the rate of return is set in April/May 2016.

If a longer averaging period were used, customers could now be given relative certainty as to likely price outcomes in the next regulatory period, upon which they could build their business and personal budgets.

Irrespective of the actual outcome for the next regulatory period, the volatility between regulatory periods discussed earlier remains.

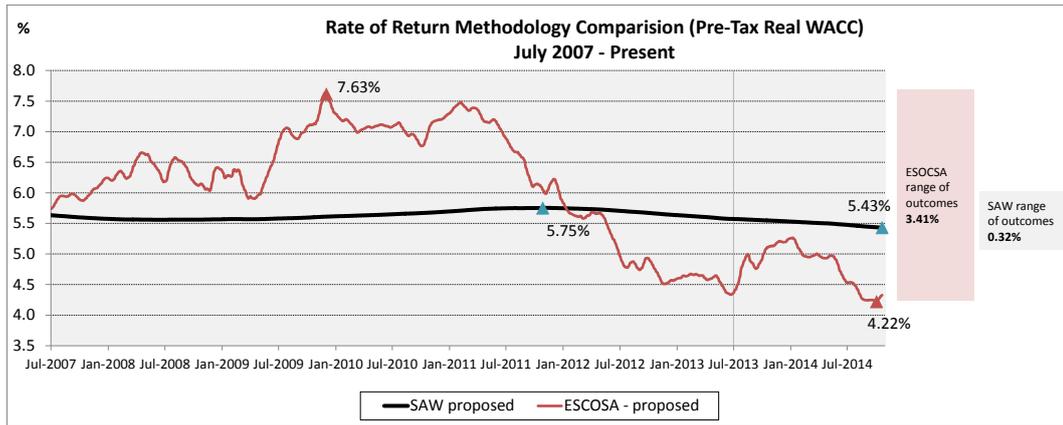
<sup>4</sup> WATC, *Response to the Draft Rate of Return Guidelines*, 19 September 2013, p 6

### 3.5 Creates Price Volatility for Customers

The use of spot market rates and short term parameter estimates (between 10 and 40 days) can lead to material differences in the rate of return from one regulatory period to the next, resulting in significant changes in customer prices between periods.

The potential volatility of ESCOSA’s proposed methodology versus what we propose is presented below, using historical market inputs.

**Figure 3.1 –Stability comparison between proposed methodologies**



Over the past seven years (two determination periods), the rate of return under ESCOSA’s proposed model would have fluctuated by 3.4%, while our proposed methodology would have only fluctuated by 0.3%. The fluctuations in ESCOSA’s methodology equate to a price change of around 30%, which could cause significant hardship for our most vulnerable customers. Each determination that provides a price decrease due to a reduction in market rates increases the size and likelihood of price increases in following determination periods.

Seeking short term potential price reductions while increasing the risk of future significant price increases that customers may not be able to absorb is not considered an optimal outcome. This is also at odds with ESCOSA’s primary objective to protect the long term interest of customers.

ESCOSA’s Draft Report contains little information regarding the impacts of its decisions on SA Water’s customers in the longer term or evidence of consultation with customers as to their preferences. Customer preferences are detailed in Section 5.1.

## 4 Interstate Regulatory Precedent

### 4.1 Background and Context

Regulatory certainty is critical for ensuring appropriate levels of investment and ongoing provision of services to customers. Changes should only be made to key regulatory building blocks where a strong case exists and where it is consistent with the balance of relevant regulatory precedent.

Regulatory uncertainty and inconsistency creates disincentives for appropriate levels of investment and distorts investment behaviour, creating inefficiency and increasing costs. Ongoing changes to regulatory models and key assumptions are costly for regulators and regulated entities, with those costs borne by regulated customers.

Determining the rate of return for a regulated entity is an imprecise science and is acknowledged nationally to be a highly complex and difficult exercise. ESCOSA's framework for estimating the cost of debt and equity during the first regulatory process was similar to many other Australian regulators in that an 'on the day' rate was used to estimate certain parameters.

Consistency in the methodologies applied will not necessarily result in consistency in the resulting investment incentives for the utilities in different jurisdictions. Due to the susceptibility of the ESCOSA framework to volatile cost of debt and equity outcomes, it is highly likely that jurisdictions applying a similar methodology to that proposed by ESCOSA would in fact determine substantially different costs of equity and debt due to the differences in timing between regulatory pricing decisions (Section 7.2 provides examples of the inconsistency between recent regulatory rate of return determinations). On the other hand, the trend of regulators to adopt "trailing average" approaches lessens the volatility in outcomes over time and leads to more consistent outcomes.

Several rate of return reviews have been undertaken interstate since our last regulatory determination, some in response to a directive from the Australian Energy Market Commission (**AEMC**). The outcome has been regulators moving away from the previously well established and widely adopted rate of return methodology which was previously used by ESCOSA.

Part of the reason for the change is that a 20 day observation period was once a good proxy for the long term average rate of return, as financial markets experienced a long period of relative stability. Financial market volatility has increased dramatically since the GFC in 2008 and the use of short observation periods to estimate long term rates of return is now highly problematic, can create extreme outcomes and should no longer be used. In short, the GFC highlighted many areas where previous approaches were shown to be deficient.

The AER (and IPART to some degree) have commenced transitioning to longer term 'trailing average' approaches, which calculate a historical average over a number of years corresponding to some term of parameter (e.g. risk free rate), preceding and inclusive of the current year.

Regulatory arrangements in the UK are more evolved and mature than those in Australia, as economic regulation has been in place for a much longer length of time. The two main UK regulators (**OFWAT** and **OFGEM**) utilise well-established rate of return methodologies that focus on the overall cost of debt and the overall cost of equity, rather than on individual components, and utilise long term averages of

observable inputs. Both regulators identify a feasible range for the rate of return and select a point estimate based on their assessment of market conditions and risks at the time of their respective final decisions.<sup>56</sup>

As with our proposed methodology, both OFWAT and OFGEM have traditionally applied longer term average values of the risk free rate rather than prevailing market rates.

