REVIEW OF SA WATER'S REGULATORY BUSINESS PROPOSAL FOR THE REVENUE DETERMINATION PERIOD 2013/14-2015/16

PUBLIC CONSULTATION - ISSUES PAPER

October 2012

REQUEST FOR SUBMISSIONS

The Essential Services Commission of SA (the Commission) invites written submissions from interested parties in relation to the issues raised in this paper. Written comments should be provided by **9 November 2012**. It is highly desirable for an electronic copy of the submission to accompany any written submission.

It is Commission policy to make all submissions publicly available via its website (www.escosa.sa.gov.au), except where a submission, either wholly or partly, contains confidential or commercially sensitive information, provided on a confidential basis, and appropriate prior notice has been given.

The Commission may also exercise its discretion not to exhibit any submission based on their length or content (for example containing material that is defamatory, offensive or in breach of any law).

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Review of SA Water's Regulatory Business Proposal: Issues Paper

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Public Information about ESCOSA's activities

Information about the role and activities of the Commission, including copies of latest reports and submissions, can be found on the ESCOSA website at www.escosa.sa.gov.au.

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ACRONYMS AND GLOSSARY OF TERMS

ADP	Adelaide Desalination Plant
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
CIE	The Centre for International Economics
COMMISSION	Essential Services Commission of South Australia
ESC ACT	Essential Services Commission Act 2002
NWC	National Water Commission
OPEX	Operating Expenditure
RAB	Regulatory Asset Base
RBP	Regulatory Business Plan
REGULATORY STATEMENT	2012-13 Drinking Water and Sewerage Prices Regulatory Statement
SA GOVERNMENT	Government of South Australia
SA WATER	South Australian Water Corporation
WACC	Weighted Average Cost of Capital
WATER FOR GOOD	Water For Good: A plan to ensure our water future to 2050
WATER INDUSTRY ACT	Water Industry Act 2012
WDV	Written Down Value (of Assets)

1. INTRODUCTION

1.1 Background

The Essential Services Commission of South Australia (**Commission**), established under the *Essential Services Commission Act 2002*[1] (**ESC Act**), is the independent economic regulator of essential services in South Australia. In undertaking its regulatory functions, the Commission's primary objective is the "***protection of the long-term interests of South Australian consumers with respect to the price, quality and reliability of essential services***."[2]

In 2009, the Government of South Australia (**SA Government**) announced a framework of reforms and commitments to address water security issues. That framework was embodied in the SA Government's plan entitled "*Water for Good: a plan to ensure our water future to 2050*" (**Water for Good**).[3]

Action 70 of Water for Good provides that the SA Government will:

> *Appoint ESCOSA as the independent economic regulator for monopoly supplies of urban and regional water and wastewater services in South Australia. This will apply to SA Water's potable water and wastewater services in the first instance.*

To give effect to Action 70 (and other related actions set out in Water for Good) the SA Government introduced the *Water Industry Act 2012*[4] (**Water Industry Act**), which received Royal Assent on 19 April 2012.

Under the Water Industry Act, from 1 July 2012 the water industry has been a regulated industry for the purposes of the ESC Act. This means that the Commission has the ability to use its broad regulatory powers and functions under the ESC Act within the South Australian water industry.

Importantly, the Water Industry Act and the ESC Act limit the Commission's role to economic regulation only; the Commission does not have any role in environmental, health or social policy. Those matters are addressed by other regulators and agencies. The Commission will liaise with those other regulators and agencies where relevant, to ensure that regulation remains coordinated across the determination period.

One of the Commission's key roles under the Water Industry Act is to make price determinations. However, pursuant to section 35 of the Water Industry Act, a statutory instrument referred to as a Pricing Order may be issued by the Treasurer, and have the

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[1] Refer to http://www.legislation.sa.gov.au/LZ/C/A/Essential%20Services%20Commission%20Act%202002.aspx

[2] ESC Act 2002, section 6(a)

[3] Refer to http://www.waterforgood.sa.gov.au

[4] Refer to http://www.legislation.sa.gov.au/lz/c/a/water%20industry%20act%202012/current/2012.10.un.pdf

effect of prescribing particular factors, matters, and methodologies which bind the Commission in making its price determination.

On 24 September 2012, the Treasurer signed a Pricing Order. The effects of that Pricing Order have been described in the Commission's Statement of Approach[5]. In summary, the Pricing Order requires the Commission to:

1. only determine the revenue which may be derived from the provision of drinking and sewerage retail services;

2. adopt a revenue cap, average revenue cap or combination of the two as the form of price regulation for SA Water's drinking water and sewerage services;

3. Include a mechanism which allows for the adjustment of allowable revenue to be derived where the Commission determines there to be a material variation between forecast and actual water consumption or sewerage connections.

4. adopt an initial value of the regulated asset base, to be specified by the Treasurer at a later date;

5. allow SA Water to recover the costs of certain non-commercial activities, externalities and water and planning management charges in accordance with a direction under Section 6 of the Public Corporation Act 1993; and

6. comply with the NWI pricing principles (other than the principles for recovering the costs of water planning and management activities).

A copy of the Pricing Order is attached as Appendix A. The Commission understands that the Treasurer will issue one further Pricing Order, in May 2013, specifying the initial value of the regulated asset base.

It is under the legislation described above, and the further directions provided by the Treasurer's Pricing Order, that the Commission will set its first price determination for the South Australian Water Corporation (**SA Water**). As the Pricing Order requires the Commission to determine revenue only, the term "revenue determination" rather than "price determination" is used in the remainder of the document.

5 Refer to http://www.escosa.sa.gov.au/library/120713-EconomicRegulationOfSAWatersRevenue-StatementOfApproach.pdf .The Pricing Order issued on 25 September 2012 is similar to the draft Pricing Order issued by the Treasurer on 22 June 2012. The draft Pricing Order was referred to in the Commission's Statement of Approach, released on 12 July 2012. As the Pricing Order is not significantly different to the draft Pricing Order, it has not necessitated further changes to the Commission's approval.

1.2 Review Process & Consultation

SA Water is the dominant supplier of water and wastewater services to Adelaide and many regional centres across South Australia, supplying drinking water to approximately 95% of the State's population.

The Commission will make its first revenue determination for SA Water in May 2013, setting maximum allowed revenues for drinking water and sewerage retail services for the three year period from 1 July 2013 to 30 June 2016.

As part of this process, SA Water has now provided the Commission with its Regulatory Business Proposal (**RBP**) for this period. The RBP is now available from SA Water's website[6] and from the Commission's website[7].

