

SECOND SA WATER PRICE DETERMINATION

Draft Framework and Approach

November 2013



REQUEST FOR SUBMISSIONS

The Essential Services Commission of SA (**the Commission**) invites written submissions from all members of the community in relation to this document. Written comments should be provided by **14 February 2014**. It is highly desirable for an electronic copy of the submission to accompany any written submission.

It is Commission's 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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The Essential Services Commission of South Australia is the independent economic regulator of the electricity, gas, ports, rail and water industries in South Australia. 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*. For more information, please visit www.escosa.sa.gov.au.

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GLOSSARY OF TERMS

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ABS	Australian Bureau of Statistics
ADP	Adelaide Desalination Project
AER	Australian Energy Regulator
β	Equity Beta
САРМ	Capital Asset Pricing Model
Сарех	Capital Expenditure
CGB	Commonwealth Government Bond
Commission	Essential Services Commission of South Australia
СРІ	Consumer Price Index
CSO	Community Service Obligation
D	Value of Debt
DRP	Debt Risk Premium
E	Value of Equity
ESC Act	Essential Services Commission Act 2002 (SA)
ESCOSA	Essential Services Commission of South Australia
First Price Determination	SA Water's Water and Sewerage Revenues 2013/14 - 2015/16 Final Determination
First Regulatory Period	1 July 2013 to 30 June 2016
FTE	Full Time Equivalent
FVC	Fair Value Curve
γ	Gamma
GSL	Guaranteed Service Level
Guidance Paper	Review of SA Water's Prices: 2013/14 – 2015/16 Guidance Paper
i _{exp}	Expected Inflation
Inquiry	Inquiry into Drinking Water and Sewerage Retail Services Pricing Reform
k _d	Cost of Debt
k e	Cost of Equity

IPART	Independent Pricing & Regulatory Tribunal, NSW
LRMC	Long Run Marginal Cost
MRP	Market Risk Premium
NWI	National Water Initiative
Орех	Operating Expenditure
RAB	Regulatory Asset Base
RBP	SA Water's Regulatory Business Proposal
r _f	Risk-free Rate
SA Water	South Australian Water Corporation
Second Price Determination	The Commission's price determination to apply to SA Water's retail services for the Second Regulatory Period
Second Regulatory Period	The regulatory period commencing 1 July 2016
SRMC	Short Run Marginal Cost
V	Value of the Firm (V = E + D)
WACC	Weighted Average Cost of Capital
Water Industry Act	Water Industry Act 2012 (SA)

BACKGROUND AND PURPOSE

1.1 Legislative framework and Commission's role

The Essential Services Commission of South Australia (**Commission**), established under the *Essential Services Commission Act 2002* (**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." ¹*

The regulatory functions of the Commission are set out in section 5 of the ESC Act:

5—Functions

The Commission has the following functions:

- (a) to regulate prices and perform licensing and other functions under relevant industry regulation Acts;
- (b) to monitor and enforce compliance with and promote improvement in standards and conditions of service and supply under relevant industry regulation Acts;
- (c) to make, monitor the operation of, and review from time to time, codes and rules relating to the conduct or operations of a regulated industry or regulated entities;
- (d) to provide and require consumer consultation processes in regulated industries and to assist consumers and others with information and other services;
- (e) to advise the Minister on matters relating to the economic regulation of regulated industries, including reliability issues and service standards;
- (f) to advise the Minister on any matter referred by the Minister;
- (g) to administer this Act;
- (h) to perform functions assigned to the Commission under this or any other Act;
- (i) in appropriate cases, to prosecute offences against this Act or a relevant industry regulation Act.

From 1 July 2012, the South Australian water industry has been a regulated industry under the *Water Industry Act 2012* (Water Industry Act). Therefore, the Commission has the ability to use its broad regulatory powers and functions under the ESC Act within the South Australian water industry.

Pursuant to section 35(1) of the Water Industry Act, the Commission may make a price determination under the ESC Act regulating prices, conditions relating to prices and price-fixing factors for water and sewerage retail services in South Australia.

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¹ ESC Act 2002, section 6(a)

That said, there are a number of important legislative controls on the scope of the Commission's price determination powers.

First, in authorising the making of a price determination, the Water Industry Act limits the Commission's price determination role only to those services falling within the definition of "retail services"; any services outside the scope of that definition may not be the subject of a price determination by the Commission.

Section 4(1) of the Water Industry Act defines a retail service as follows:

retail service means a service constituted by—

- (a) the sale and supply of water to a person for use (and not for resale other than in prescribed circumstances (if any)) where the water is to be conveyed by a reticulated system; or
- (b) the sale and supply of sewerage services for the removal of sewage, (even if the service is not actually used) but does not include any service, or any service of a class, excluded from the ambit of this definition by the regulations;

As a result, any operations or services falling outside the scope of that definition are not subject to price regulation by the Commission; for example, the provision of network services on a stand-alone basis is not currently price regulated.

Second, the Water Industry Act (section 5(2)) limits the Commission's price determination role from applying to irrigation water service providers:

- (2) This Act does not apply to or in relation to—
 - (a) an irrigation trust, or any services provided or infrastructure held by an irrigation trust, under the Irrigation Act 2009;
 - (b) the Renmark Irrigation Trust, or any services provided or infrastructure held by the Renmark Irrigation Trust, under the Renmark Irrigation Trust Act 2009;
 - (c) any other person providing irrigation services designated by the Minister by notice in the Gazette,

except to the extent prescribed by the regulations.

Third, section 35(4) of the Water Industry Act provides the Treasurer with a power to issue a statutory instrument, known as a 'pricing order':

- (4) The Treasurer may, for the purposes of subsection (3), issue an order (a pricing order) that
 - (a) sets out any policies or other matters that the Commission must have regard to when making a determination contemplated by this section;
 - (b) specifies various parameters, principles or factors that the Commission must adopt or apply in making a determination contemplated by this section;
 - (c) relates to any other matter that the Treasurer considers to be appropriate in the circumstances.

Section 35(3) of the Water Industry Act requires the Commission to comply with the terms of any pricing order issued by the Treasurer under that Act.

1.2 First Regulatory Period – 2013/14 to 2015/16

In May 2013, the Commission made its First Price Determination in respect of the water and sewerage retail services provided by the South Australian Water Corporation (**SA Water**). The Commission's *SA Water's Water and Sewerage Revenues 2013/14 - 2015/16 Final Determination* (**First Price Determination**) sets the maximum average revenues that SA Water can earn during the period 1 July 2013 to 30 June 2016 (**First Regulatory Period**).

1.3 Purpose of this document

Prior to 30 June 2016, the Commission will make a new determination (Second Price Determination) for the period commencing 1 July 2016 (Second Regulatory Period). The purpose of this draft Framework and Approach paper is to set out the Commission's proposed principles and approach that will guide that determination.

It will be important for the Commission to settle key principles and matters of process for the Second Price Determination in time to provide SA Water with reasonable certainty as it develops its Regulatory Business Proposal (RBP) for the next regulatory period. The Commission stresses, however, that it does not intend to provide detailed instructions to SA Water on all of the matters that must be addressed in its RBP. SA Water should be provided with sufficient flexibility to argue the merits of its proposals, based on its business plans and having regard to the views of its customers.

There are, however, certain areas where the Commission has sought to identify the minimum information requirements that it would expect SA Water to present as part of its RBP. For example, within the expenditure sections of this paper, specific expectations have been set around the granularity of data and supporting written information that should be provided. SA Water must be comprehensive in its provision of information, with proposals supported by clear, reasoned arguments and evidence.

The Commission notes that, in any industry, certain conditions and factors change, as new information becomes available. It is, therefore, not possible to settle all matters, nor is it possible to say with certainty that the Commission's approach to some matters will not, or should not, change.

The Second Price Determination may also be affected by certain Government policies, including how Community Service Obligation (**CSO**) payments will be set and the requirements of any pricing orders, which the Treasurer may make. For the purposes of this paper, the Commission has not made assumptions about whether a future pricing order(s) will be made, nor the content of any future pricing order(s). The Commission notes that it is important that all relevant Government policy settings are finalised well before the review process commences. The Commission's approach may change if the policy framework changes.

The Commission may also change its approach on the basis of consultation with all members of the community and/or consideration of any other new information.

This paper should, therefore, be interpreted as reflecting the Commission's proposed framework and approach at this point in time, based on the information currently available.

The Commission is currently conducting an Inquiry into reform of SA Water's drinking water and sewerage prices (Inquiry).² Consistent with the Inquiry's terms of reference, provided to the Commission by the Treasurer in September 2012,³ the Commission will release a draft report on its findings by 31 May 2014, and a final report by no later than 31 December 2014. The Commission's Inquiry is examining options for pricing reform to promote the long-term interests of consumers.

The key areas for reform that the Commission is examining include:

- Reform of SA Water's drinking water tariff structure to promote greater cost reflectivity;
- Possible changes to the current property-based approach to sewerage pricing;
- ▲ Location-based pricing as an alternative to the current statewide pricing approach;
- ▲ Treating end-users as customers (rather than land-owners); and
- Increasing the number of individual customers that are metered and introducing smart water meters.

As part of the Inquiry, the Commission will carefully consider transitions impacts of any reforms on customers.