## 4.2 Relevant Regulatory Precedents

We consider an interstate regulator's methodology relevant if:

- Their regulatory environments and legislative frameworks are similar to ours (e.g. Melbourne Water, Sydney Water, SA Power Networks);
- Their regulatory methodologies have recently been reviewed so they incorporate recent developments; and
- They have implemented structural changes to improve the robustness of rate of return outcomes.

Given these factors, IPART and the AER's rate of return methodology reviews released in December 2013 are considered the most relevant recent regulatory precedent (noting that the Essential Services Commission in Victoria (**ESCV**) is in the process of reviewing its regulatory framework).

Further to this, the two regulators in the UK are considered relevant due to their having well-established regulatory environments and rate of return methodologies.

## 4.3 Regulatory Precedents not Relevant to SA Water

It is our view that rate of return determinations for the Queensland Competition Authority (**QCA**), Economic Regulatory Authority of Western Australia (**ERA**) and the Independent Competition and Regulatory Commission (**ICRC**) are not relevant and should not be used as regulatory precedents.

ESCOSA has cited consistency with the QCA review. This is not a valid comparison as QCA use "light-handed" regulation for the council-owned South Eastern Queensland water utilities, utilising their actual costs of funds rather than those of an "efficient business". These entities have relatively low debt levels and different debt management arrangements to commercialised businesses such as ours.

Similar to this, the ICRC uses a firm-specific approach (rather than a benchmark firm) attempting to measure the ACT electricity distributor's (ACTEW) true cost of capital directly. This approach departs from standard regulatory practice and is not supported.

While it is acknowledged that there are some similarities with the ERA's proposed methodology released in December 2013 (5 year CGBs, 40 day estimating period) and the position taken in the Draft Report, we note that the majority of stakeholder public submissions<sup>7</sup> are consistent with the issues raised in this submission, namely:

<sup>5</sup> OFWAT, *Setting price controls for 2015-20 – risk and reward guidance*, January 2014

<sup>6</sup> OFGEM, *Final Determinations for the slow-track electricity distribution companies*, November 2014

<sup>7</sup> <http://www.erawa.com.au/gas/gas-access/guidelines/rate-of-return-guidelines>

- A 5 year term to maturity assumption does not assess the appropriate cost of debt and that the ERA simply assumes that 5 years is an appropriate term without providing demonstrable evidence; and
- Little attention has been paid to customers' views on their long term interests, particularly in respect of the effects of rate of return models on price volatility.

Further to this, SA Water notes WATC's critical review (refer to Section 3.2) and an independent report prepared by consulting firm Competition Economists Group in response to the release of the ERA's guidelines that states:

*"The ERA's calculation for the cost of debt does not result in an allowance that is commensurate with the efficient debt financing costs of a benchmark efficient entity"*<sup>8</sup>

We therefore do not consider the ERA's proposed model to be an appropriate precedent for ESCOSA.

#### 4.4 Balance of Regulatory Precedent

On page 13 of its Draft Report, ESCOSA states that:

*"Regulatory precedent has moved towards the use of terms to maturity that match the regulatory period, rather than the life of regulated assets. Regulators have increasingly recognised that matching debt to future cash flows (which reset every 4 or 5 years) is more relevant to a regulated business than matching debt to asset lives"*

Table 2.1 on page 13 of ESCOSA's Draft Report outlines maturity dates and averaging periods assumed by Australian regulators. As discussed in Section 3.1 this table does not include the most up to date rate of return reviews and decisions.

Furthermore, it is also misleading to display a 20 business day averaging period for the AER; given that they have decided to adopt a 10 year trailing average model and the application of the 20 day window solely reflects the gradual transition process being employed. ESCOSA's Draft Report (page 12) states that IPART use either a 4 or 5 year CGB however SA Water notes that IPART has now shifted from a 5 year to 10 year term assumption following a review of their rate of return methodology in 2013.

The balance of regulatory precedent can be assessed only after the most recent rate of return reviews and decisions are included.

As shown in Table 4.1, moving to a 4 year term to maturity with a 20 day estimating period model is not consistent with the balance of regulatory practice interstate.

<sup>8</sup> Competition Economists Group *Cost of debt consistent with the NGR and NGL*, p 55

**Table 4.1: Maturity dates and averaging periods assumed by other regulators**

	DECISIONS					REVIEWS - Australia					DECISIONS and REVIEWS -Overseas	
	ERA	IPART	IPART	ESCOSA	ESCV	ESCOSA	QCA	IPART	AER	ERA	OFWAT (UK)	OFGEM (UK)
	Determination on the 2014 WACC for Freight and Urban Railway Networks - <b>October 2014</b>	Essential Energy's water and sewerage services in Broken Hill - <b>June 2014</b>	Review of prices for Hunter Water's water, sewerage, stormwater drainage and other services - <b>June 2013</b>	SA Water's Water and Sewerage Revenues - 2013/14 - 2015/16 - <b>May 2013</b>	Price Review 2013: Greater Metropolitan Water Businesses - <b>June 2013</b>	SA Water Regulatory Rate of Return 2016-2020. Draft Report to the Treasurer - <b>November 2014</b>	Long term framework for SEQ water retailers - WACC - <b>August 2014</b>	Final Report - Review of WACC Methodology - <b>December 2013</b>	Explanatory Statement - Rate of Return Guideline - <b>December 2013</b>	Rate of Return Guidelines - <b>December 2013</b>	Setting Price Controls for 2015-2020 - <b>December 2014</b>	Final Determinations for the slow-track electricity distribution companies - <b>November 2014</b>
Industry	Rail	Water	Water	Water	Water	Water	Water	Various	Energy	Various	Water	Energy
Term Assumption	10 year CGB	10 year CGB	5 year CGB	10 year CGB	10 year CGB	4 year CGB	1 year, updated annually	10 year CGB	10 year CGB	5 year CGB	10 year	10 year
Averaging Period	20 trading days	Mid point between: current WACC range (40 day average); and long-term WACC range (10 year average)	Mid point between: current WACC range (40 day average); and long-term WACC range (10 year average)	20 trading days	40 trading days	20 trading days	20 trading days	Mid point between: current WACC range (40 day average); and long-term WACC range (10 year average)	Initially 20 trading days and then gradual transition to 10 year trailing average	40 trading days	Weighted average between embedded (75%) and new debt (25%)	Cost of Debt Index trailing average 10 20 years

## 5 Long Term Interests of Customers

The primary objective in ESCOSA's enabling legislation is the '*protection of the long term interests of South Australian consumers with respect to the price, quality and reliability of essential services*'. Long term interests are specifically mentioned to ensure that decisions are not made for short term political or public perception gains at the expense of customers' interests in future regulatory periods.