The Commission sees the RBP as a critical input into the revenue determination process. The Commission will conduct an extensive review of the RBP to ensure that it is consistent with relevant legislative requirements, most importantly, that it promotes the long-term interests of consumers in South Australia. Should the RBP meet all relevant requirements and best promote the long term interest of consumers, the Commission will approve the plan. If any elements of the RBP do not meet the requirements, the Commission will substitute those elements with its own decisions.

This Issues Paper has been prepared to provide all members of the community with the opportunity to provide input on any issues related to SA Water's RBP, and on how the Commission should take them into account in its revenue determination. Members of the community are invited to provide input on any aspect of SA Water's proposals, or any other issue that is considered relevant to the Commission's first revenue determination.

The Commission considers public consultation to be an essential element of any revenue determination process. There will be a further opportunity for members of the community to provide input into this process in February 2013 when, having taken account of submissions received in response to the Issues Paper and having carried out detailed analysis of the RBP, the Commission will release its Draft Determination for public consultation.

The Commission encourages all members of the community to participate at both stages of the revenue determination process.

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[6] Refer to http://www.sawater.com.au/SAWater/AboutUs/AboutSAWater/Regulation.htm

[7] Refer to http://www.escosa.sa.gov.au/library/121012-SAWaterRegulatoryBusinessProposal_2013.pdf The Commission has published non-confidential attachments to SA Water's RBP.

1.3 Other Publications

This document is intended to be read in conjunction with SA Water's RBP. Furthermore, its content should be considered in the context of previous considerations of the Commission, as reflected in the following publications:

DATE OF PUBLICATION	DOCUMENT
December 2010	Economic Regulation of the South Australian Water Industry – Statement of Issues[8]
November 2011	Economic Regulation of the South Australian Water Industry – Draft Advice[9]
February 2012	Advice on a Regulatory Return for SA Water – Final Advice[10]
June 2012	Economic Regulation of the South Australian Water Industry – Final Advice[11]
July 2012	Economic Regulation of SA Water's Revenues – Statement of Approach[12]

1.4 Top Down Efficiency Study

In August 2012, the Commission engaged a consultant (the Centre for International Economics (**CIE**)) to provide an assessment of how efficient SA Water currently is, relative to its peer companies across Australia. The study has applied statistical techniques to data collected on a consistent basis over a number of years by the National Water Commission (**NWC**) from all major water utilities across Australia.

A copy of the consultant's final report[13] is published as a companion paper to this Issues Paper.

The CIE report analyses expenditure using an aggregate, or "top-down", approach. The report does not necessarily reflect the Commission's views, which will be informed by further detailed analysis during the revenue determination process. However, the

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8Refer to http://www.escosa.sa.gov.au/library/101207-EconomicRegulationOfSAWaterIndustry-StatementOfIssuesPaper.pdf

9 Refer to http://www.escosa.sa.gov.au/library/111110-EconomicRegulationWaterIndustry-DraftAdvice.pdf

10Refer to http://www.escosa.sa.gov.au/library/120221-AdviceRegulatoryRateOfReturnForSAWater-FinalAdvice.pdf

11Refer to http://www.escosa.sa.gov.au/library/120607-EconomicRegulationWaterIndustry-FinalAdvice.pdf

12Refer to http://www.escosa.sa.gov.au/library/120713-EconomicRegulationOfSAWatersRevenue-StatementOfApproach.pdf

13 http://www.escosa.sa.gov.au/library/121012-TopDownEfficiencyReviewSAWater-CIEReport.pdf

Commission is releasing the report to facilitate public consultation. In summary, the study reached the following conclusions:

- On a simple unit cost basis, SA Water has amongst the lowest operating costs per property of all Australian urban water utilities. Historically, SA Water has also had relatively low capital expenditure, until recent major water security investments in the Adelaide Desalination Plant and related North-South Interconnection System Project.
- On a total factor productivity basis, SA Water has high productivity when compared to most of the smaller water companies, and ranks about average against the major utilities. However, when this analysis is adjusted to remove water security investments, SA Water has the highest productivity of all utilities in the sample.
- CIE also examined SA Water's performance using a number of further statistical techniques, with performance varying between average and the top 25% of utilities. It was, however, highlighted that these models were less stable in their outputs and therefore considered less reliable.
- Overall, CIE found that SA Water performed relatively well in its efficiency, typically being around the 25th percentile of utilities or better. CIE concluded that, whilst there is some scope for further efficiency gains, the magnitude of these gains is likely to be only moderate.
- Despite SA Water's apparent relatively low operating costs and historically low capital expenditures, SA Water's prices are relatively high. CIE identified that a major driver of SA Water's higher prices is that it currently earns a return on the full Written Down Value (WDV) of its assets, whereas many of its peer companies are already regulated, and earn a return only on a RAB that is typically heavily discounted against the WDV of their assets. Typically the RAB of major regulated water utilities is between approximately 25-70% of the WDV.

The CIE report forms one input into the revenue determination process. The Commission will consider that report in conjunction with the detailed bottom-up analysis of SA Water's business plan to determine the prudent and efficient level of expenditure for the 2012/13-15/16 period.

2. KEY ISSUES FOR THE REVIEW

2.1 Form of Revenue Control

The Pricing Order limits the Commission's role to revenue regulation of SA Water. It does not allow the Commission to determine SA Water's drinking water and sewerage prices. That role will rest with SA Water and the SA Government.

The Pricing Order does provide the Commission with the discretion to adopt a total revenue control, average revenue control, or combination of the two controls. It also requires the Commission to apply separate revenue controls for drinking water and sewerage retail services, but prevents the Commission from differentiating these controls between class of customers (e.g. residential and commercial), or by location (i.e. the control must apply on a state-wide basis).

2.1.1 SA Water's Proposal

To assist SA Water in preparing its RBP, the Commission issued a Guidance Paper in February 2012, setting out the minimum information requirements to enable the Commission to make a revenue determination.[14] Consistent with the requirements of the Commission's Guidance Paper, SA Water has proposed that revenue controls apply to direct control services only. Direct control services are those retail services that are provided to all customers or a broad class of customers. SA Water proposes that the sale and supply of drinking water and sewerage services are direct control services and, therefore, that the revenue control should only apply to those services. Retail services that are not provided to all customers or a broad class of customers are defined as "excluded" services, and a separate form of price regulation, to be determined by the Commission, will apply to those services.

In its RBP, SA Water has proposed a combined form of revenue/average revenue cap for drinking water services, and a total revenue cap for sewerage services. Its proposal is discussed in Chapter 10 of the RBP.