The Commission will only be able to implement some possible Inquiry recommendations if the government decides to change existing policies (e.g., in regard to statewide pricing). The Commission will be able to implement various other possible recommendations (such as rebalancing supply and usage charges) unless a pricing order is made that prevents it from doing so.

Therefore, this document has been written to provide as much flexibility as possible to enable the implementation of any potential recommendations of the Commission's Inquiry.

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The Commission has published a series of Issues Papers to commence this Inquiry, which are available at http://www.escosa.sa.gov.au/projects/189/inquiry-into-drinking-water-and-sewerage-retail-services-pricing-reform.aspx.

The terms of reference for that Inquiry is available at http://www.escosa.sa.gov.au/library/121207- InquiryDrinkingWater SewerageRetailServicesPricing-NoticeOfReferral.pdf

The Commission will aim to implement all recommended reforms that it is able to at the commencement of the Second Regulatory Period. However, should longer lead times be required for some reforms, the Commission's Second Price Determination will introduce those reforms as early as possible during the Second Regulatory Period.

2. OVERARCHING PRINCIPLES FOR THE SECOND PRICE DETERMINATION

2.1 Guiding objectives

In making its Second Price Determination, the Commission will be guided by the objectives specified in the ESC Act.

Section 6 (a) of the ESC Act states that, in performing its functions, the Commission 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.

Section 6 (b) states that at the same time, the Commission must have regard to the need to:

- (i) promote competitive and fair market conduct; and
- (ii) prevent misuse of monopoly or market power; and
- (iii) facilitate entry into relevant markets; and
- (iv) promote economic efficiency; and
- (v) ensure consumers benefit from competition and efficiency; and
- (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.

2.2 Determining allowed revenues, prices and/or pricing principles

In making its Second Price Determination, the Commission will undertake the following steps:

- determine the service standards and targets to be met by SA Water during the Second Regulatory Period, which will impact on SA Water's expenditure during that period (see Chapter 4);
- classify SA Water's regulated retail services into "direct control" services (services
 provided to a broad group of customers, which will be subject to direct regulation),
 and "excluded services" (services provided to individual or distinct groups of
 customers, which will be subject to a lighter-handed form of control) (see Chapter 5);
- 3. determine the forms of regulation to apply to direct control services (eg. revenue caps, individual price caps or weighted average price caps) and excluded services (eg. pricing principles and/or price monitoring) (see Chapter 6);
- 4. determine the cost components, or "building blocks", that are used to determine total allowable revenue for direct control services. In particular, the Commission will:
 - determine prudent and efficient operating and capital expenditures for the Second Regulatory Period (see Chapter 7). Operating expenditure is directly

- recoverable through allowed revenues and capital expenditure is added to SA Water's Regulatory Asset Base (RAB), which is itself an input into the revenue building blocks;
- b. set the value of the RAB during each year of the Second Regulatory Period and the amount of regulatory depreciation of the RAB, which forms a building block of revenue (see Chapter 8);
- c. determine the extent to which an allowance for working capital is allowed (see Chapter 8);
- d. set the regulatory rate of return, which is applied to the value of the RAB and the amount of working capital to determine the return on assets and working capital components (see Chapter 9);
- e. make an allowance for tax expense (see Chapter 10);
- f. take into account any payments from the Government for Community Service Obligations (CSOs) that the Government requires SA Water to perform. SA Water incurs costs in performing CSOs; CSO payments are deducted from total allowed revenues, to ensure there is no double-recovery of those amounts; and
- g. make allowances for cost pass-through events that have occurred during the First Regulatory Period; these events are those that were unforeseen at the time of making the First Price Determination but which meet the criteria established by the Commission in that determination and which have led to cost changes that may be considered for a pass-through to revenues in the Second Regulatory Period (see Chapter 11).
- 5. Having combined the building blocks of revenue to determine total revenue allowances for direct control services, the Commission will use its forecasts of demand for direct control services during the Second Regulatory Period (which will also drive SA Water's expenditure forecasts) to enable it to set regulated prices consistent with allowed revenues (see Chapter 12);
- 6. determine the basis on which prices of direct control services will be set each year consistent with allowed revenues (see Chapter 13). As a general principle, the Commission believes that cost-reflective prices are in the long-term interests of consumers and it is likely that the Commission will consider certain cost information (such as the long-run marginal cost of providing drinking water services) in setting prices; and
- 7. estimate the impacts of the price determination on SA Water's customers (see Chapter 14).

Importantly, the building block approach described above sets allowed revenues to reflect only the prudent and efficient costs incurred in providing the direct control services to an agreed set of service standards (and in meeting any other obligations that the Government requires the Commission to consider) in a rigorous and transparent manner. Figure 2-1 shows how total revenue allowances are derived from these cost building blocks.

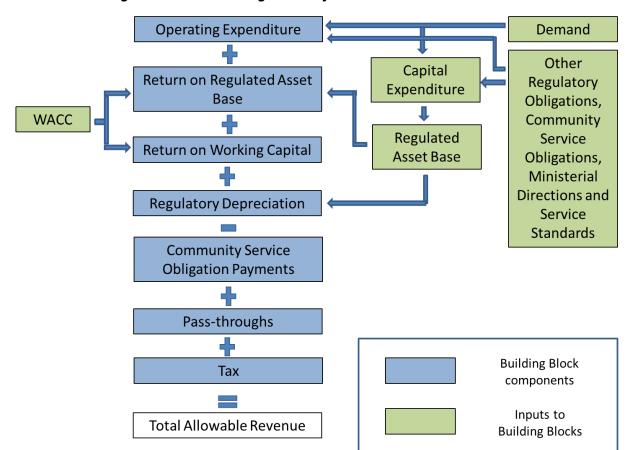


Figure 2-1: The Building Blocks of the Total Revenue Allowance

2.3 Length of regulatory period

In determining the length of the Second Regulatory Period, the Commission will consider the costs and benefits of having a short period (eg. two years) or a longer period (e.g. five years). A shorter period may increase administrative costs, but lead to greater flexibility to adjust revenue allowances, prices and/or pricing principles in response to changing circumstances. The Commission will also consider impacts on the financial incentives to SA Water; the longer the regulatory period, the greater the incentive that SA Water may have to reduce costs below the allowances determined by the Commission, as it would retain the benefit of out-performance for a longer period of time (prior to revenues and prices being reset).

The Commission's preliminary view is that a regulatory period of 3 or 4 years strikes an appropriate balance between these factors. Setting a regulatory period of less than 3 years is likely to increase administrative costs and reduce efficiency incentives, while a period of 5 or more years may lead to prices that are not reflective of ongoing market conditions. The Commission invites submissions on this matter and will consider those submissions in finalising its position on the length of regulatory period.

2.4 Non-commercial costs

A non-commercial activity is an activity that is not required to provide the regulated services, and which does not earn a commercial rate of return in its own right. SA Water incurs non-commercial costs because the Government requires it to perform certain non-commercial activities pursuant to section 6 of the Public Corporations Act 1993. The Commission believes that SA Water's customers should not fund the costs of meeting those non-commercial activities. Such costs should be fully funded by the Government in the form of CSO payments to SA Water.

2.5 Other regulatory obligations

Under the Water Industry Act and the ESC Act, the Commission's role is focussed on independent economic regulation. Environmental and health obligations are set for SA Water by other regulators.

Prior to making the Second Price Determination, the Commission will continue to liaise with other regulators and agencies where relevant, to ensure coordination and identify regulatory impacts as early as possible.

However, it is important that any cost impacts on SA Water that arise from environmental and health regulatory obligations are:

- based on obligations that are clearly stated in legislative instruments (e.g. environmental operating licences); and
- determined to be efficient before being passed on to customers. SA Water will need to demonstrate that any cost impacts reflect only the most efficient ways to meet regulatory obligations.

2.6 Customer consultation

The Commission expects SA Water to undertake adequate consumer consultation in the development of its RBP. Accordingly, the RBP should include information on how customers have been consulted and evidence of customers' responses to SA Water's proposals.

The Commission is not prescriptive as to how SA Water should consult. The Commission will assess all RBP proposals on the basis of whether or not the demonstrated benefits to customers exceed the costs. It is up to SA Water to demonstrate the customer benefits associated with its proposals.

Wherever customer surveys and studies are undertaken as part of the consultation process, the methodology, and any assumptions underlying, will need to be clearly explained in the RBP and its supporting material. The Commission encourages SA Water to engage early with the Commission in the development of its customer surveys and studies to ensure that the Commission has reasonable confidence in the proposed approaches.

While SA Water may consult on any aspects of its RBP that it sees as appropriate, at a minimum, the Commission expects SA Water to consult with its customers on significant expenditure proposals that rely on customer benefits to justify them and customer service standards. This is consistent with the requirements imposed under other regulatory regimes. For example, the Essential Services Commission of Victoria required each regulated water business to set out how it used the results of surveys on customers' preferences in cost—benefit analysis of major projects.⁴

⁴ Essential Services Commission of Victoria, *2013 Water Price Review: Guidance on Water Plans*, October 2011, p.110.