Given there are numerous interpretations of the concept of 'long term', ESCOSA provided further guidance in its October 2010 Statement of Issues document:

*"Whatever the precise meaning of the term, it is clear that the requirement to protect 'long term' interests means that the Commission's attentions cannot be limited to immediate impacts on price, quality and reliability of service. For example, if the impact of reducing prices for an essential service was such that investment in maintaining the infrastructure became inadequate, resulting in longer term deterioration, this would not be in consumers' long term interests"*<sup>9</sup>

Our customers in the coming regulatory period will be substantially the same in future regulatory periods. Most of these customers cannot or are unlikely to change water and/or sewerage supplier in future determinations if those determinations have an adverse impact on them.

We contend that it is in the long term interests of customers to:

- Minimise price volatility which causes uncertainty and confusion;
- Maintain a reliable and safe service; and
- Have a financially viable water utility into the medium to long term.

A rate of return allowance based on long term inputs is a critical driver to all of these factors.

We have undertaken a customer engagement process, through which customers advised that they agreed with the above view.

### 5.1 Price Stability - Avoidable Significant Price Volatility

Avoiding unnecessary price volatility should be the aim of regulators, as price volatility is not in the long term interests of customers. It is our view that utilising a rate of return model that produces cycles of price rises and price falls (i.e. 'yo-yo pricing') is not consistent with ESCOSA's enabling legislation as it is not in the long term interests of customers.

Significant price increases could lead to household financial distress, failure or closure of businesses and relocation of water and wastewater intensive businesses to jurisdictions with different regulatory outcomes. The impact of volatility in customer bills is magnified for customers on a lower income, for whom utility costs represent a higher proportion of their incomes and whose levels of disposable incomes are lower.

<sup>9</sup> ESCOSA, *Economic Regulation of the South Australian Water Industry, Statement of Issues*, December 2010, p 8

ESCOSA's proposed model relies on a snapshot of financial market information in a very short window (20 days) and could result in a high level of volatility for prices. Based on the actual movements in market inputs over the past seven years, using a 20 day average could result in price changes of up to 30% in a single determination period (as outlined in Section 3.5). Customers would be provided less than two months' notice of any such increase. Any price decreases through market input changes increase the size and likelihood of the price increase in the subsequent regulatory period. While price decreases would be unlikely to cause issues for customers, any price increases would.

### Feedback from Customers

We have consulted with our residential and business customers, and Customer Advisory Groups during 2014, on the question of bill predictability and the risk of future price shocks. The overall consensus among customers was that great importance is placed on bill predictability, stability and transparency.

Customer groups favoured price stability, where bills move in accordance with the rate of inflation (or less – based on real business efficiency) and are not driven by short term financial market volatility.

We received the following feedback from four customer focus groups in October 2014 in relation to questions on bill stability and predictability:

*"In terms of preference between stability whereby SA Water prices would not change significantly over time and variability whereby SA Water prices could vary significantly both up and down, the overwhelming majority of both business and residential customers are seeking stability" and*

*"Stability in pricing is financially easier to manage for businesses and families alike in terms of budgets and forecasting. With very limited understanding on how these concepts would work, one residential customer did suggest that for stability, customers would be paying more than the going rate" <sup>10</sup>*

There was also concern about the impact on customers and the competitiveness of South Australian businesses (relative to other states) if significant price increases were to occur in future. A pattern of price changes up and down is not appreciated by customers trying to manage their budgets.

Additionally, in the Statement of Reasons relating to the First Price Determination, ESCOSA acknowledges:

*"...submissions of various stakeholders regarding the desire for price stability during the regulatory period"<sup>11</sup>*

Further, as part of the consultation in determining the AER's Rate of Return Guideline in 2013, customers expressed their view:

*"...that (other things being equal) more stability in allowed returns, flowing through to more stability in prices, would be in the long term interests of consumers" <sup>12</sup>*

<sup>10</sup> NewFocus Pty Ltd *Qualitative Research: Recent Contact Customers*, October 2014

<sup>11</sup> ESCOSA, *SA Water's Water and Sewerage Revenues 2013/14-2015/16 Final Determination Part A – Statement of Reasons*, May 2013, subsection 5.3.1.2

<sup>12</sup> Energy Networks Australia, *Response to the AER Rate of Return of Return Guidelines - Issues Paper*, p 19

Finally, the AEMC noted during the regulatory review process that:

*“...the long-term interests of consumers would be best served by ensuring that the methodology used to estimate the return on debt reflects, to the extent possible, the efficient and risk management practices that might be expected in the absence of regulation”* <sup>13</sup>

## 5.2 Safe and Reliable Service

Our customers and the wider community expect and depend on us to deliver safe, reliable essential water and sewerage services at an affordable price now and into the future.

The provision of water and sewerage services relies on significant infrastructure and is highly capital intensive. Ensuring safe and reliable services depends on continuing to invest in that infrastructure at an appropriate level each year.

Failure to maintain infrastructure at an appropriate standard may put at risk the current high standard of safety and reliability of water and sewerage supplies, which is not in the long term interests of customers. Therefore it is essential to provide an appropriate rate of return to allow us to invest in its infrastructure on an ongoing basis.

## 5.3 A Financially Viable SA Water

It is in the long term interests of customers and the South Australian community to have a viable water and wastewater service provider. This is recognised in the objectives of the Essential Services Commission Act.

The ‘low-case’ rate of return currently outlined in the Draft Report is below our projected cost of borrowing from 2016 to 2020. This is largely due to a mismatch between ESCOSA’s 4 year term assumption and the actual longer term debt instruments we use under a prudent and efficient financing strategy (as yields on 4 year instruments are generally lower than 10 year instruments).