SA Water's proposed combined control for drinking water services is based on its view that water demand may fluctuate significantly due to weather, and a pure total revenue cap may result in price instability for customers, should demand vary from that forecast. For example, should water demand be lower than forecast, prices would need to increase in order to deliver the predetermined revenue allowance. Under an average revenue control, SA Water has stated that, while price stability may be improved, there could be significant over or under recovery of required revenue, on the basis that its costs are much less sensitive to changes in demand than its revenues would be. For example, if

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14 The Guidance Paper is available on the Commission's website at http://www.escosa.sa.gov.au/library/120207-ReviewOfSAWatersPrices_2013-16-GuidancePaper.pdf.

demand was to fall, SA Water states that there would be a cost saving to SA Water as a result of having to source less water than forecast, but that incremental saving is likely to be around 10 times lower than the reduction in revenue that would result from lower customer billings.

Given its concerns over adopting either a revenue cap or average revenue control, SA Water has proposed a combined approach that would act as a revenue cap during the price path period, subject to the operation of a "banking mechanism". The proposed banking mechanism would allow any differences between actual revenue collected in a year, and the amount forecast for that year (provided the difference is greater than 1%), to be notionally "banked", with differences in subsequent years of the regulatory period to be added or subtracted from that bank. In this way, any banked increase in revenue earned through higher sales could be offset against any subsequent banked decrease in revenue from lower sales. At the end of the regulatory period, SA Water proposes that any material residual bank balance be carried forward to the next regulatory period, adjusted to reflect any increase or decrease in the marginal costs arising from the variation in water supply requirements relative to those forecast.

In relation to sewerage services, a total revenue cap form of control was seen by SA Water as being appropriate, on the basis that weather does not impact significantly on sewerage demand and the extent of demand fluctuations is much lower compared to drinking water. SA Water does not propose any banking mechanism for revenue from sewerage services.

The Commission notes that in competitive markets, prices do not rise (and usually fall) when demand falls and that future prices are not increased to compensate for past under recovery. In competitive markets, businesses bear demand risk. The Commission is concerned that insulating SA Water from demand risk may distort prices and generate inefficiencies.

Comments are sought from members of the community on SA Water's proposed forms of revenue control.

Are they consistent with the requirements of the Pricing Order?

Do they represent an appropriate balancing of demand risk between consumers and SA Water?

Would they lead to the recovery of revenue amounts that are cost reflective?

2.2 Cost Pass Throughs

The Commission's Statement of Approach sets out its intention to provide for a pass through regime, to allow adjustments to maximum revenues or average revenues, should an unforeseen event occur that is outside the control of the utility and has a material impact on the cost of providing drinking water and sewerage services. The establishment

of such arrangements is consistent with the objective of providing SA Water with a reasonable chance to recover the efficient cost of its operations.

SA Water's RBP proposes a detailed set of pass through arrangements, including a list of proposed pass through events to be specified up-front in the revenue determination, and associated administrative processes. SA Water supports a regime that neither advantages nor disadvantages SA Water should any relevant pass through events occur. In that respect, it acknowledges the possibility of revenues either increasing or decreasing, should an event occur that materially increases or decreases its costs.

The pass through proposals are contained in Chapter 8 of the RBP.

SA Water proposes 2 classes of pass through events, as follows:

Class 1: General pass through events

1. *Change in taxes events:*

Any tax imposed by or payable directly or indirectly to any Authority of the Commonwealth of Australia or Authority in the State of South Australia, (including a goods and services tax) and any fees and charges paid or payable to the Commission for licences under the Act, or any other membership, contributory or other charge payable to other regulatory bodies.

2. *Service standards events:*

A service standards event means a decision made by ESCOSA or the Department of Health and Ageing that has the effect of:

a) Imposing a set of minimum standards on SA Water in respect of direct control services that are different from the set of minimum standards imposed on SA Water in respect of direct control services at the commencement date;

b) Requiring SA Water to undertake any activity as part of direct control services in addition to those activities required to be undertaken as part of direct control services as at the commencement date; or

c) Substantially varying the manner in which SA Water is required to undertake any activity forming part of direct control services as at the commencement date, as a result of which SA Water incurs materially higher or lower costs in providing direct control services than it would have incurred but for that event.

3. *Regulatory change events:*

Any change in legislation, imposed government policy or regulatory standard (not covered by the definition of a service standard event) as defined below:

The introduction of, amendment to, or revised interpretation of:

- *Legislation;*

• Ministerial direction under the Water Industry Act 2012 and the Initial Pricing Order;

• Government policy;

• Regulations, codes, licences, guidelines and associated instrumentation; and

• Industry standards or guidelines (e.g. ANCOLD guidelines for dam safety).

4. *Extraordinary events:*

Extraordinary event means a natural or unnatural event the occurrence of which was unpredictable, unforeseen, or if foreseen could not be reasonably guarded against, as at the commencement date and substantially beyond the reasonable control of SA Water, as a result of which SA Water incurs materially higher or lower costs in providing direct control services than it would have incurred but for that event.

5. *Major projects events.*

• The costs are not included within the price determination for the period;

• The events were unforeseeable or unquantifiable at commencement of the regulatory period, or the timing is beyond SA Water's control; and

• The materiality threshold for pass through events is met.

Class 2: Specific Pass Through Events

1. *Operation of the Adelaide Desalination Plant (**ADP**)*

Any change to the operational mode of the ADP once the plant has been put in standby mode that meets the materiality threshold of pass through events.

2. *Management of water licences*

Any change in costs associated with the management of its water licences that meets the materiality threshold of pass through events.

SA Water has proposed that, should a pass through event occur, it would make an application to the Commission at that time, detailing the costs and timing of the event. The Commission would then determine the prudent and efficient costs of the pass through event, with any revenue adjustments to occur in the following financial year.

In considering SA Water's proposed pass through arrangements, a key issue for the Commission will be ensuring that SA Water's revenue remains reflective of efficient costs, and that SA Water bears normal business risks.

Comments are sought from members of the community on SA Water's proposed set of pass through events.

Are SA Water's proposed pass through events consistent with the objective of providing SA Water with a reasonable chance to recover the efficient cost of providing water retail services?

Should SA Water bear the risks that most businesses do?

2.3 Capital Expenditure

Capital expenditure (**capex**) results in the purchase or creation of an asset that can be utilised into the longer term. As such, capex, if deemed to be prudent and efficient, is added to the Regulatory Asset Base (**RAB**); in contrast operating expenditure is expensed as incurred.

Utility businesses, such as SA Water, tend to be capital intensive, with many long-life assets such as pipe networks, dams, and water treatment plants.

Capex (net of contributions from customers and Government) if deemed to be prudent and efficient, is added to the RAB on an annual basis. The level of capex is, therefore, a key driver of prices into the longer-term.