3. PROCESS

An indicative timetable for the Commission's Second Price Determination is listed below:

Table 3-1: Indicative⁵ Timetable for Second Price Determination

Date	Activity
November 2013	Release Draft Framework and Approach paper for public consultation
February 2014	Submissions to Draft Framework and Approach paper due
30 May 2014	Release Draft Pricing Reform Inquiry Report for public consultation
July 2014	Release Final Framework and Approach paper
August 2014	Issue RBP Templates to SA Water
August 2014	Finalise Service Standard Framework ⁶
December 2014	Release Final Pricing Inquiry Report
August 2015	Receive SA Water's RBP
September/October 2015	Release RBP and an Issues Paper for public consultation
January/February 2016	Release Draft Price Determination for public consultation
May 2016	Release Final Price Determination
1 July 2016	Implement Final Price Determination

⁵ All dates are indicative at this time

This refers to the framework only. The service standard targets will be proposed by SA Water in its RBP, and finalised as a part of the Commission's determination.

4. SERVICE STANDARDS

This chapter provides a brief overview of the proposed service standards and service incentive framework for SA Water for the Second Regulatory Period. This framework seeks to mimic the workings of competitive markets in which service providers (in this case SA Water) engage with customers to determine the best price-service delivery outcomes. Such outcomes achieve the best trade-off between the value to customers of service levels versus the costs of providing them.

Service standards are key drivers of the prudent and efficient levels of both capital and operating expenditure (capex and opex) that the Commission will allow in its price determination.

The Commission will set service standard targets and monitor SA Water's performance against those targets over time to check that reasonable service levels are delivered by SA Water to its customers.

Integral to a successful outcome is the Commission's requirement for SA Water to engage meaningfully with its customers to determine the most efficient levels of service.

Under the proposed framework, the Commission will determine the core service standards and targets (and any supplementary performance indicators). However, SA Water will be required to propose a target for each service standard, based on evidence collected through its customer engagement, for the Commission to consider.

The Commission will have regard to a number of factors in determining the final targets, such as the evidence-based targets proposed by SA Water, levels of historical performance, customer satisfaction with existing performance levels and interstate comparisons.

The Commission will require SA Water to undertake scenario-testing of all service standard targets proposed, to ensure that customers are given the opportunity to at least consider whether they would prefer to accept higher/lower levels of service in exchange for higher/lower bills.

The Commission will be closely involved with SA Water in the development of its proposed approach to meeting its obligations under the service standard framework, to ensure that the Commission has reasonable confidence in that approach.

Service standard regulatory regimes in the energy and water sectors often include financial incentive schemes to encourage service providers to meet or exceed service targets. The Commission will consider whether to apply such an incentive scheme to SA Water as part of its price determination deliberations.

Ultimately it may be simply uneconomic to seek to ensure that all customers receive the average service level targets set, with the approach adopted under some other schemes being the inclusion of Guaranteed Service Level (**GSL**) payments, with affected customers receiving payments where defined levels of service are not met.

The Commission will consider whether to apply a GSL scheme to SA Water as part of its price determination deliberations.

The Commission has released a companion paper titled *SA Water Service Standards: Draft Framework and Approach,* which further discusses the key issues and process for setting SA Water's service measures and targets to apply from 1 July 2016.⁷

The proposed process for determining service standards/targets and any associated incentive schemes is set out in Table 4-1 below.

Table 4-1: Indicative⁸ Timetable for Finalising Service Standards and Associated Targets

Date	Activity
November 2013	Release SA Water Service Standards: Draft Framework and Approach
February 2014	Submissions to SA Water Service Standards: Draft Framework and Approach due
July 2014	Release SA Water Service Standards: Final Framework and Approach ⁹
August 2015	Receive SA Water's RBP, including proposed Service Standards targets
September/October 2015	Release RBP and related Issues Paper for public consultation
January/February 2016	Release Draft Price Determination, including Commission's draft Service Standards targets for public consultation
May 2016	Publish Final Price Determination including final Service Standards targets

⁷ The SA Water Service Standards: Draft Framework and Approach paper is available on the Commission's website at http://www.escosa.sa.gov.au/library/131121-SAWaterServiceStandards-FrameworkAndApproach-Draft.pdf

⁸ All dates are indicative at this time

⁹ This refers to the framework only. Service standard targets will be proposed by SA Water in its RBP. The Commission will consult all members of the community on, and conduct its own scrutiny of, proposed targets and will decide those targets in the final determination.

CLASSIFICATION OF SERVICES

In its Statement of Approach¹⁰ for the First Price Determination, the Commission classified SA Water's services into three broad categories¹¹:

- ▲ direct control services;
- excluded services; and
- ▲ non-regulated services.

In its 2012 RBP,¹² SA Water proposed which of its services should be allocated to each of the Commission's categories. Following community consultation on the allocations of these services, the Commission determined the allocations for the First Price Determination, as set out in Table 5-1.

Table 5-1: Service Classes and Allocations – First Price Determination

DIRECT CONTROL SERVICES	EXCLUDED SERVICES	NON-REGULATED SERVICES
 ▲ Sale and supply of water ▲ Sale and supply of sewerage services 	 ▲ Standard and non-standard connection services (includes developer charges) ▲ Miscellaneous minor services ▲ Annual sewerage and recycled water audit services ▲ Easement extinguishment services ▲ Network Analysis services 	 ▲ Laboratory services that are not retail services ▲ Project management services that are not retail services ▲ Water transportation services provided to third parties ▲ Operation and maintenance of the River Murray lock system ▲ Soil and sand testing services ▲ Emergency functional services ▲ Metropolitan floodwaters drainage administration

For the Second Price Determination, the Commission intends to maintain these three broad categories of services. However, the Commission reserves the right, based on performance observed over the First Regulatory Period, and community feedback, to change the classification of individual services between categories.

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¹⁰ ESCOSA, Statement of Approach, July 2012, page 21.

¹¹ ESCOSA, SA Water's Water and Sewerage Revenues 2013/14 – 2015/16 Final Determination Statement of Reasons, May 2013, page 17.

¹² SA Water, *Regulatory Business Proposal 2013*, October 2012, page 48.

For example, the Commission will review SA Water's compliance with the relevant pricing principles for excluded services throughout the First Regulatory Period and, if new information or arguments come to light, the Commission may apply different principles or classifications to some services.

5.1 Non-regulated services

Some services provided by SA Water are not retail services (as defined under section 4 of the Water Industry Act). As the Commission has no regulatory powers over those services, they are classed as non-regulated services.

5.2 Regulated services: excluded and direct control

The Commission has regulatory powers over all retail services. It may apply different forms of price regulation, as specified in section 25(3) of the ESC Act, to different types of regulated services. At this stage, the Commission intends to adopt the same two-category division of regulated services as in the First Price Determination:

- direct control services; and
- excluded services.

The Commission's allocation of services between the direct control and excluded services categories will have regard to the extent to which competition exists for those services, and the extent to which the services are consumed by all, or a broad class, of customers, versus by some customers only.

In general, excluded services are those provided to a subset of specific customers. The costs of such services should be recovered through specific charges to those customers, rather than being costs borne by all customers through tariffs.

Direct control services are all regulated services that are not excluded services. They currently comprise the sale and supply of drinking water and sewerage retail services.

SA Water may propose in its RBP which retail services should be allocated to the direct control and excluded categories. The Commission will determine the allocation of individual services to those categories as part of the Second Price Determination process.

FORMS OF REGULATION

6.1 Introduction

The Commission intends to set prices, or average prices, for direct control services, which include drinking water and sewerage services. It will also consider whether or not any currently excluded services should be subject to direct price control, based on experiences during the First Regulatory Period.

The Commission intends to continue with a pricing principles and a price monitoring approach for excluded services.

6.2 Direct control services

As discussed in Chapter 2, the Commission will use the building block approach to determine total revenue allowances for direct control services that reflect prudent and efficient costs. The Commission will then set prices for direct control services consistent with the revenue allowances.

The Commission can set prices for direct control services in various ways, such as setting individual price caps or average price caps. Individual price caps impose the greatest regulatory costs, but ensure that individual prices reflect costs and provide consumers with the most certainty about future movements in individual prices. Average price caps provide greater flexibility for SA Water to change individual prices, provided they comply with the average price caps. They are less costly to administer, but provide less certainty to customers about specific price movements. If average price caps are adopted, the Commission may consider whether or not "rebalancing controls" are required, which would place some constraints around the maximum increases in individual tariffs from year to year.

The outcomes of the Commission's Inquiry into SA Water's drinking water and sewerage prices is likely to impact on the Commission's decision on the most appropriate form(s) of regulation for direct control services. The Commission's decision on this matter will therefore be made during the price determination process. SA Water may propose a form(s) of price control for direct control services in its RBP.

6.3 Excluded services and Recycled Water

At this time, the Commission proposes to retain the form of regulation for excluded services that it adopted in the First Price Determination. However, as stated above, the Commission reserves the right to change its approach for some services if new information or arguments come to light that would suggest an alternative approach is warranted.

The pricing principles and price monitoring approaches that the Commission proposes to apply to excluded services in the Second Price Determination are summarised in Table 6-1.

Table 6-1: Forms of Price Regulation for Excluded Services and Recycled Water

Service	Pricing Principles	Price Monitoring
Excluded Services	Commission's Excluded Service Pricing Principles 1-4 NWI Pricing Principles (where relevant) These principles relate to cost recovery and transparency. ¹³	Maintain and submit to the Commission annually: Pricing Schedule Pricing Policy Statement Regulated Accounts
Recycled Water	National Water Initiative (NWI) Pricing Principles 1-9 of Recycled Water and Stormwater Use. These principles relate to cost recovery and transparency. ¹⁴	Maintain and submit to the Commission annually: Pricing Schedule Pricing Policy Statement Hypothetical Bill Regulated Accounts

Further information on the NWI Pricing Principles is contained in Appendix 1.