Setting a rate of return below our actual cost of borrowing could cause financial viability concerns. This could have adverse impacts on our ability to maintain our infrastructure and provide services, as well as impacting the broader community through the impact on the State Government and the Government’s credit rating.

<sup>13</sup> AEMC, *Final Position Paper National electricity and gas rule changes*, 15 November 2012, p 57

## 6 SA Water's Proposed Methodology

### 6.1 Summary of Proposed Methodology

Our proposed methodology has been developed with regard to the long term interests of customers, encouraging prudent and efficient business practices and being consistent with recent interstate regulatory precedent.

We propose a rate of return methodology that encompasses the following elements:

- Moving away from the 'on the day' approach to a 'trailing average' approach, using an averaging period of 10 years, to better reflect prudent and efficient debt management practice;
- An immediate, rather than gradual, transition to the 'trailing average' approach at the next regulatory period, to provide price stability for customers;
- Using an averaging period of 10 years for all observable inputs (risk free rate, DRP and inflation) rather than just the cost of debt, to ensure consistency between the elements and to provide price stability for customers;
- Maintaining the use of 10 year term to maturity instruments for the observable cost of debt (risk free rate plus DRP) to remain consistent with the debt profile of infrastructure providers with long lived assets;
- Maintaining the use of 10 year term to maturity for the observable risk free rate, to remain consistent with the basis for estimating the equity market risk premium;
- Continuing to reset the rate of return only at the start of each regulatory period, with no annual reset within a regulatory period, to provide price stability for customers; and
- Retaining the existing generally accepted regulatory assumptions for gearing (60% debt), credit rating (BBB), equity beta (0.8), the market risk premium (6.0%) and the value of imputation credits ( $\gamma = 0.50$ ).

### 6.2 Comparison to ESCOSA's Draft Report

The rate of return calculation should be considered as a whole, as changes to one element will have impacts upon other elements. For example, changes in the bond term would impact the credit rating and DRP. We would be supportive of certain elements of ESCOSA's position in the Draft Report, subject to addressing other aspects of the methodology.

The elements that we could support are:

- Adoption of the RBA's series of credit spreads, rather than Bloomberg, as a data source for estimating the DRP component. Whilst the calculated values from using either the Bloomberg or the RBA sample should broadly be the same, the RBA sample is larger and is likely to be more stable and reliable. While the AER has used an average of the RBA and Bloomberg data sources, this is not proposed as it will add complexity for minimal or no value;

- Retaining the existing generally accepted regulatory assumptions for gearing (60% debt), credit rating (BBB), equity beta (0.80), the MRP (6.0%) and the value of imputation credits (gamma – 0.50);
- Retaining the simplest version of the CAPM as the foundation model; and
- A consistent and coherent framework built on easily accessible data sources and non-complex financial models, reflective of economic and finance principles and market information.

The major differences between our and ESCOSA's proposed methodologies are:

- The length of the averaging period to be used when determining the risk free rate, the inflation forecast and the DRP;
- The term to maturity assumption to be used for these parameters; and
- Application of longer averaging periods to inputs for the cost of equity as well as the cost of debt.

These elements are discussed in more detail in Sections 7, 8 and 9.

## 7 Averaging periods

We have consistently maintained our view that the averaging period used for establishing the cost of debt allowance should be consistent with a prudent debt management approach and stable prices. Prudent debt management will provide a smooth funding profile over a 10 year horizon. The averaging period for establishing the regulated cost of debt should therefore match the 10 year prudent financing period, aligned with regulatory precedence.

The averaging period for the risk free rate, inflation estimate and DRP should align as it is inconsistent to have a short term averaging period (e.g. 20 days) for one parameter and a long term (e.g. 10 years) for another when constructing an overall cost of debt or equity.

This proposal will deliver secure funding, more stable regulatory prices and better allocative efficiency, putting it in direct contrast to ESCOSA's proposed 20 day averaging period approach.

### 7.1 Short Term Approach Shortcomings

We believe that setting the rate of return based on the average value of a recent 20 day period is a fundamentally flawed process, particularly since the onset of the GFC and should no longer be used (refer to Section 4.1 for further background).

This approach does not reflect how a regulated business actually finances its activities and increases price volatility. Sections 7.3 and 7.4 provide further detail on the potential for price shocks and prudent and efficient borrowing strategies.

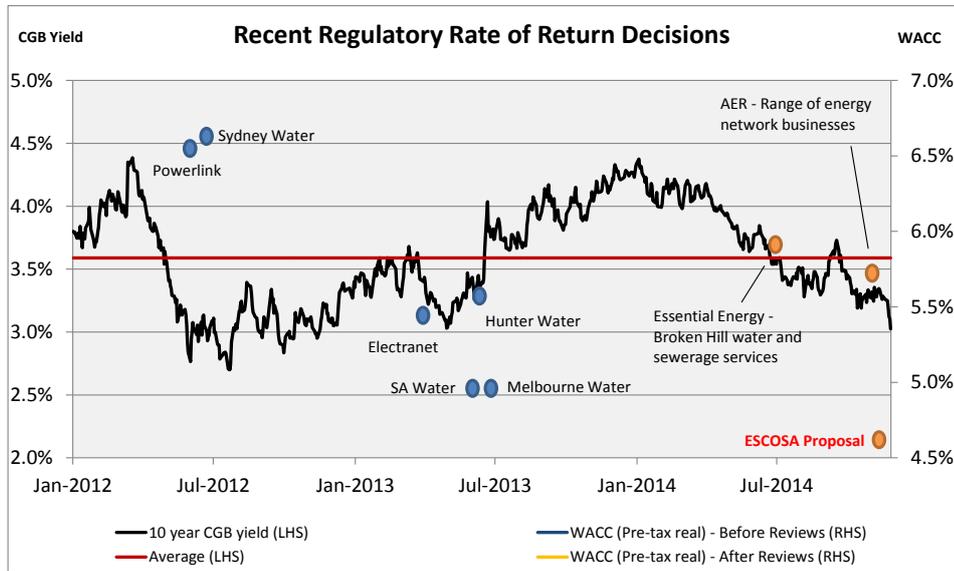
### 7.2 Better Outcomes for Customers

Customers should not be impacted over the longer term by the choice of averaging periods. A short averaging period can create fortunate and unfortunate customer groups, with pricing outcomes largely based on the fortunes of timing of their determination. Shorter averaging periods will provide higher price outcomes as often as they provide lower price outcomes (i.e. short term averaging introduces an unwelcome volatility to customer prices). The inclusion of longer term averages will greatly improve price stability for our customers.