2.3.1 SA Water's proposal

SA Water has provided a forecast of its proposed capex in Chapter 6 of its RBP. As part of developing its forecast capital expenditure, SA Water has used a risk assessment and review process. However, the resultant capex is almost $200m higher than that assumed in the SA Government's 2012-13 Drinking Water and Sewerage Prices Regulatory Statement[15] (**Regulatory Statement**), published in March 2012. In providing a comparison against 2012/13 Regulatory Statement figures, the Commission notes that the expenditure forecasts adopted under the 2012-13 Regulatory Statement include certain costs that would fall outside the "direct control" category that forms the basis of the Commission's revenue determination. However, those excluded and non-regulated services captured under the Regulatory Statement represent a small component of SA Water's business (less than 10% of total revenue) and, if excluded from the Regulatory Statement, would increase the variance between the RBP and Regulatory Statement figures.

15 Refer to: http://www.treasury.sa.gov.au/dtf/infrastructure_support/water.jsp.

Table 1: Comparison of Capex Forecasts

$m(Mar12 constant)	2013/14	2014/15	2015/16	Total
SA Water RBP	342.5	348.9	412.3	1103.7
Regulatory Statement	309	350	251	910
Variance	+33.5	-1.1	+161.3	+193.7

SA Water states that investment in asset renewal was curtailed across the 2010/11-2012/13 period to facilitate major investment in drought response projects (Adelaide Desalination Plant, North South Interconnection System Project). The RBP seeks to address this, reflecting a catch-up of renewals expenditure deferred from previous years.

SA Water's capex proposal comprises a series of planned capital projects and programs of work, driven principally by asset renewal requirements, system growth, new external obligations, and drought response measures. The bulk of total capex comprises many small projects. However, key projects within the three year period include:

Table 2: Comparison of Capex Proposals

$m(Mar12 constant)	2013/14-15/16 forecast	Overall Project Total[16]
Murray Bridge Wastewater Treatment Plant Upgrade	107.2	188.6
Kangaroo Creek Dam Safety Upgrade	74.5	80.0
Aldinga Wastewater Treatment Plant – Capacity Upgrade St.2	34.8	60.4
Mt Barker Water Supply Scheme	32.2	80.2
Adelaide Desalination Plant	23.3	1824.0
Bolivar Primary Treatment Structure Concrete Rehabilitation	22.4	27.3

Further to these major projects, the plan proposes several hundred smaller projects and programs of work.

Additionally, SA Water has provided, in Table 6.4 of the RBP, forecasts of the real input cost escalation (i.e. increases in cost above general CPI inflation) that it expects to face across the 2013/14-2015/16 period. SA Water has forecast real increases in the cost of

16 All of these projects are multi-year, with additional spend in either the years prior to 2013/14 or after 2015/16

labour, materials and contracted services at between 1.5% and 1.8% per annum (i.e. above the rate of inflation), depending on the input cost and year. This would add approximately $49m to the capex forecasts over the regulatory period. These forecasts were developed through a study conducted by Evans & Peck on behalf of SA Water. The Evans & Peck report has been published as appendix F3 to the RBP.

The Commission will review SA Water's capex plans in detail, with the support of water engineering and financial consultants, to ensure that they represent only the prudent and efficient level of investment required to deliver water and sewerage services to customers, and to ensure that the planned work is achievable in the regulatory period.

The Commission's determination of prudent and efficient capital expenditure will be reflected in the value of the rolled-forward RAB. The return of, and on, the forecast RAB will then form a key element of the allowed revenue for the forthcoming regulatory period.

Comments are sought from members of the community on SA Water's proposed capital program.

Comments are also sought on SA Water's forecast of real increases in the cost of labour, materials and contracted services.

2.4 Operating Expenditure

Operating expenditure (**opex**) is the day to day cost of running the business. For SA Water, this includes the costs of paying wages and salaries, the costs of pumping and treating water, carrying out maintenance activities, reading meters and sending out customer bills, and the many other activities required to provide an on-going service to its customers.

SA Water has provided forecasts of its operating expenditure requirements as part of its RBP submission. The Commission intends to review this plan in detail, with the support of water engineering and financial consultants, to ensure that it represents only the prudent and efficient cost of providing services to customers.

As part of this exercise, the Commission will review how SA Water's opex will move over time, including forecasts of any real movements in salary and wage costs, contractor costs, and materials costs. Additionally, the Commission will assess the extent to which SA Water can improve the efficiency of its operations. The potential for efficiency improvements will be examined from an activity-specific perspective (bottom-up) and aggregate perspective (top-down).

2.4.1 SA Water's proposal

The Commission notes that SA Water's proposed opex is about 6% lower than that contained in the SA Government's Regulatory Statement when it announced 2012/13

prices, as reflected in Table 3. However, the Commission notes that if opex associated with excluded and non-regulated services was excluded from the Regulatory Statement, the like-for-like reduction is lower.

Table 3: Comparison of Opex Proposals

$m(Mar12 constant)	2013/14	2014/15	2015/16	Total
SA Water RBP	483.5	469.4	465.8	1418.7
Regulatory Statement	514	503	499	1516
Variance	-30.5	-33.6	-33.2	-97.3

In its Guidance Paper, the Commission stated that SA Water's RBP should clearly articulate the methodology and rationale adopted to forecast operating expenditure for the first revenue determination period.

In its RBP SA Water has stated that it has based its operating expenditure forecasts on the following methodology[17]:

- Step 1: Selection of a base year (2011/12);
- Step 2: Allocation of operating expenditure between direct control, excluded and non-regulated services;
- Step 3: Further allocation of direct control operating expenditure between water and sewerage services;
- Step 4: Identification of adjustments to base year operating expenditure for each year through to 2015–16; and
- Step 5: Application of input cost escalators, reflecting forecast cost escalation in real terms.

SA Water has stated that it has selected 2011/12 as its base year for the following reasons:

- The costs associated with severe drought abated in 2011/12, with severe drought conditions assumed not to apply during the forthcoming regulatory period;
- SA Water began to incur significant operating costs associated with the ADP and North South Interconnection System (NSIS) during 2011/12, with further increases forecast for 2012/13, reflecting the increased operating expenditure associated with these assets which will persist during the regulatory period;

17 Refer to p.128 of SA Water RBP

- There have been major upgrades at several of SA Water's wastewater treatment plants immediately prior to July 2011, with the operating expenditure incurred at these plants in 2011/12 indicative of the operating expenditure to be incurred during the regulatory period.