The Commission has developed a proposed dispute resolution framework for excluded services. This proposed framework is contained in *Draft Water Industry Rule No.1 – Excluded Retail Services*¹⁵, which was released for public consultation in September 2013. The Commission expects to publish the final rule in December 2013.

Refer to ESCOSA, SA Water's Water and Sewerage Revenues 2013/14 - 2015/16 Final Determination Part A - Statement of Reasons, May 2013, page 186; available at http://www.escosa.sa.gov.au/library/130527-SAWater-Water-SewerageRevenues-2013-16-FinalDetermination-StatementOfReasons-0.pdf

Refer to National Water Commission, National Water Initiative Pricing Principles, April 2010, page 16; available at http://www.environment.gov.au/water/publications/action/pubs/nwi-pricing-principles.pdf

ESCOSA, Consultation Draft Water Industry Rule No. 1 - Excluded Retail Services, September 2013, available at: http://www.escosa.sa.gov.au/projects/201/consultation-draft-water-industry-rule-no-1-excluded-retail-services.aspx

7. EXPENDITURE

7.1 Introduction

In its First Price Determination, the Commission determined the prudent and efficient ¹⁶ costs of providing direct control services and of meeting the non-commercial obligations that the Government required the Commission to allow. Allowing only prudent and efficient costs is consistent with the Commission's legislative objectives, as well as the requirements of the NWI Pricing Principles. ¹⁷ The Commission proposes that the information on expenditure that SA Water will be required to provide in its RBP for the Second Price Determination will be similar to that required in the Guidance Paper that it issued for the First Price Determination. ¹⁸

The Commission requires SA Water's RBP to include only prudent and efficient capital and operating expenditures. The Commission will scrutinise and examine proposed expenditures and all members of the community will be given the opportunity to present their views both on SA Water's RBP, and on the Commission's draft price determination.

7.1.1 General information requirements

The Commission will generally require from SA Water both spreadsheet-based financial information and supporting written commentary. Historic actual cost data will be required to provide context to forecast data. The commentary must demonstrate that SA Water's proposed expenditures are both prudent and efficient. Further information requirements include:

- a description of the process for developing and seeking approval of new projects and associated expenditures;
- a demonstration of the links between proposed expenditures and demand forecasts;
- evidence that asset management plans are in place and have been followed;
- ▲ the impacts of any new regulatory obligations on expenditures;
- information on SA Water's consultations with external bodies during its development of expenditures (e.g. occupational health and safety and water quality issues);
- information on the level of consumer consultation that has taken place (see section
 2.6 for further information);

¹⁶ A discussion of the 'prudent & efficient' tests is provided at section 7.1.9.

¹⁷ NWI Pricing Principles are available at:

http://www.environment.gov.au/water/publications/action/pubs/nwi-pricing-principles.pdf

¹⁸ ESCOSA, Review of SA Water's Prices: 2013/14 – 2015/16 Guidance Paper, February 2012.

- any relevant cost benchmarking information (e.g. provision of benchmarking studies undertaken);
- details of any emerging issues with asset populations (e.g. if the accuracy of a particular meter population is deteriorating faster than expected, this may support the case for early replacement);
- details of any issues which may materially affect expenditures that may possibly arise within the Second Regulatory Period;
- details of any capital/operating expenditure linkages within the forecasts (e.g. capital expenditures that are proposed to reduce operating expenditures or any ongoing operating expenditure incurred to defer capital projects); and
- any further supporting information that SA Water wishes to present in support of its expenditure proposals.

The Commission will also seek to understand, as early as possible, any directions issued by the Government requiring SA Water to perform non-commercial services¹⁹ and any associated CSO funding arrangements that may apply to SA Water for the Second Regulatory Period.

The Commission requires SA Water's RBP to:

- ▲ identify all directions that require it to incur non-commercial costs; and
- provide rigorous estimates of those non-commercial costs required to meet each direction.

7.1.2 Reporting period

The reporting period will cover the period from 2012/13 to the end of the Second Price Determination period. The RBP should contain both historic and proposed capital and operating expenditure information for these periods.

Capital expenditure information for each year should comprise a list of specific named and costed projects, grouped by investment strategy and program.

All project cost estimates should be mid-point estimates that are based on an equal chance of under-spending or over-spending. Estimates should be based on an appropriate split of risk between SA Water and any third party contractors.

7.1.3 Expenditure templates

The Commission will provide SA Water with a series of expenditure templates, similar to those provided for the First Price Determination. These templates will be used to capture both capital and operating expenditure information. The Commission will issue updated

¹⁹ Pursuant to section 6 of the Public Corporations Act 1993.

spreadsheet templates by December 2014. The Commission expects SA Water to help it refine these templates to ensure that they align closely with SA Water's reporting systems and formats. This will minimise requirements for data mapping/allocations, and increase the ease and transparency of the process.

7.1.4 Customer consultation

The Commission will require SA Water to consult with its customers on proposed expenditures that rely on customer benefits to justify them prior to submitting its RBP. The RBP must clearly demonstrate how customer inputs, including views from customers about their willingness to pay, have been taken into account in the development of expenditure proposals, particularly those projects/activities that are discretionary.

7.1.5 Efficiency improvement targets

The Commission expects SA Water to consider specific annual ongoing and catch-up efficiency improvement targets for both capital and operating expenditures. SA Water's RBP should clearly identify any projects/programs of work that will help to achieve these targets. Further, supporting information should be provided on productivity assumptions, procurement initiatives, and the application of new techniques/technology, including details of how these have been applied in developing the proposed capital and operating expenditures. SA Water should consider efficiency improvement targets separately for operating and capital expenditures.

The Commission will scrutinise the proposed efficiency improvement targets and invite all members of the community to express their views through public consultation. The Commission will have regard to these views in determining the ongoing efficiency and catchup efficiency targets in its Second Price Determination. In doing so, it may consider benchmarking SA Water against water industry peers, as it did in its First Price Determination.

7.1.6 Cost escalation assumptions

The Commission believes that regulated entities have considerable ability, through their management, remuneration, contracting procurement and other policies, to manage input costs. Therefore, entities should not be protected from the risk of input costs escalating in real terms unless a convincing case is provided to demonstrate that real cost increases are unavoidable.

The Commission uses the Consumer Price Index (**CPI**) as a benchmark for scrutinising forecast costs. It recognises that SA Water's inputs are different to the basket of goods and services used to determine the CPI. However, the CPI has advantages of transparency, independent calculation and difficulty to manipulate.

Therefore, the Commission intends to adopt a CPI-based approach to cost escalators in its Second Price Determination, unless it can be demonstrated that circumstances beyond the reasonable control of SA Water exist, which justify either an above-CPI or below-CPI cost change. For example, the Commission allowed electricity cost escalation above CPI in its First Price Determination.

If SA Water believes that such circumstances will exist in any specific cost category, it will need to provide strong supporting evidence in its RBP.

7.1.7 Capitalisation of certain expenditures

As the Commission's primary objective is to protect the long-term interests of consumers, it sets a revenue path that reflects efficient costs over a regulatory period. Where there are efficient costs that provide benefits outside that period, the Commission will consider whether those future costs are more appropriately recovered in future periods. This approach matches the timing of cost recognition with the benefits received and is consistent with the approaches taken by other economic regulators.

In its First Price Determination, the Commission chose to treat a limited number of expenditure items as capex for <u>regulatory purposes</u>, even though they may be treated as opex for <u>accounting purposes</u>.

These items included the marginal cost of running the Adelaide Desalination Plant for warranty proving purposes in 2013 and 2014, and the cost of replacing reverse osmosis membranes used in the desalination process.

The Commission confirms that it intends to continue to apply this matching principle in the Second Regulatory Period.

7.1.8 Project cost breakdowns

Project cost breakdowns should be provided for each identified project and for investment totals for actual and forecast years. This should include, at a minimum, costs split by direct labour, contract labour, materials, and other costs. It is not sufficient to simply allocate all costs to a single category on the basis that works are provided under a single 'service delivery' contract. Where systems do not hold this information, an indicative view should be provided, with a suitable explanation on how the cost allocation has been determined.

7.1.9 Prudence and efficiency

The Commission will assess expenditure proposals using the 'prudent' and 'efficient' tests that it adopted in the First Price Determination. The prudence principle tests whether the benefits of the expenditure outweigh the costs. The efficiency principle tests whether the proposed expenditure is the least-cost solution to achieve the intended outcome. The Commission will invite all members of the community to give their views regarding the prudence and efficiency of proposed expenditures and take account of these views in its assessment.

The concepts of prudence and efficiency are commonly used by regulators in assessing the expenditure proposals of regulated entities. In testing the prudence and efficiency of capital expenditures, consideration will be given to the following factors:

- the benefits of, and need for, the proposed project/program;
- the proposed timing and deliverability of the project/program;
- the alternative options considered in developing the project/program;
- the forecast costs of the planned project/program; and
- ▲ any further relevant considerations.