Using short-term estimating periods allows for customer prices to vary significantly simply due to the arbitrary nature and timing of the calculation and without changes in the actual underlying costs of the business. This provides inequitable outcomes between regulated jurisdictions and between both regulated entities and customers, which is not consistent with an efficient, effective and fair regulated market.

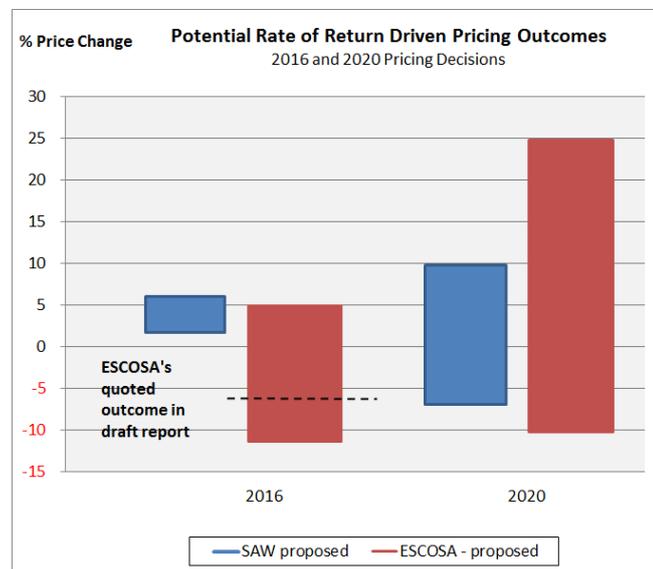
Volatility in bond yields and inconsistency between recent rate of return determinations for regulated infrastructure utilities are visually presented below:

**Figure 7.1 – Volatility in rate of return decisions**



To illustrate the volatility created through using short term averages for observable inputs, the indicative rate of return driven pricing outcomes that may occur over time using ESCOSA’s proposed rate of return methodology are benchmarked against the long term averaging we propose below in Figure 7.2.

**Figure 7.2–Maximum price volatility of methodologies**



This shows that under ESCOSA’s proposed methodology prices in the next regulatory period could increase by around 5% or decrease by around 11%. In future regulatory periods prices have the potential to increase significantly, by up to 30%. While our proposed methodology can still result in some price movement, it is significantly less than under a short term averaging methodology.

### 7.3 Funding Costs for an Efficient Utility

ESCOSA's Draft Report states:

*"One objective of regulation is to provide a monopoly utility with a business environment as close as possible to that experienced by an efficient firm in a competitive market"*(page 14)

ESCOSA has used predictive efficiency as the principal basis for concluding that the 'on the day' approach is the best outcome in terms of economic efficiency, stating:

*"Those that support a short-term averaging period argue that it provides a more accurate measure of the cost of debt that a regulated business will incur over the future regulatory period"* (page 16); and

*"Many regulators have concluded that an approach based on prevailing market conditions is more consistent with the objective of economic efficiency"* (page 16).

We are of the opinion that seeking the best predictor of interest rates over the next regulatory period is addressing the wrong question. The relevant question should be:

***Which approach produces the best estimate of funding costs for an efficiently financed benchmark firm?***

Once the correct question is posed, then predictive efficiency has much less importance when determining an appropriate return on debt allowance.

We note that the AER used economic efficiency criteria in developing its return on debt guidelines in 2013:

*"In the presence of refinancing risk, it is efficient for a service provider to hold a portfolio with staggered maturity dates. The allowed return on debt under the trailing average portfolio approach reflects the financing costs of a benchmark entity with a staggered portfolio. Further, we consider this approach promotes productive, allocative and dynamic efficiency of debt financing practices"*<sup>14</sup>

In effect, ESCOSA's proposed approach means that we are exposed to risk because our prudent and efficient financing strategy is not reflected in the cost of debt allowance. By having a cost of debt allowance that does not coincide with efficient financing practices, ESCOSA is introducing incentives to adopt inefficient and higher risk practices.

We apply an efficient portfolio methodology to manage our debt portfolio and as such are locked into fixed interest rates on long term debt acquired in past years. This prudent approach avoids the risk of not being able to refinance large maturities at a single point in time, and reduces volatility in interest costs.

The argument for adopting the 'trailing average' approach is strengthened when the debt management practices of large non-regulated infrastructure firms such as Sydney Airport and Transurban are taken into consideration. Market evidence confirms that these firms, along with SA Water, issue debt on a staggered basis over a long term horizon.<sup>15</sup>

<sup>14</sup> AER, *Better Regulation: Explanatory Statement: Draft Rate of Return Guideline*, August 2013, p 83

<sup>15</sup> QTC, *Submission to the Draft Rate of Return Guideline*, October 2013, Appendix A

ESCOSA's view is that the closer the regulated return is to the prevailing marginal cost of debt (just prior to the start of the regulatory control period), the more efficient investment decisions will be. This ignores the need to service the cost of debt which financed previous investments (i.e. embedded debt) and that we cannot subsequently change the interest rate on its efficient debt portfolio when prevailing interest rates change without paying a premium (when rates fall) or receiving a discount (when rates rise) to break out of longer term bonds.

Under a 'trailing average' approach, all future refinancing and borrowing transactions for the efficient benchmark firm are compensated at the prevailing cost of debt, rather than a historical average rate. In other words, prevailing market interest rates would be regularly incorporated into the updated trailing average. In economic terms, the marginal return on debt allowance (revenue) matches the marginal cost of debt.

An additional benefit of the 'trailing average' approach over the 'on the day approach' is that we can implement the approach in practice as we already maintain a staggered debt portfolio.