In the Guidance Paper, the Commission suggested that SA Water's RBP should include information on the different drivers impacting opex. The RBP states the following four key drivers for these costs:

- Capex program impacts (e.g. the ADP and NSIS);
- Asset-renewal/operating requirements (e.g. expenditure associated with asset condition monitoring);
- Changes in demand factors such as water use, number of customers, and volume of wastewater; (e.g. electricity costs from pumping of water from the River Murray); and
- Compliance with obligations (e.g. costs associated with the carbon pricing mechanism).

The Commission notes that the decision to put the ADP in standby mode is not one of the key drivers. That decision will reduce opex by a relatively small amount compared to the operating strategy for the ADP that had been previously planned.

SA Water proposes real input cost escalation (i.e. increases in cost above general CPI inflation) of approximately $9.5m, to be included in its operating expenditure forecasts over the regulatory period.

Similar to the Commission's proposed approach to assessing SA Water's capital expenditure plans, the Commission will set an operational expenditure allowance for the forthcoming regulatory period that reflects only the expenditure required to efficiently deliver water and sewerage services to customers.

To do this, the Commission will take into consideration both a detailed analysis of SA Water's proposed operating expenditure, and the econometric study of its relative efficiency, as discussed in section 1.4. All relevant submissions from stakeholders will also be taken into account.

Comments are sought from members of the community on SA Water's proposed:

a) level of operating expenditure;
b) methodology for selecting the base year of 2011/12; and
c) key drivers influencing the proposed operating expenditure.

2.5 Demand

SA Water has provided forecasts of demand as part of its RBP submission. The Commission will scrutinise these forecasts, and will take expert external advice on the robustness of the methodology and resultant forecasts proposed by SA Water.

It is important that SA Water provides the Commission with accurate forecasts of future demand. Water demand has an impact on the cost of providing water, as changes in demand may require water to be supplied from alternate sources with different costs. It also has a strong influence on the amount of revenue recovered by SA Water. As discussed in section 2.1, the impact of demand on revenue will depend on the form of revenue control. It will also depend on the price structures adopted by SA Water (eg. the greater the amount of revenue sourced from usage charges, the more revenue is at risk due to demand variations).

Demand forecasting is a complex task. In recent years, due to drought conditions, demand levels have been constrained by water restrictions. This has driven changes in customer behaviour, with initiatives such as mandatory rainwater tanks on new houses, the establishment of more drought tolerant gardens, and the installation of highly efficient irrigation systems.

Water restrictions were eased across the state at the end of 2010, following a period of improved rainfall conditions, though Water Wise measures remain in place. The extent to which customer behaviour has, or will, revert to pre-drought levels is a key issue in forecasting demand.

2.5.1 SA Water's proposals

SA Water has developed and is implementing a new demand forecasting methodology, which is described in its RBP. SA Water has stated that, previously, its demand forecasting methodology was based on long-term trends, with adjustments made for growth in the number of customers served. SA Water has changed its methodology to reflect greater volatility in demand, and the fact that a greater component of its revenue is subject to demand fluctuations (through water usage charges). The methodology was developed by SA Water's consultant, ACIL Tasman.

ACIL Tasman had conducted an analysis of three customer classes: 1) Residential; 2) Commercial and 3) Other non-residential. Its report identifies key drivers of demand for each class of customer, and accounts for the different nature of demand and responsiveness to these drivers. ACIL Tasman identified price (Tier 2 usage price), temperature (Cooling Degree Days), economic activity (Gross State Product) and water restrictions as key drivers of demand for water.

SA Water considers the drivers selected by ACIL Tasman to be reasonable, and consistent with the drivers of demand observed by SA Water. ACIL Tasman considered using Tier 2 prices since this represents the marginal price of water for most users. It further stated that recent price increases have coincided with the application of various restrictions on

water use and campaigns aimed at modifying water use behaviours, making it impossible to distinguish accurately the influence of each of these factors. Hence, in its analysis the variability of demand is capturing the combined impact of rising prices, rebates, water conservation programs, educational programs and the general pressure to conserve water.

In the RBP for residential and commercial customers, two separate forecasting models were developed for each class of customer:

i. A forecast of the number of customers in that class; and

ii. A forecast of water use per customer in that class.

SA Water stated in its RBP that demand for water has fallen significantly, from 222GL in 2006–07, to 184GL in 2011–12 (17% reduction). It claimed that the reduction is primarily due to serious drought and water price increases. Despite the easing of water restrictions in December 2010, SA Water expects that water consumption will not return to pre-drought levels during the forthcoming regulatory period. Further, price elasticity of demand for water, combined with other factors, is expected to suppress growth in water use through to 2015–16, with residential demand forecast to increase by approximately 7.5GL (4.3%) during this period.

The Commission notes that SA Water's demand forecasts are substantially below the demand levels assumed in the SA Government's Regulatory Statement (190GL).18

Comments are sought from members of the community on SA Water's demand forecasting methodology and the resultant demand forecasts.

2.6 Supply Mix

SA Water has provided details of how it plans to optimise its water supply mix to meet the forecast demand. Supply sources comprise catchment water from reservoirs, water pumped from the River Murray, and desalinated water supplied from the ADP. Water from each of these different sources has a different cost, and the Commission intends to test SA Water's proposals, to ensure that the most efficient mix of supply sources is used.

2.6.1 SA Water's proposals

SA Water's proposed supply mix is illustrated in Chart 1.

18 Refer to http://www.treasury.sa.gov.au/dtf/infrastructure_support/water.jsp

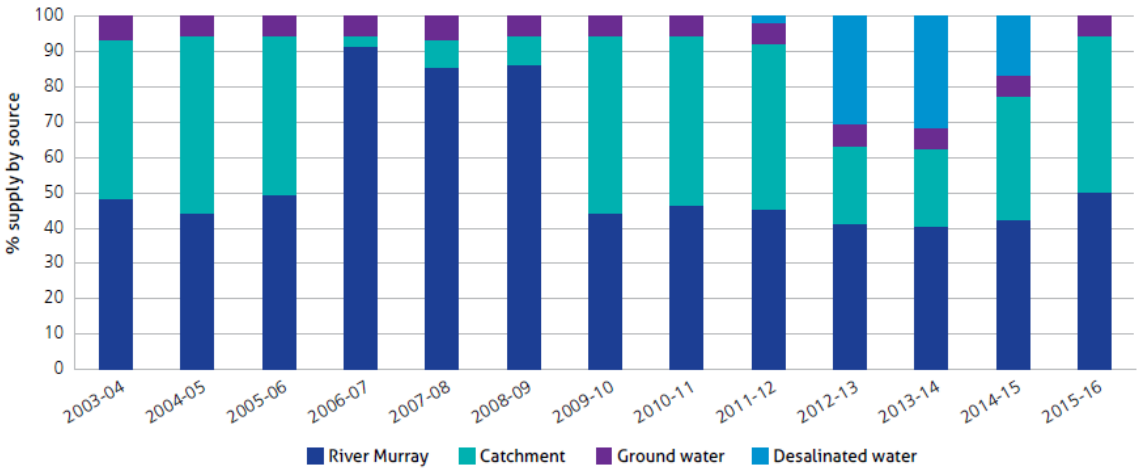
There are various drivers of the cost of water supply and SA Water has stated in its RBP that, among other things, it has considered the following in developing its supply mix:

- Forecast water usage based on an independent consultant study;
- A 'Water Balance Model' which considers the water expected to be available from different sources (i.e. reservoir, River Murray and desalination);
- Assumed impact of the Federal Government's carbon pricing mechanism; and
- The commissioning and production requirements of the ADP.