The Commission will scrutinise the prudence and efficiency of proposed capital expenditures on both a project/program basis and a 'whole of system' basis, over a long-term planning horizon.

The Commission will scrutinise the prudence and efficiency of proposed operating expenditures by examining whether they are prudent (benefits exceed costs) and efficient (represent the least-cost means of achieving the benefits).

The Commission may seek external expert advice to assist it in assessing the prudency and efficiency of SA Water's expenditure proposals.

7.2 Capital expenditure

This section outlines the capital expenditure information that the Commission will require from SA Water. This information is similar to that required in the First Price Determination. SA Water's RBP must include only prudent and efficient capital expenditures.

7.2.1 Longer-term investment

SA Water should provide an indicative view of capital expenditure forecasts beyond the Second Regulatory Period, with a supporting narrative detailing the rationale behind those forecasts.

The Commission requires longer-term information to properly assess the prudent and efficient levels of capital expenditure for the Second Regulatory Period.

7.2.2 Reporting requirements

As stated in section 7.1, the Commission will provide SA Water with templates to capture information on capital expenditures. All individual projects above a \$4m capital expenditure threshold must be specified within each strategy. SA Water should provide a narrative definition/description of each 'investment strategy'.

Total investment on projects less than \$4m will initially be captured at an 'investment program' level within each strategy.

For each project/program, gross capital expenditure should be reported, with capital contributions separately identified in order to derive net capital expenditure. The sources of contributions (e.g. customers or the Commonwealth Government), should be identified.

For each named project, the following cost splits are required:

- by category: drinking water/sewerage/recycled water/corporate; and
- by region: metropolitan/country/other (note that there may be different regional reporting requirements that arise from the Commission's Inquiry as it considers potential reforms to the current practice of statewide pricing).

At a total level, cost splits on these bases is also required for each year.

A schedule of asset disposals, and gifted assets, should be provided.

The Commission will issue updated spreadsheet templates by December 2014.

7.2.3 Project/program information

For each project above \$11m (gross capital expenditure) with any spend in the Second Regulatory Period, the following information is required:

- A Narrative description of the project covering its scope, drivers, costs, and the phasing of spend.
- ▲ Copies of all relevant project authorisation papers. Depending on the maturity of the project, this may comprise (but is not limited to) the following
 - o project development funds submission;
 - project brief;
 - external consultants reports;
 - detailed feasibility studies;
 - project authorisation papers (SA Water Board/Public Works Committee/Cabinet);
 - re-submissions; and
 - o post-investment appraisal papers.

A full listing of projects between \$4m-\$11m should also be provided, detailing planned phasing of spend and supported by a short descriptive narrative. It is likely that a sample of these projects will be subject to further examination.

For projects below \$4m, only summary information by investment program will initially be required. Depending on the materiality of planned investment on projects less than \$4m within each investment strategy, it may prove necessary to examine a sample of these projects in more detail.

Similarly, for each investment program totalling greater than \$11m within the Second Regulatory Period, a narrative description of the program covering scope, drivers, costs, phasing of spend, and any further relevant supporting documentation is required.

7.2.4 Price base

All actual capital expenditures (up to and including 2014/15) should be presented in nominal (money of the day) prices.

Forecast capital expenditures (from 2015/16 onwards) should be reported at constant dollar prices, using actual CPI as of March 2015 (All Groups, weighted average 8 capital cities), as published by the Australian Bureau of Statistics (**ABS**).

7.2.5 Service classifications

In setting drinking water and sewerage revenue allowances, the Commission will incorporate prudent and efficient capital expenditures that relate only to direct control services. SA Water should identify in its submission any projects that may be partially or entirely related to excluded or non-regulated services (e.g. certain elements of recycling projects may be considered to fall outside direct control services).

7.2.6 Capital expenditure by asset class

In its RBP, SA Water should provide a mapping of actual and planned capital expenditure into asset register groupings (asset classes), reconciling to gross and net capital expenditure.

Asset classes were developed in conjunction with SA Water during the First Price Determination process. The Commission does not intend to change these asset classes in its Second Price Determination, although it remains open to considering any proposals in this area (see section 8.4 for further information).

7.3 Operating expenditure

As part of the expenditure review process, the Commission will consider the level of operating expenditure that it would expect a prudent and efficient water utility to incur over the term of the Second Regulatory Period.

The Commission will scrutinise and examine all operating expenditure relevant to SA Water's direct control business, both direct costs and overheads. SA Water's RBP must illustrate where expenditure is linked to service standards set by the Commission (refer to chapter 4), CSOs and other regulatory obligations. SA Water's RBP must include only prudent and efficient operating expenditures.

The Commission is also likely to benchmark SA Water's current and proposed operating expenditure relative to other water utilities as one input into its assessment, as it did in its First Price Determination.

7.3.1 Reporting requirements

The following operating expenditure reporting requirements should be addressed in SA Water's RBP:

- Gross operating expenditure and contributions (subsidies).
- ▲ Splits of operating expenditure by:
 - category (water or sewerage);
 - service type (direct control services, excluded services and unregulated services);
 - area/region (metropolitan, country or any other region that the Commission considers appropriate following the findings of its Inquiry);
 - o resource type (direct labour, contract labour, materials and other); and
 - o business unit (at an appropriate granularity).
- ▲ Historic and proposed operating expenditure figures, sufficiently disaggregated to allow detailed examination of individual costs.
- ▲ Information based on internal reporting categories i.e. aligned with how the business is managed/reported internally, to a level of 15-20 lines of disaggregation. Alignment to SA Water internal reporting/accounting systems will afford the ability to drill down into detail where necessary and reduce the burden of information provision.
- ▲ The methodology and rationale adopted in developing proposed operating expenditure.
- Where operating expenditure has been allocated (i.e. between projects, categories, service or area), the basis of any allocations and a demonstration that they are appropriate.
- Discussion on the drivers and justifications of expenditure, activities to be carried out and outcomes to be achieved. A supporting commentary should address year on year changes/trends in operating expenditure, for both historic and proposed operating expenditure. Variances must be fully explained.
- Detailed project information from business cases or board papers to support any change in operating expenditure. This includes cost increases, cost savings or deferment of costs.
- A detail breakdown of labour cost forecasts and a reconciliation of full time equivalent (FTE) staff.
- An explanation of the relationship between the level of its operating expenditure and the quality and quantity of customer service.

An explanation of any changes to operating expenditure resulting from the current or proposed capital program and any significant changes in the levels of operating expenditure likely to eventuate during the Second Regulatory Period relative to the First Regulatory Period.

This list is not exhaustive and SA Water should not limit its RPB in this regard.

7.3.2 Superannuation

In its First Price Determination, the Commission flagged to SA Water that, prior to its 2015 RBP, it should seek a further review of the superannuation liabilities arising from the (now closed) SA Water Pension and Lump Sum defined benefit scheme which, based on a 2012 actuarial report, was in deficit.

Therefore, SA Water should seek a further review of the scheme, in time to be submitted as part of its RBP. Consideration will then be given as to how any ongoing deficit should be addressed in the Second Price Determination.

7.3.3 SA Water's water portfolio mix

SA Water's RBP must demonstrate that its proposed 'portfolio mix' of water sources (i.e. the ADP, River Murray, reservoirs and other sources) represents the optimised cost to meet demand forecasts. The RBP should include:

- evidence to support the volumes to be drawn from each water source. This may include, for example, estimated inflow information for the River Murray over the proposed period; and
- ▲ a schedule separately identifying the operating, maintenance & administrative costs related to the ADP, with supporting commentary covering:
 - how operating, maintenance and administrative costs related to ADP have been optimised; and
 - any assumptions that have been made on ADP usage versus other infrastructure over the Second Regulatory Period. Explanations of the manner in which the forecast costs reflect compensatory savings in other cost areas should also be included.

8. REGULATED ASSET BASE AND WORKING CAPITAL

8.1 Introduction

The water industry is highly capital intensive. Substantial infrastructure is required to provide drinking water and sewerage services to customers. The value of that infrastructure is a critical driver of the revenue allowances and prices that the Commission will set.

Therefore, the value of the Regulated Asset Base (**RAB**) - the regulatory value of assets associated with the provision of direct control drinking water and sewerage services - will be a critical driver of the Second Price Determination. On 17 May 2013, the Treasurer set the RAB values as follows:

Table 8-1: Values of the Regulated Asset Base as at 1 July 2013 (\$Dec12)

DIRECT CONTROL SERVICE	RAB VALUE (\$'000)
Drinking Water	7,767,081
Sewerage	3,584,534
Total	11,351,615

The Commission's revenue allowances will provide SA Water with the opportunity to earn a reasonable rate of return on the RAB and to recover the costs of providing regulated assets over the period of their useful lives (otherwise known as regulatory, or allowable, depreciation).

The outcomes of the Commission's Inquiry into water price reform may influence the manner in which revenue allowances and prices are set. For example, if the current statewide pricing policy was no longer to apply, SA Water's RAB may need to be "disaggregated" across regions.

However, in principle, the Commission will determine two key elements of the RAB for the purposes of the Second Price Determination:

- the RAB values to apply at the commencement of the Second Regulatory Period (1 July 2016);
- 2. how those values will be updated or "rolled forward" over the course of the Second Regulatory Period.