#### **7.4 Risk Management Concerns**

In making this submission, our intention is to outline efficient debt management practices and the practicalities of transacting in the Australian debt and swap market. In particular, the challenges that can arise in refinancing or swapping large tranches of debt within a short regulatory window.

Regulated businesses such as SA Water face a significant financial risk from a potential mismatch between changes in revenue from the regulatory rate of return and their actual cost of debt.

Under the 'on the day' approach proposed by ESCOSA, we could manage this risk in a number of ways. For example, we could raise all debt required to satisfy our financing needs once (i.e. just ahead of the start of each regulatory control period). Alternatively, we could engage in some other debt financing practice, by entering into hedging arrangements using financial derivatives. Entering into hedging arrangements aims to replicate a borrowing cost structure that would arise if we did refinance the entirety of our debt at the beginning of the regulatory control period.

Our current interest rate risk management policy prohibits the use of interest rate derivatives, meaning that we would need to raise the entirety of our debt in a narrow window just ahead of the regulatory control period. Under this scenario, we may be able to alleviate the potential mismatch between the regulatory return on debt allowance and its expected cost of debt. Further, we note that ESCOSA has not provided an allowance in its Draft Report for the costs that we would incur entering into financial derivative contracts.

Raising the entirety of our debt once at the start of every regulatory control period (i.e. every 4 years) would expose us to substantial refinancing risk. Debt market financiers could possibly take advantage of such a massive refinancing and demand a significantly higher yield, which would ultimately flow through to higher prices for customers. Further to this, there are no market instruments that allow the DRP to be adequately hedged.

Even under circumstances whereby we were permitted to use interest rate derivatives, significant difficulties would still be faced in attempting to hedge this risk under ESCOSA's proposed 'on the day' approach:

- WATC has advised that firms with large debt exposures have historically been unable to issue or hedge via interest rate swaps more than \$1 billion of debt during a 20 day regulatory reset window (without paying significantly higher interest rates)<sup>16</sup>; and
- The South Australian Government Financing Authority (**SAFA**), who manage our refinancing activities, has expressed concerns with future market liquidity over a short period of time for a particular point of the swap curve (i.e. 4 years), in particular over a 20 day window. Achieving a competitive financing cost and an appropriate level of financial risk may not be possible under this framework.

## 7.5 Alignment to Regulatory Objectives

We reiterate that the implementation of longer term averaging periods is aligned to ESCOSA's legislative regulatory objectives:

### In the long-term interests of customers

- Allows for a smoother profile for the allowed cost of debt and equity components compared with the current 'on the day' approach, decreasing the variation in prices between determination periods and reduces the likelihood of price shocks for customers.
- Improves the alignment between regulatory cost of debt and our actual borrowing costs, reducing financial risks.

### Encourages & Reflects Prudent and Efficient Behaviour

- Reflects efficient debt management practices that are also viewed favourably by credit rating agencies.
- ESCOSA's proposed 'on the day' approach is impossible to match for firms with large debt portfolios and would discourage private sector investment.

### Consistent with Recent Interstate Regulatory Precedent

- IPART<sup>17</sup> and the AER<sup>18</sup> are the most relevant precedents and have introduced longer term averages into their rate of return methodologies, consistent with well-established regulators in the UK.

<sup>16</sup> WATC, *Response to the Draft Rate of Return Guidelines*, 19 September 2013, p 4

<sup>17</sup> IPART, *Review of WACC Methodology, Research – Final Report*, December 2013

<sup>18</sup> AER, *Rate of Return Guideline*, December 2013

## 7.6 Regulatory Support

There has been widespread support for the inclusion of long term trailing averages being incorporated into the calculation of rate of return estimates:

- The AER considers a trailing approach more closely aligns to an efficient benchmark firm<sup>19</sup>;
- SFG Consulting suggests staggered approach is consistent with usual practice of unregulated firms with long-lived assets<sup>20</sup>; and
- OFWAT and OFGEM utilise longer term historical averages in their regulatory models (refer to Section 4.1).

<sup>19</sup> AER, *Rate of Return Guideline*, December 2013, p 12

<sup>20</sup> SFG Consulting, *Rule Change Proposals Relating to the Debt Component of the Regulated Rate of Return*, August 2012

## 8 Term to Maturity

We propose the retention of a 10 year term to maturity of market-based parameters to reflect the long term nature of a prudent and efficient borrowing profile funding investment in long-lived assets.

ESCOSA has not provided sufficient evidence to support shortening its term assumption from 10 to 4 years. Adopting a 4 year benchmark term would encourage us to pursue inefficient debt management practices and significantly increase our and the South Australian Government's financial risk profile.

### 8.1 ESCOSA's Proposed Approach

We note the debate that has developed with regard to the appropriateness of a 10 year term to maturity assumption as the proxy for observable market data inputs. ESCOSA proposes moving from a 10 year term to a 4 year term, arguing in its Draft Report (page 14) that:

- 10 year bonds do not completely align with the life of the assets and financing;
- 10 year bonds provide compensation for risks that regulated entities do not bear;
- Regulatory precedent is now in support of a 4 or 5 year term to maturity; and
- There is now strong evidence to suggest that the term of the regulatory period is a more relevant consideration than asset lives.

### 8.2 Shortcomings with Adopting a 4 year Term to Maturity Assumption

#### Refinancing Risk

The principal problem with shortening the term from 10 years to 4 years is that it does not consider that the most important risk facing a large utility entity is liquidity and refinancing risk.

Refinancing risk is the risk that a firm would not be able to issue debt at a given point in time and at a reasonable cost. This may be because the debt instruments that it seeks are not available to it, or because they are expensive. Refinancing risk can arise through systematic factors, such as macroeconomic trends or changes in financial market liquidity. Refinancing risk may also result from company specific matters. For example, if lenders are aware that a company is refinancing its debt at a certain time, they may raise the interest rates that they demand from the company or may be unwilling to lend to the company. Credit rating agencies will anticipate this risk in advance and it may have an adverse impact on the company's credit rating and overall cost of debt. The GFC provided stark evidence of the detrimental impact of this refinancing risk.