SA Water has stated that it will use lower cost water sources first, which will mean placing the desalination plant in 'standby mode' when these cheaper sources are available[19].

Under the proposed supply mix, SA Water plans to operate the ADP only for a testing/proving period of two years, commencing January 2013. After this, the ADP will not be required to produce water through to the end of the forthcoming regulatory control period[20].

Chart 1: SA Water's delivered and forecast supply mix to 2015–16 (% by source)[21]



Comments are sought from members of the community on SA Water's proposed supply mix.

19 Refer to section 10.1.4 of the RBP for information on SA Water's proposed water supply mix.

20 Refer to p.145 of SA Water RBP.

21 Refer to p.130 of SA Water RBP.

2.7 Return on Assets

The regulatory rate of return (also referred to as the "cost of capital") is a measure of the opportunity cost of investment in regulated assets and is integral in ensuring that consumers do not pay prices higher than those necessary, while providing sufficient incentives for on-going investment in relevant infrastructure. Capital (or investment funds), like any other commodity, has a price that is determined by supply and demand and the riskiness of the cash flows generated by the assets. Thus, determination of the regulatory rate of return requires the estimation of the cost of capital associated with the regulated activity.

The Commission considers that the appropriate regulatory rate of return can, and should, change over time as economic and market conditions change. To account for future changes to the cost of capital, the Commission will set the regulatory rate of return to apply to SA Water's regulated assets from 1 July 2013 as close as possible to that date, so that the most up-to-date data can be utilised.

Further information on this topic is available in the Commission publication, *Advice on a Regulatory Rate of Return for SA Water – Final Advice*[22], published February 2012.

2.7.1 SA Water's proposal

In its RBP, SA Water has proposed a methodology for calculating the rate of return that is generally consistent with that used by the Commission in its February 2012 Final Advice.

SA Water has derived a rate of return using a post-tax Weighted Average Cost of Capital (WACC) approach, with the cost of equity calculated through the Capital Asset Pricing Model (CAPM). The only methodological difference between SA Water's proposal and that used by the Commission in its February 2012 advice is the use of a 180 day period for determining the risk-free rate of return, debt risk premium and inflation rate. The Commission's preference is to use a 20 day averaging period, which is standard practice in corporate finance. SA Water argues that a short period may result in overly volatile estimates of those WACC parameters given the potential impacts of short-term financial market conditions, and that a longer period would produce less volatile estimates. While it acknowledges that the longer the period in which observations are measured, the less relevant some of those historic observations may be in determining future financing costs, it considers 180 days as providing an appropriate balance between reduced volatility and ensuring that the estimate is based on the most relevant market data.

SA Water's proposed rate of return is also based on more recent market data than that used in the Commission's February 2012 market advice, which is consistent with the Commission's intention to use the latest data set available.

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22 http://www.escosa.sa.gov.au/library/120221-AdviceRegulatoryRateOfReturnForSAWater-FinalAdvice.pdf

SA Water's proposed rate of return compared to the Commission's proposed rate of return as per the February 2012 advice to the Treasurer, is summarised in Table 9-13 of the RBP, which is reproduced below. Some of the parameters that make up the WACC are quite technical. Further explanation of these parameters is provided in the Commission's publication *Advice on a Regulatory Rate of Return for SA Water – Final Advice*.

Table 5: Comparison of SA Water's proposed rate of return to the Commission's rate of return derived in February 2012

Parameter	Commission's Final Advice (27 January 2012)	SA Water's Updated calculation (1 June 2012)[23]	SA Water Proposal (1 June 2012)	Data Source
Averaging Period Nominal Risk Free Rate	20 days 3.79%	20 days 3.23%	**180 days** **3.93%**	10 year CGBs
Credit Rating	BBB	BBB	**BBB**	Regulatory Precedent
Gearing	60%	60%	**60%**	Regulatory Precedent
Debt Margin	3.94%	3.53%	**3.55%**	Extrapolated Bloomberg BBB 7 year FVC
Equity Beta	0.80	0.80	**0.80**	Regulatory Precedent
Market Risk Premium	6%	6%	**6%**	Regulatory Precedent
Corporate Tax Rate	30%	30%	**30%**	Statutory tax rate
Gamma	0.50	0.50	**0.50**	Regulatory Precedent
Inflation Forecast	2.25%	2.16%	**2.28%**	10 year CGB and inflation indexed bonds
Nominal WACC	8.07%	7.27%	**7.98%**	Calculated from above
Real WACC	5.70%	5.00%	**5.57%**	Calculated from above

23 SA Water's updated calculation of the Commission's Final Advice on Rate of Return as at 1 June 2012.

The Commission notes that SA Water's proposed post-tax real rate of return (5.57%) is lower than that estimated by the Commission in its February 2012 advice (5.70%), but is greater than SA Water's calculation of the updated estimate using the Commission's methodology (5.00%).

The Commission's revenue determination will include a rate of return based on the most up-to-date market data, and is therefore likely to differ from that calculated by SA Water. The use of a 180 day versus 20 day averaging period will be further considered by the Commission during the review process.

Comments are sought from members of the community on how the regulatory rate of return for SA Water should be determined.

2.8 Regulatory Asset Base

The value of the Regulatory Asset Base (RAB) will be a key input into the Commission's determination.

When utilities are subject to economic regulation, an initial value of a RAB is often established. The regulated business is then allowed to receive a return of, and on, the initial value of the RAB, and subsequent additions to it, over the useful life of the assets.

SA Water has already an established asset base which is used to serve its customers, comprising approximately 35,000km of water and sewerage pipes, dams, treatment plants, pumping stations, the ADP, and other assets. A key part of establishing the regulatory regime is to set the initial value of the RAB.