8.2 RAB values at commencement of the Second Regulatory Period

The Commission will use the same asset roll forward methodology used in its First Price Determination to roll forward the RAB values from 1 July 2013 to 1 July 2016.

The roll forward methodology is consistent with Principle 5 of the NWI Pricing Principles, which states that the RAB should be updated each year in accordance with the following formula:

 $RAB_t = (RAB_{t-1} + Prudent \ and \ Efficient \ Capital \ Expenditure_t - Depreciation_t - Disposal_t \ (discarded \ assets)).$ (Where $t = the \ year \ under \ consideration)$.

8.2.1 Ex-post Review of Capital Expenditure

In making its Second Price Determination, the Commission will carry out a review of SA Water's actual capital expenditure incurred during the First Regulatory Period. The purpose of the review is to ensure that SA Water's RAB values at the commencement of the Second Regulatory Period incorporate only those capital expenditures that are determined by the Commission to be prudent and efficient; capital expenditures incurred by SA Water that are determined by the Commission not to be prudent and efficient will not be incorporated into the RAB values at the commencement of the Second Regulatory Period.

Ex-post reviews of capital expenditure are commonplace in other Australian jurisdictions, and in the UK, and provide an additional level of comfort to consumers that they are funding only prudent and efficient investments.

The Commission considers that such a review is particularly relevant to Government-owned enterprises, where the incentives towards profit maximisation may be weaker than for privately-owned entities, and where there is the potential for non-commercial objectives to be given higher priority.

To facilitate the review, the Commission expects SA Water's RBP to provide justification for any new capital projects/activities or material increases in existing capital projects/activities during the First Regulatory Period, relative to those that were allowed by the Commission in making its First Price Determination.

8.3 Rolling forward the RAB values during the Second Regulatory Period

The Commission's Second Price Determination will specify the manner in which the RAB values will be rolled forward during each year of the Second Regulatory Period. The Commission expects that methodology to be consistent with the roll-forward methodology used in the First Price Determination, but it will have regard to best regulatory practice at the time of making the Second Price Determination.

8.4 Asset classes

Subject to the recommendations of the Commission's water price reform Inquiry, the Commission proposes at this stage to use the same asset classes as in its First Price Determination. RAB values by asset class at the commencement of the First Regulatory Period are summarised in Table 8-2 and Table 8-3.

Table 8-2: RAB Values by Drinking Water Asset Class as at 1 July 2013 (\$Dec12)

WATER ASSET CLASS	RAB VALUE \$'000
Pipes	4,211,232
Non-Pipes	1,724,809
ADP	1,437,593
Corporate Depreciable	90,408
Corporate Non-depreciable	303,039
Total Water RAB	7,767,081

Table 8-3: RAB Values by Sewerage Asset Class as at 1 July 2013 (\$Dec12)

SEWERAGE ASSET CLASS	RAB VALUE \$'000
Sewer Pipes	2,240,498
Sewer Non-Pipes	1,151,089
Sewer Corporate Depreciable	91,875
Sewer Corporate Non-depreciable	101,073
Total Sewerage RAB	3,584,534

The Commission will consider any proposals from SA Water or other members of the community to change asset classes. If SA Water does propose changes to asset classes, it must provide the rationale as well as the full consequential adjustments to RAB values (and economic lives) as of 1 July 2016.

The economic lives of depreciable assets that the Commission used in its First Price Determination are provided in Table 8-4.

Table 8-4: Economic Lives of Depreciable Assets by Asset Class

	ECONOMIC LIVES (YEARS)		
ASSET CLASS	AVERAGE REMAINING LIFE OF EXISTING ASSETS (AS AT 1 JULY 2013)	AVERAGE ECONOMIC LIFE OF NEW ASSETS	
Water Pipes	60.79	102.91	
Water Non-Pipes	32.44	64.08	
Water ADP	55.54	56.67	
Water Corporate Depreciable	6.80	14.73	
Sewer Pipes	65.32	107.24	
Sewer Non-Pipes	28.31	46.79	
Sewer Corporate Depreciable	6.80	14.73	

The Commission will consider any proposals from SA Water or other members of the community to change the calculation of depreciation, including asset classes and the economic lives of the various asset classes and the methodology or assumptions used. If SA Water does propose changes the method of calculating depreciation relative to that used in the First Price Determination, it should include a full justification of the changes and an analysis of the impacts resulting from those changes.

8.5 Asset additions and disposals

In accordance with NWI pricing principles, the Commission will allow prudent and efficient asset additions (capital expenditures) and deduct the value of asset disposals in determining RAB values during the Second Regulatory Period.

8.6 Return on RAB Values

The Commission will allow SA Water to earn a return on RAB values. The return will be calculated by multiplying each mid-year RAB value by the regulatory rate of return. The regulatory rate of return is discussed in Chapter 9.

8.7 Working capital allowance

As SA Water generally incurs costs of providing regulated services in advance of receiving payment for those services, the Commission may make a revenue allowance to reflect working capital financing costs. The inclusion of a working capital allowance is a matter that is frequently considered by economic regulators.

The Commission notes that other regulators, in particular the AER and the NSW Independent Pricing and Regulatory Tribunal (**IPART**), have differing views on working capital allowances; the AER does not make a provision for working capital, whereas IPART does. In previous determinations in the energy industry and in its First Price Determination for SA Water, the Commission has made a working capital allowance and, in particular, considered the issue in respect of capital expenditures and operating expenditures separately.²⁰

The Commission will review whether, and how, to make a working capital allowance and seek the views of SA Water and all members of the community in regard to this matter.

Refer to the Commission's review of ETSA Utilities' 2005-2010 electricity distribution prices available at http://www.escosa.sa.gov.au/projects/35/electricity-distribution-price-review-2005-10.aspx and its review of Envestra's 2006-2011 gas distribution access arrangement available at http://www.escosa.sa.gov.au/projects/104/2006-11-gas-distribution-access-arrangement.aspx.

9. REGULATORY RATE OF RETURN

The regulatory rate of return is a measure of the opportunity cost of investment in regulated assets. The Commission will set this rate to ensure that consumers do not pay unnecessarily high prices, while providing SA Water with sufficient incentive to make investments that are in the long-term interests of consumers. Capital, like any commodity, has a price that is determined by its supply and demand, and the riskiness of the cash flows generated by assets. Thus, determination of the regulatory rate of return for SA Water's regulated assets requires the estimation of the cost of capital.

The Commission considers that the appropriate regulatory rate of return can, and should, change over time, as economic and market conditions change. Therefore, the Commission will set the regulatory rate of return to apply from 1 July 2016 as close as possible to that date, so that that rate reflects the most up-to-date information.

Consistent with its First Price Determination, as well as general market and regulatory practice, the Commission will derive the regulatory rate of return using the Weighted Average Cost of Capital (WACC) methodology. At this stage, the Commission proposes to adopt a real, post-tax approach in estimating the WACC.

The real post-tax WACC formula used by the Commission is:

$$WACC_{real}^{post-tax} = \frac{1 + (k_e \frac{E}{V} + k_d (1 - t) \frac{D}{V})}{(1 + i_{exp})} - 1$$

where:

 k_d = nominal cost of debt

 k_e = nominal cost of equity

E = market value of equity;

D = market value of debt;

V = market value of the firm (V = E + D);

t = corporate tax rate

 i_{exp} = expected inflation.

In estimating the WACC, the Commission must determine seven parameters:

- ★ the nominal risk-free rate (r_f);
- ▲ the debt risk premium (DRP);

- ▲ the corporate tax rate (t);
- ▲ expected inflation (i_{exp})
- ▲ the market risk premium (MRP); that is, the expected total equity market return less the risk-free rate;
- \blacktriangle the degree of systematic risk of the regulated entity's equity also referred to as the equity beta (β); and
- ▲ the efficient debt and equity ratios for the business (D/V and E/V).

The first step in estimating the WACC is to estimate the cost of equity. The Commission proposes to use the Capital Asset Pricing Model (**CAPM**) to estimate the post-tax cost of equity, as it did in the First Price Determination. In the CAPM, the cost of equity is defined as:

$$k_e = r_f + \beta x MRP$$

The second step is to estimate the nominal post-tax cost of debt (k_d) , which is defined as:

$$k_d = (r_f + DRP)(1-t)$$

The next step is to weight the nominal costs of debt and equity by the efficient debt and equity ratios to derive the nominal post-tax WACC.

The final step is to discount the nominal post-tax WACC by the expected inflation rate to derive the real post-tax WACC.

The values of the WACC parameters used in the Commission's First Price Determination are summarised in Table 9-1.

Table 9-1: Commission's WACC parameter values – First Price Determination

PARAMETER	PARAMETER VALUE	DATA SOURCE
Nominal risk-free rate	3.25%	10 year Commonwealth Govt. Bonds (CGB)
Debt risk premium	2.80%	Extrapolated Bloomberg BBB 7 year Fair Value Curve (FVC)
Corporate tax rate	30%	Statutory tax rate
Expected inflation	2.24%	10 year CGBs and inflation indexed bonds
Market risk premium	6%	Regulatory precedent
Equity beta	0.80	Regulatory precedent
Efficient debt ratio (D/V)	60%	Regulatory precedent
Efficient equity ratio (E/V)	40%	Regulatory precedent

Note: For presentation purposes, the rounded values for each parameter are shown.