The need to manage refinancing risk is balanced against the overall cost of the benchmark efficient entity's debt portfolio. For example, a longer average term of debt for a debt portfolio means lower refinancing risk. But it also means the total cost of the debt portfolio is higher. Hence, efficient debt financing practices address this trade-off.

A consequence of adopting a 4 year term is the implied assumption that a benchmark efficient utility in an efficient market would refinance 25% of its debt each

year (assuming an optimal staggered debt strategy). In contrast to this, a 10 year assumption would imply substantially less refinancing risk since only 10% of its debt requirements would assume to be refinanced each year. This provides a compelling case as to why a regulated business would issue debt of a longer term than the regulatory period.

Having regard for the financing practices of Australian regulated businesses; the term of debt at issuance is approximately 10 years rather than the regulatory period of 4 years.<sup>21</sup> The length of debt used is more often a factor of the longest term debt instruments a company can secure from lenders at a reasonable cost, with many companies using terms of maturity as long as practical.

Shortening the term assumption from 10 to 4 years increases our (and by extension customers') vulnerability to another financial crisis.

#### Impact on South Australia's Credit Rating

TCorp, like SAFA, provides loans to a range of publicly owned entities such as Sydney Water and Essential Energy.

It has publicly stated that shortening the term assumption from 10 years would increase pressure on the New South Wales Government's credit rating. By increasing the annual financing requirement on a large portfolio of loans, the term of TCorp's own financing requirement would also rise. This would increase the pressure on TCorp's short term funding requirements and lead to deterioration in the liquidity credit metric (as assessed by credit rating agencies).<sup>22</sup>

We see no reason as to why SAFA would not be faced with the same set of circumstances (i.e. a deterioration in credit metrics) as that outlined by TCorp. To summarise, ESCOSA's proposed shortening of the term to maturity benchmark (from 10 to 4 years) would make it more challenging to maintain South Australia's AA credit rating, which is not in the long term interests of our customers and the South Australian community.

#### No overcompensation

ESCOSA claims that a 10 year term to maturity assumption would overcompensate a benchmark efficient entity operating under a regulatory framework that resets the debt allowance at every pricing determination. We do not agree with this principle on the basis that:

- We periodically issue 10 year debt (consistent with ESCOSA's current benchmark) to stagger our refinancing requirements to minimise refinancing risks;
- The average cost of our debt at any point in time will be a historical trailing average of the yield on 10 year debt; and
- The allowance for the cost of debt is to be set periodically every 4 years by reference to the debt benchmark (i.e. debt with a term of 10 years).

<sup>21</sup> Price Waterhouse Coopers, *Benchmark debt assumption: A report for the Energy Networks Association*, June 2013, p ii

<sup>22</sup> TCorp, *AER's proposal for a 7-year debt allowance benchmark*, 9 October 2013

### 8.3 Regulatory Support

ESCOSA cites that regulatory precedent has moved towards matching the term to maturity assumption to the regulatory period. This does not reflect the findings of recent rate of return methodology reviews released by IPART and the AER.

Sydney Water drew on the expertise of NERA Economic Consulting (**NERA**) to comment on aspects of IPART's September 2013 report entitled '*WACC Methodology – Draft Report*'. NERA's report included a critique of IPART's rationale for maintaining its term to maturity assumption of 5 years for regulated entities.<sup>23</sup>

NERA's arguments are summarised below:

- A 5 year term to maturity assumption exposes utilities to greater refinancing risk;
- A 10 year term to maturity is more consistent with their objective of setting a rate of return that reflects efficient financing costs of a benchmark entity operating in a competitive market;
- Evidence indicates that asset-intensive firms with long-lived lives seek to raise debt with a maturity of 10 years or longer;
- Investors seeking to invest in utilities, whether regulated or unregulated, have investment and financing horizons longer than 10 years; and
- Using a 10 year term to maturity would not over compensate a benchmark efficient utility operating under a regulatory model, which resets the debt allowance at each determination.

NERA's findings are of particular relevance given that IPART made a decision to increase its term to maturity assumption from 5 to 10 years between releasing its draft report (September 2013) and final report (December 2013).

The AER maintained the 10 year term to maturity assumption following its rate of return methodology review in 2013 for the following reasons<sup>24</sup>:

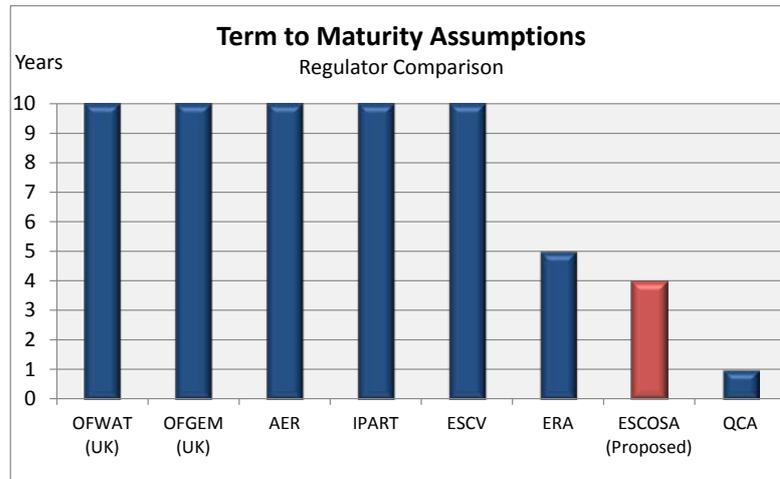
- The AER regulates under objectives of promoting efficient investment and allowing businesses to recover their efficient costs;
- Maintaining a 10 year term avoids some practical complexities in the estimation of certain return on equity parameters (specifically, the MRP) that would result from a change from a 10 year to a 5 year term; and
- It had adopted a 10 year term in past decisions. Maintaining their previous position, in the absence of good reasons for change, promotes certainty and predictability in decision making.