Given the cost and life of the assets, utilities generally do not expect customers to pay for these assets, in full, at the time of construction. Instead, they match the cost of long-term assets against the period over which customers will benefit from the use of the assets. This is called regulatory depreciation or "return of assets" and is one of the three building blocks of the revenue allowance.

The value of the RAB, together with the rate of return on assets, determines the "return on assets" component of the revenue allowance.

SA Water, in common with most utility providers, utilises long-term assets, such as water and sewerage mains, dams, water treatment plants, and the ADP, in providing services to customers. These assets are expensive to build, and may have a useful life of up to 100 years or more.

There are a number of potential approaches to establishing the initial value of the RAB, such as considering depreciated historic cost, current market value, replacement value, or written down value (**WDV**). These approaches can result in different values and therefore prices to customers.

For other major regulated water utilities in Australia, it has been commonplace for the RAB to be set at a level substantially discounted against the WDV of assets. Table 6 illustrates examples of the extent to which the RAB is below the WDV of assets for regulated entities across other jurisdictions.

Table 6: Comparisons of Water Utility WDV and RAB – 2010/11[24]

Utility	WDV($bn)	RAB($bn)	RAB/WDV
Hunter Valley	4.64	1.97	**42%**
Gosford City Council	1.86	0.49	**27%**
Wyong Shire Council	0.96	0.42	**44%**
Sydney Water	34.91	13.59	**39%**
Yarra Valley Water	3.67	2.93	**80%**
City West Water	3.16	1.38	**44%**
South East Water	3.00	2.30	**77%**
ACTEW	3.34	1.51	**45%**

The 25 September 2012 Pricing Order states that the Commission will be required to adopt a specified initial RAB for SA Water. This value will be provided to the Commission in a further Pricing Order, which the Commission expects to receive in May 2013. It is the Commission's understanding that this RAB will be established to achieve the price path forecast in the SA Government's May Regulatory Statement, except that any further capex and opex savings will flow through to consumers; that is, the initial RAB will be set at a value based on delivering the Government's pre-determined price path.

As the RAB will not be set until May 2013, the Commission will state in its Draft Determination in February 2013 its views on an appropriate initial RAB value, having regard to the legislative context, best regulatory practice, and submissions received on SA Water's RBP. Whilst the Pricing Order (clause 4.1.7.1) provides that the initial regulatory value of the RAB that must be adopted by the Commission will be set through a subsequent Pricing Order, the Commission notes that value will need to be considerably lower than the current WDV of SA Water's assets if significant increases in South Australia's already high water bills are to be avoided.

As the Treasurer will set the initial value of the RAB, the Commission's revenue determination will only affect the amount of revenue to be earned by SA Water to the extent that the Commission determines capex and opex savings compared to the

[24] Refer to P76 http://www.escosa.sa.gov.au/library/121012-TopDownEfficiencyReviewSAWater-CIEReport.pdf

forecasts contained in the May Regulatory Statement. The SA Government has committed to ensuring that any such savings will ultimately flow through to prices faced by consumers. All other decisions made by the Commission (for example, on the regulatory rate of return), will not have any impact on revenues during the first determination period, as the RAB will be set to compensate for those decisions.

2.8.1 SA Water's proposal

In its RBP submission, SA Water does not propose an initial RAB value, on the basis that the Treasurer will be determining that value in a future Pricing Order. It does, however, propose a set of asset classes, with associated useful lives, to be used to calculate regulatory depreciation and a methodology for updating, or "rolling forward", the RAB from year to year. The proposed approach allows for capital additions, disposals, regulatory depreciation, and an allowance to compensate for the loss of the return on assets component of revenue that results from SA Water's assumption that all assets are commissioned on the last day of the financial year.

In accordance with the Pricing Order, the Commission will need to ensure that SA Water's proposed roll-forward approach is consistent with the NWI Pricing Principles.

Comments are sought from members of the community on SA Water's proposed approach for rolling forward the value of the initial RAB.

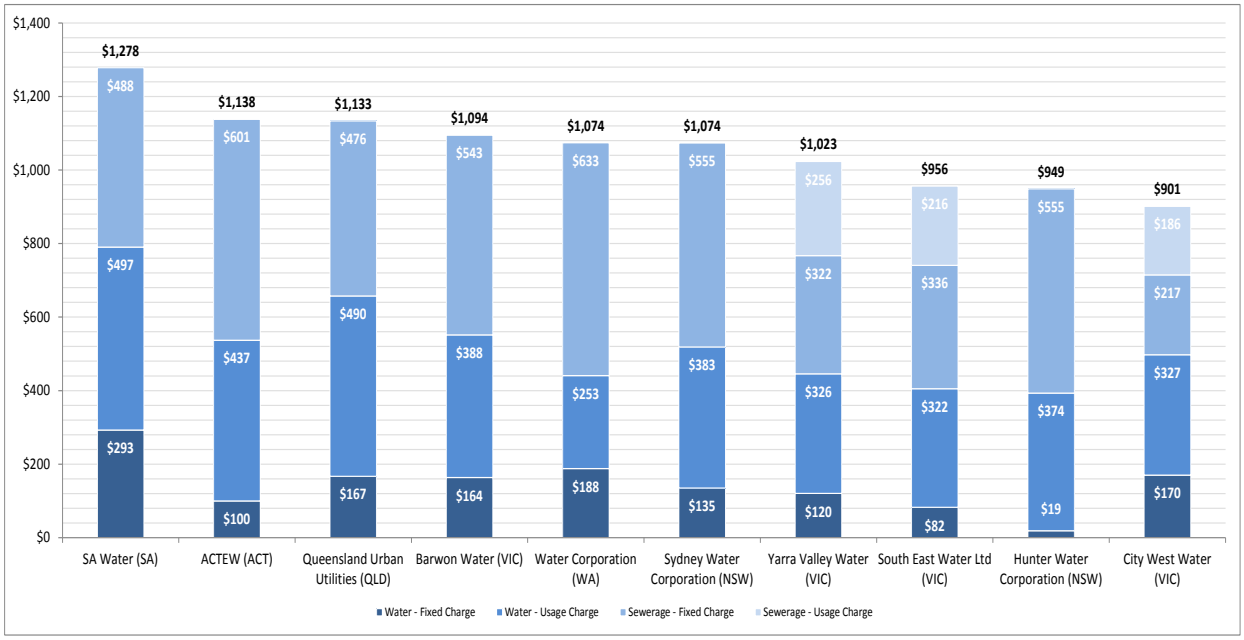
2.9 Revenues

SA Water has not proposed revenue caps or prices in its RBP. Indeed, as stated above, final prices will be determined by SA Water and approved by the SA Government.