The above parameters produced a real post-tax WACC of 4.50%.

Many regulators across Australia are in the process of reviewing their WACC methodologies. The Commission will also review its WACC methodology in the lead up to the Second Price Determination and will seek public feedback as part of that process.

SA Water's RBP should provide its estimate of the proposed real post-tax WACC and supporting analysis. This should include a breakdown of the WACC into its individual parameters.

10. TAX ALLOWANCE

Companies pay corporate tax on their table incomes. However, under Australia's dividend imputation system, their shareholders receive imputation credits on corporate taxes paid, which reduce shareholders' tax liabilities. While SA Water is a government-owned business, the Commission treats it like any other business in determining a tax allowance, to ensure competitive neutrality.

The value of a dollar of imputation credits is referred to as γ (or gamma). Consistent with regulatory practice, the Commission used a γ value of 0.5 in its First Price Determination.

In the First Price Determination, the Commission determined the tax allowance by:

- ▲ forecasting revenues from all sources including tariffs, CSOs and contributed assets;
- ▲ forecasting the tax depreciation expense of the tax value of the regulatory assets inclusive of all capital expenditures (including contributed assets), determined on a straight-line basis in a similar manner to the regulatory depreciation but using tax asset lives;
- forecasting the nominal tax liability after consideration of the expected revenues less opex, tax depreciation and benchmark interest costs;
- adjusting the liability for the value of imputation credits adjusted for gamma; and
- converting the γ adjusted tax liability from a nominal value to a real value.

However, the Commission notes that other regulators use different approaches to determining the tax allowance. For example, the AER and IPART calculate tax depreciation based on the maximum depreciation rates that regulated entities can use for tax purposes. As assets can be depreciated for tax purposes faster than straight-line depreciation achieves, this reduces tax payable and therefore should result in a lower tax allowance. The Commission will consider the merits of this approach in finalising its methodology for setting the tax allowance.

The Commission will review its methodology for determining the tax allowance and will seek the views of all members of the community on this matter.

11. PASS-THROUGHS

11.1 Introduction

In competitive markets, firms may incur unexpected costs due to events outside of their control. Unlike price-regulated firms, those firms have the option to raise prices at any time. However, not all unexpected costs can be passed on through higher prices in competitive markets. The discipline of competitive markets ensures that only unexpected costs that are uncontrollable, unavoidable, and raise short-run marginal costs are passed on.

Having regard to the fact that a price-regulated firm generally cannot raise prices in the same way that unregulated firms can, "pass-through" mechanisms have been adopted by regulators in Australia, and other countries. Under these mechanisms, a regulator may adjust prices or revenue caps during a price determination period to account for unexpected cost impacts (whether upwards or downwards) that meet certain criteria.

Where pass-through mechanisms are permitted, regulators recognise that not all unexpected cost changes are passed through in competitive markets, and that pass-throughs create price uncertainty for consumers. It is also important that regulated entities have strong incentives to manage costs. Furthermore, the consideration of cost pass-throughs can involve significant costs.

For these reasons, the Commission proposes that there should be only limited events which can trigger the Commission's consideration of whether or not a pass-through should be permitted. Those events must be demonstrated to have material cost implications (positive or negative), and could not be controlled by SA Water acting prudently and efficiently or substantially mitigated through prudent management.

11.2 First Price Determination

The Commission concluded that, read as a whole, the statutory regime for its First Price Determination permitted a very limited form of pass-through mechanism. Pass-through mechanisms are also highly dependent on the nature and scope of the underpinning statutory framework.

As price stability was a clear objective of that statutory regime, the Commission determined that any pass-throughs would not be considered in the First Regulatory Period; instead, pass through events that occurred during that time period would, if the Commission determined, result in a revenue pass-through in the Second Regulatory Period. The Commission considered this to be the most cost-effective way to deal with pass-through events.

Under the current regime, SA Water should include in its RBP pass-through events that had occurred in the First Regulatory Period and how those costs are to be recovered in the Second Regulatory Period. The Commission will scrutinise any pass-throughs proposed by SA Water in its RBP.

11.3 Second Price Determination

The Commission currently expects pass-through events will be specified at the time of making the price determination. SA Water may propose in its RBP any pass-through events that it seeks to be included in that regime.

The Commission will assess SA Water's proposal using the criteria laid out in the First Price Determination:

- ▲ the financial impact must be material;
- ▲ the event could not have otherwise been controlled by SA Water (acting prudently and efficiently); and,
- ▲ the event leads to cost impacts that could not have been substantially mitigated through prudent management.

12. DEMAND

12.1 Introduction

Demand forecasts play a very important role in the assessment of operating and capital expenditure requirements. The Commission must, therefore, be satisfied that the forecasting methodology is robust.

The demand forecasts must take into account all the relevant dynamic factors, such as expected population growth, the price elasticity of demand for the major customer categories, customer response to permanent water conservation measures, and any other relevant factors.

Importantly, demand forecasts should be based on long-term average of weather conditions. The Commission recognises that drinking water demand may change significantly from year to year due to volatility in rainfall and temperature patterns. However, weather is unpredictable over a multi-year regulatory period. Demand forecasts based on long-term average weather conditions are the most reasonable forecasts of demand over a multi-year regulatory period. If the Commission were to use short-term weather outcomes as a basis for setting SA Water's revenue allowances, there is a significant risk that SA Water's revenues could be much higher or lower than its efficient costs during the Second Regulatory Period. Using average weather conditions provides the greatest assurance that, in the long-run, SA Water's revenues and prices are cost-reflective.

12.2 Second Regulatory Period

12.2.1 Water demand forecasts

The Commission expects that the demand figures adopted for the Second Regulatory Period will be the result of an objective forecasting methodology, along similar lines to that which SA Water presented in its RBP for the First Regulatory Period.

Consistent with the Commission's requirements for the First Price Determination, the Commission remains of the view that SA Water's demand model should:

- be free from statistical bias;
- recognise and reflect key drivers of demand;
- be based on sound assumptions using the best available information;
- be consistent with other available forecasts and methodologies;
- be based upon the most recently available data;
- reflect the particular situation and the nature of the market for services; and

be based upon sound and robust accounts of current market conditions and future prospects.

In addition, SA Water's demand forecasts should take into account the following:

- ▲ After the easing of water restrictions in December 2010, the level and rate of any bounce-back in demand should be apparent, and should be reflected in the new forecasts.
- ▲ Demand forecasts should be consistent with pricing reforms resulting from the Commission's Inquiry. These reforms (or at least reform options) will be known prior to the preparation of final demand forecasts for the Second Regulatory Period. Implications of the Inquiry for the demand forecasts proposed by SA Water in its RBP may include:
 - If water pricing tiers are maintained, in any form, the Commission will require a forecast of consumption at each tier, as well as an estimate of price elasticity that applies at each tier. If tiered pricing is removed, the price elasticity implications will need to be accounted for.
 - If there is no price differentiation between customer types, the demand forecast will not need to be disaggregated according to the main customer types. Similarly, price elasticities would apply to the overall customer base, rather than by customer type.
 - The modelling will need to account for any likely changes in demand that occur in response to any Inquiry recommendations that are adopted, which may include:
 - any change in the mix of fixed and usage charges;
 - any changes resulting from charging end-users rather than landowners;
 - any changes if fixed charges for commercial customers move from being based on property values to an alternative basis;
 - any move towards pricing based on costs for each region, rather than a 'statewide pricing' approach;
 - any impacts of a move towards scarcity pricing; and
 - any impacts of the installation of individual meters for more customers, and/or smart water meters, to the extent that they will be installed during the Second Regulatory Period.

12.2.2 Sewerage demand forecasts

Overall, the demand for sewerage should continue to be largely reflective of population growth, using the most recent projections from the ABS, and other reputable sources, as the basis for the analysis.

However, SA Water should consider which of its sewerage catchment areas will absorb the expected population growth, in order to support operating expenditure forecasts and any proposed capacity augmentation capital expenditures.

A forecast should also be made of demand from the top 100 'trade waste' customers, and information provided as to which service catchments they apply to.

Consideration should also be given to the potential impacts of adopting the findings of the Commission's Inquiry, which may include a move away from property value-based sewerage charges.

12.2.3 Summary of requirements

Ultimately, the results of the demand forecasting process will need to be distilled to provide overall levels of demand for water (quantity and customer numbers) and sewerage (customer numbers), as well as price elasticity of demand for these sectors for the Second Regulatory Period.

The methodology and any assumptions underlying the modelling will need to be clearly explained. Additionally, SA Water should demonstrate that sensitivity analysis of the forecast results to changes in key parameters has been performed.

The demand analysis report should be accompanied by tables showing the outcomes of the demand modelling. Raw data and modelling should also be provided to the Commission as supporting information.

13. REVENUE CAPS, PRICES AND/OR PRICING PRINCIPLES

13.1 Introduction

Previous chapters have indicated how the Commission, at this stage, intends to determine each of the revenue building blocks in its Second Price Determination. These building blocks will be added together to determine the total revenue allowance for each direct control service. The prices of direct control services will then be set consistent with the revenue allowances.

13.2 Second Regulatory Period

As discussed in Chapter 6, the Commission proposes to set prices for direct control services, through either individual price caps or some form of average price cap.

The Commission also intends to continue with a pricing principles and a price monitoring approach for excluded services.