<sup>23</sup> NERA Economic Consulting, *IPART's Draft WACC Methodology – Comments. A report for Sydney Water Corporation*, November 2013, pp 2-4

<sup>24</sup> AER, *Rate of Return Guideline*, December 2013, p 49

The following graph visually represents the balance of regulatory precedent being in favour of utilising a 10 year term to maturity assumption:

**Figure 8.1 – Term to maturity comparison between methodologies**



## 9 Cost of Equity Estimate

We propose that longer averaging periods of observable inputs be applied to the cost of equity as well as the cost of debt.

This proposal is borne out of an underlying desire to provide outcomes that are in the long-term interests of customers and drive stable and predictable price outcomes.

### 9.1 Consistent and Stable Outcomes

As with the cost of debt, the risk free rate used for the cost of equity can be determined using a short or long averaging period.

Regulatory determinations should also ensure that a sustainable return on equity can be generated, to ensure appropriate investment by the regulated entity. Water utility businesses are long term investments and should deliver stable long term returns. Short term fluctuations in market returns on equity are not relevant to investments in water utilities, as the investment cannot be easily divested. If returns are unreasonably low then adequate long term capital investment may not be undertaken, which is not in the long term interests of customers.

Whilst there has been a trend by regulators to determine the cost of debt by adopting a 'trailing average' methodology, Australian regulators have not moved away from the traditional method for the cost of equity estimation to the same extent.

We propose the adoption of a trailing average for the cost of equity estimation on the basis of:

- Removing all short term averaging period assumptions will drive stability in the calculated rate of return outcomes and therefore customer prices between determination periods;
- Our owner (the South Australian Government) has a long-term investment horizon and will not reallocate its capital during periods of changing financial and economic conditions; therefore short term fluctuations in market conditions are not relevant to its required return on equity. This is also the case for private sector utility investors, who value stability of returns over time over a higher return that varies significantly between periods<sup>25</sup>;
- Providing an appropriate, stable investment return on public sector assets to the Government for the benefit of the people of South Australia; and
- Using a combination of a prevailing risk free rate with an historical estimate of the MRP to estimate the cost of equity is internally inconsistent and a violation of the CAPM<sup>26</sup>.

<sup>25</sup> Aswath Damodaran, *Equity Risk Premiums: Determinants, Estimation and Implications – A post crises update*, October 2009, p 14

<sup>26</sup> Competition Economists Group, *WACC Estimates, A Report for NSW DNSPs*, p 9

## 10 Transitional Approaches

A number of alternate transitional arrangements have been discussed and adopted interstate to alleviate any short term customer impacts of moving to a more stable and appropriate rate of return model.

There are three broad options for a regulated entity to transition to the 'trailing approach':

- 1. Gradual:** 'On the day' approach for the first year of the regulatory period and then incorporates longer term averages, annual resets. Would take 10 years until a regulated entity's cost of debt was reflective of efficient financing practice of refinancing at regular intervals over a ten year period (favoured by AER).
- 2. Intermediate:** Regulated entity determines the initial averaging period for the starting cost of debt allowance (anywhere between 40 days and 10 years), based on their existing debt maturity profile (favoured by the Queensland Treasury Corporation).<sup>27</sup>
- 3. Immediate:** Cost of debt allowance is to be set based on the 10 year trailing average for the risk free rate and DRP as close to the start of the regulatory period as possible.

Our preference is for 'immediate' adoption of the trailing average i.e. no gradual transition, with the cost of debt and equity components to be updated at the end of each regulatory period (i.e. introduce the latest 4 years into the rolling average calculation). This is in the interests of long term price stability and financial viability.

Our objective is to keep prices at or below inflation into the foreseeable future by focussing on efficient delivery of its services. We acknowledge that our preferred methodology could result in prices being higher for the second regulatory period than under ESCOSA's suggested methodology (noting that this may not necessarily be the case and this will not be known until April/May 2016).

Should the adoption of our proposed methodology cause price movements above inflation at the commencement of the second regulatory period, we are open to consider means to enable our price objective to be achieved.

It should be noted that this is a transitional matter as over the long term and over multiple regulatory periods our preferred methodology is likely to result in prices below ESCOSA's model as often as they are above.

A transition that commences averaging from the start of the first regulatory period would enable customers to benefit in future regulatory periods from the low market interest rates that have prevailed since 2012.

We are open to discussing these with ESCOSA in an open, transparent and cooperative manner.

<sup>27</sup> QTC, *Submission to the Draft Rate of Return Guideline*, October 2013

## Appendix 1 – ESCOSA and SA Water Proposed Methodologies

Parameter	ESCOSA – 2013 Pricing Determination (May 2013)	ESCOSA – Draft Report (November 2014)	SAW – Public Response (January 2015)
<b>COST OF DEBT ESTIMATION</b>			
<b>Risk Free Rate</b>	10 year CGB (nominal)	4 year (interpolated from 3yr and 5yr CGB yield – nominal)	10 year CGB (nominal)
<b>Debt Risk Premium</b>	Extrapolated 7 year Bloomberg BBB FVC	RBA Series of Credit Spreads – 4yr BBB	RBA Series of Credit Spreads – 10yr BBB
<b>Averaging Period</b>	20 days	20 days	10 years
<b>COST OF EQUITY ESTIMATION</b>			
<b>Risk Free Rate</b>	10 year CGB (nominal)	4 year (interpolated from 3yr and 5yr CGB yield – nominal)	10 year CGB (nominal)
<b>Averaging Period</b>	20 days	20 days	10 years
<b>Market Risk Premium</b>	6.0%	6.0%	6.0%
<b>Equity Beta</b>	0.80	0.80	0.80
<b>INFLATION ESTIMATION</b>			
<b>Inflation</b>	10 year CGBs (Inflation Indexed Bonds) – Fisher Equation	4 year CGBs (Inflation Indexed Bonds) – Fisher Equation	10 year CGBs (Inflation Indexed Bonds) – Fisher Equation
<b>Averaging Period</b>	20 days	20 days	10 years
<b>OTHER</b>			
<b>Annual Adjustment</b>	No	Not discussed	No
<b>Credit Rating</b>	BBB	BBB	BBB
<b>Gearing</b>	60%	60%	60%
<b>Gamma</b>	0.50	0.50	0.50