The Commission has previously noted[25] that SA consumers already pay the highest water prices in Australia, as shown in Chart 3 below.

25 Refer to http://www.escosa.sa.gov.au/library/120713-EconomicRegulationOfSAWatersRevenue-StatementOfApproach.pdf

Chart 3: 2012/13 Annual Residential Water and Sewerage Bill by Jurisdiction (based on annual water consumption of 180kL)



The Commission is committed to rigorously examining all aspects of SA Water's RBP to ensure that consumers pay only the prudent and efficient cost of delivering water and sewerage services.

Any capex and opex savings relative to the 2012/13 Regulatory Statement figures will reduce revenue caps. **It is noted, however, that an important factor that will drive water prices is the initial value of the RAB that the Treasurer will set.**

3. NEXT STEPS

3.1 Draft Timetable for this Review

The following timetable sets out the proposed key dates[26] for the revenue determination process:

Date	Activity
28 September 2012	SA Water submitted RBP to Commission
12 October	First Public Consultation - Commission's Issues Paper released with RBP for public consultation
9 November	Closing date for members of the community to provide submissions on Issues Paper
1 February 2013	Second Public Consultation - Commission's Draft Determination released for public consultation
15 March	Closing date for members of the community to provide submissions on Draft Determination
10 May	Commission's preliminary Final Determination provided to Treasurer
14 May	Treasurer's Pricing Order issued specifying initial value of RAB
17 May	Commission's Final Determination published
May-June	Prices developed by SA Water, approved by SA Government, and checked for compliance with revenue caps by the Commission
1 July 2013	First three year revenue determination period begins

[26] Whilst the Commission has agreed these dates with stakeholders, it is recognised that there are dependencies around the receipt of information from other parties, which may require changes to the timetable.

APPENDIX A

WATER INDUSTRY ACT 2012 (SECTION 35)

PRICING ORDER

FOR THE REGULATORY PERIOD 1 JULY 2013 – 30 JUNE 2016

Pursuant to s35(4) of the *Water Industry Act 2012* (**the Act**), the Treasurer hereby issues the following pricing order (**this Order**):

1. INTERPRETATION

1.1 Where a term used in this Order is defined in the Act, it has the meaning given in the Act.

1.2 In this Order, unless the contrary intention appears:

determination means a determination of the Commission under s35 of the Act and Part 3 of the *Essential Services Commission Act 2002* (**the ESC Act**) made in respect of retail services;

drinking water retail service means a retail service constituted by the sale and supply of water of a quality fit for human consumption;

initial regulatory period means the three year period commencing 1 July 2013;

NWI Pricing Principles means the National Water Initiative Pricing Principles 2010 agreed by Australian governments as the basis for setting water prices / charges in their jurisdictions, as amended or replaced from time to time;

NWI Principles for Recovering the Costs of Water Planning and Management Activities means the Principles for recovering the costs of water planning and management activities which form part of the NWI Pricing Principles, as amended or replaced from time to time;

NWI Principles for the Recovery of Capital Expenditure means the Principles for the recovery of capital expenditure which form part of the NWI Pricing Principles, as amended or replaced from time to time;

NWI Principles for Urban Water Tariffs means the Principles for urban water tariffs which form part of the NWI Pricing Principles, as amended or replaced from time to time;

sewerage retail service means the sale and supply of sewerage services for the removal of sewage.

2. APPLICATION

2.1 This Order is to take effect from the date that it is signed.

2.2 Part 3 of this Order is to apply to any determination.

2.3 Part 4 of this Order is to apply to a determination in respect of the following retail services for the initial regulatory period:

2.1.1 drinking water retail services provided by SA Water;

2.1.2 sewerage retail services provided by SA Water,

(such services referred to in Part 4 of this Order as 'a relevant service' or 'the relevant services').

3. ADOPTION OF NWI PRICING PRINCIPLES

3.1 The Commission must adopt or apply the NWI Pricing Principles (other than the Principles for Recovering the Costs of Water Planning and Management Activities) when making a determination, to the extent that those, or any of those, principles are relevant to the determination in question.

3.2 In the case of a determination to which Part 4 of this Order applies, clause 3.1 applies subject to Part 4 of this Order.

4. SA WATER DRINKING WATER AND SEWERAGE RETAIL SERVICES

4.1 The Commission must adopt or apply the following parameters, principles or factors when making a determination to which this Part applies:

4.1.1 The initial regulatory period must be adopted as part of the determination.

4.1.2 The determination must only determine the revenue which may be derived from the provision of such services.

4.1.3 The determination must determine separate revenue controls for drinking water retail services and sewerage retail services.

4.1.4 In respect of each relevant service, the determination may apply either a revenue cap control, an average revenue control, or a combination of both of those forms of revenue control.

4.1.5 The determination must not establish, or require the establishment of, a revenue control for a relevant service based on customer class or location.

4.1.6 The determination must include a mechanism which allows for the adjustment of the allowable revenue to be derived where the Commission determines there to be a relevant and material variation between forecast and actual rates of water consumption or sewerage connections.

4.1.7 The determination must adopt or apply the NWI Principles for the Recovery of Capital Expenditure, subject to the following:

4.1.7.1 the determination must adopt the initial regulated asset base for SA Water as at 1 July 2013 to be specified by the Treasurer in a subsequent pricing order issued under s35 of the Act;

4.1.7.2 the determination must allow SA Water to recover the efficient cost of assets to be acquired over the course of the initial regulatory period which are required to support activities that SA Water is required to provide in accordance with a direction under s6 of the *Public Corporations Act 1993;*

4.1.7.3 for the avoidance of doubt, the Commission must only adopt or apply Principle 6 of the NWI Principles for the Recovery of Capital Expenditure in relation to contributed assets that SA Water acquires after 1 July 2013.

4.1.8 The determination must adopt or apply Principle 1 of the NWI Principles for Urban Water Tariffs, subject to the following:

4.1.8.1 in relation to costs relating to externalities (including water planning and management), the determination must only allow SA Water to recover such costs as are attributable to and payable by SA Water in accordance with the law, including a direction under s6 of the *Public Corporations Act 1993;*

4.1.8.2 the determination must allow SA Water to recover such costs (less any relevant contributions to such costs that it receives) that are attributable to activities that SA Water is required to provide in accordance with a direction under s6 of the *Public Corporations Act 1993*, and are either:

(i) specified in the relevant direction, or if not so specified,

(ii) determined by the Commission to be efficient.

5. VARIATION

5.1 This Order may be varied by a subsequent pricing order issued under s35 of the Act.

Jack Snelling

JACK SNELLING M.P.
Treasurer

Date: 24 September 2012

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