The Commission's Inquiry into SA Water's drinking water and sewerage prices may have implications for how prices are set during the Second Regulatory Period and, hence, the information that SA Water will be required to provide in its RBP. At this time, the Commission cannot pre-empt the findings of that Inquiry, nor predict the Government policy changes that may result.

As discussed in Chapter 1, the Commission will only be able to implement some possible Inquiry recommendations if the government decides to change existing policies (e.g., in regard to statewide pricing). The Commission will be able to implement various other possible recommendations (such as rebalancing supply and usage charges) unless a pricing order is made that prevents it from doing so.

Therefore, this document has been written to provide as much flexibility as possible to enable the implementation of any potential recommendations of the Commission's Inquiry.

Accordingly, revenue and pricing proposals in SA Water's RBP must reflect the recommendations of the Inquiry.

To assist the Commission in assessing the reasonableness of the RBP, revenue and pricing proposals must also be accompanied by the following supporting information:

- ▲ the relationship between the proposed revenues and prices and key cost drivers;
- underlying cost justifications, including cost estimates and validity of those estimates;
- pricing model(s) used, including details of inputs, assumptions and outputs;
- projected behavioural impacts on customers as a result of the proposed prices;
- details on how those proposed prices meet the requirements of the prescribed form of price control;
- an overview of the consumer consultation that has taken place in developing the proposed revenues and prices; and
- details of any implementation and transitional issues.

Where SA Water draws upon supporting information, such as modelling and customer consultation, in support of proposed prices, the findings should be summarised in the proposal, and the detailed information (e.g. methodology and assumptions) must be included as appendices to the proposal.

14. CUSTOMER IMPACTS

The Commission's primary objective is to promote the long-term interests of consumers. It is not to make value judgements on equity issues. That role, quite rightly, resides with government. Nevertheless, it is important that the Commission provides information to the government on the impacts of its price determination on customers, so that the government is well-informed in its consideration of equity issues.

Therefore, the Commission will present information on the customer impacts of its decisions. The Commission will require SA Water to provide information during the price determination process to assist the Commission in estimating these customer impacts.

Accordingly, the Commission will require SA Water's RBP to include an assessment of the pricing proposals on customers. The areas on which SA Water must undertake analysis are summarised below.

14.1 Customer impact analysis

Any changes in prices will affect customers and, in some cases, those impacts may be adverse. Further, impacts are likely to vary across different customer types and classes. For example, customers who are unable to change their consumption patterns in response to price increases are more likely to be adversely affected than customers who are able to respond to price changes.

14.1.1 Financial impacts

The Commission requires SA Water to analyse the impacts of its proposed prices on different customer types and classes, by identifying the estimated bill impact between periods, assessed separately for water, sewerage and both. While it is acknowledged that SA Water has a significant number of customer segments, the customer impact analysis should capture the vast majority of its customer base.

In particular, the RBP must provide an analysis on the price movement between periods in average residential bills, having regard to the following:

- the proposed structure of the fixed and variable components;
- ▲ the range of customer types, distinguishing between residential, commercial and other business;
- ▲ the respective consumption profiles of different customer types, particularly residential customers with low, medium and high consumption profiles;
- subject to the Commission's Inquiry, forecasts of movements in property values, where prices are linked to these values; and
- ▲ the proportion of bill and price increases attributed to water and sewerage services.

14.1.2 Managing customer impacts

Pricing decisions may have adverse impacts on certain customers or customer groups. However, some mechanisms are in place to assist such customers. Accordingly, the RBP should provide detailed information concerning the availability of government concessions, rebates or grants to mitigate pricing impacts, and how customers can access these support measures.

The Commission's *Water Retail Code – Major Retailers*²¹ contains various consumer protection measures that SA Water must afford to its customers, including an approved hardship policy and payment options to assist residential customers experiencing financial hardship. Accordingly, the RBP must provide detailed information concerning these measures and how customers can access them. While changes to SA Water's customer hardship policy will be dealt with under a separate process, the RBP should also include a high-level discussion of any amendments it considers necessary to better manage any pricing impacts.

²¹ ESCOSA, *Water Retail Code – Major Retailers*, available at: http://www.escosa.sa.gov.au/library/121116- WaterRetailCode-MajorRetailers.pdf.

APPENDIX 1: PRICING PRINCIPLES

Table A.1 sets out the NWI pricing principles for recycled water and stormwater use, which SA Water must comply with under the First Price Determination. Table A.2 sets out the pricing principles that currently apply to excluded services, which are largely based on the NWI pricing principles.

Table A.1: NWI pricing principles for recycled water and stormwater use²²

PRICING PRINCIPLES

Principle 1: Flexible regulation

Light handed and flexible regulation (including use of pricing principles) is preferable, as it is generally more cost-efficient than formal regulation. However, formal regulation (e.g. establishing maximum prices and revenue caps to address problems arising from market power) should be employed where it will improve economic efficiency.

Principle 2: Cost allocation

When allocating costs, a beneficiary pays approach — typically including direct user pay contributions — should be the starting point, with specific cost share across beneficiaries based on the scheme's drivers (and other characteristics of the recycled water/stormwater reuse scheme). Prices to contain a water usage (i.e. volumetric) charge

Principle 3: Water usage charge

Prices to contain a water usage (i.e. volumetric) charge.

Principle 4: Substitutes

Regard to the price of substitutes (potable water and raw water) may be necessary when setting the upper bound of a price band.

Principle 5: Differential pricing

Pricing structures should be able to reflect differentiation in the quality or reliability of water supply.

Principle 6: Integrated water resource planning

Where appropriate, pricing should reflect the role of recycled water as part of an integrated water resource planning system.

²² NWC, National Water Initiative Pricing Principles, April 2010, page 16; available at http://www.environment.gov.au/water/publications/action/pubs/nwi-pricing-principles.pdf

Principle 7: Cost recovery

Prices should recover efficient, full direct costs — with system-wide incremental costs (adjusted for avoided costs and externalities) as the lower limit, and the lesser of standalone costs and willingness to pay as the upper limit. Any full cost recovery gap should be recovered with reference to all beneficiaries of the avoided costs and externalities. Subsidies and Community Service Obligation payments should be reviewed periodically and, where appropriate, reduced over time.

Notes:

Direct costs include any joint/common costs that a scheme imposes, as well as separable capital, operating and administrative costs. This definition of direct costs does not include externalities and avoided costs.

Principle 8: Transparency

Prices should be transparent, understandable to users and published to assist efficient choices.

Principle 9: Gradual approach

Prices should be appropriate for adopting a strategy of 'gradualism' to allow consumer education and time for the community to adapt.

Table A.2: Pricing principles for excluded services

PRICING PRINCIPLES

<u>Setting Developer Charges (Principles for Urban Water Tariffs: NWI Pricing Principle 8)</u>

Developer charges should reflect the investment in both new and existing assets required to serve a new developmentⁱ and have regard to the manner in which ongoing water usage and service availability charges are set.

Notes:

i. Where there are benefits beyond the boundary of the development, the developer charge should have regard to the share of capacity required to serve the development.

Capping Developer Charges (Principles for Urban Water Tariffs: NWI Pricing Principle 9)

Developer charges should not exceed the costs of serving new developments which includes investment in both new and existing assets required to serve a new development.

Revenue from Developer Charges (Principles for Urban Water Tariffs: NWI Pricing Principle 10)

To avoid over-recovery, revenue from developer charges should be offset against the total revenue allowance either by excluding or deducting the contributed assets from the RAB or by offsetting the revenue recovered using other mechanisms.

<u>Cost Recovery for New Capital Expenditure (Principles for Recovery of Capital Expenditure: NWI Pricing Principle 1)</u>

For new or replacement assets, charges will be set to achieve full cost recovery of capital expenditures (net of transparent deductions/offsets for contributed assets and developer charges and transparent community service obligations) through either:

- a) a return of capital (depreciation of the RAB) and return on capital (generally calculated as rate of return on the depreciated RAB); or
- b) renewals annuity and a return on capital (calculated as a rate of return on an undepreciated asset base (ORC)).

<u>Differential Water Charges (Principles for Urban Water Tariffs: NWI Pricing Principle 7)</u>

Water charges should be differentiated by the cost of servicing different customers (for example, on the basis of location and service standards) where there are benefits in doing so and where it can be shown that these benefits outweigh the costs of identifying differences and the equity advantages of alternatives.

Notes:

Differential pricing may be achieved by upfront contributions, including developer charges.

Commission's Additional Pricing Principles

- 1. Principle 1: Where a service is provided for the sole benefit of the recipient, the beneficiary should pay the full efficient cost of the service, and other consumers should not be required to contribute to the cost of the service.
- 2. Principle 2: Where a service is provided to a distinct group of customers (e.g. trade waste audits are provided to trade waste customers only), prices to a customer should reflect the incremental cost of supplying the service to the customer, and a reasonable allocation of the fixed costs of providing the service, where relevant.
- 3. Principle 3: Prices should reflect the efficient cost of the particular service provided, although in circumstances where the cost of implementing differentiated prices to different customers is likely to outweigh the benefits, non-differentiated prices can be implemented.

4. Principle 4: SA Water must be able to provide transparent information to customers on how the costs for these services have been calculated, or are to be applied, and must be able to support its position in the event of a dispute.



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