Water

SA Water Regulatory Determination 2016

Final determination

June 2016

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Disclaimer

The Commission has considered and reviewed matters raised in the written submissions and undertaken further research as to practices and matters relevant to this review.

The Commission has been assisted by the submissions it has received through this review process. The issues raised by stakeholders through the consultation period have been carefully considered and, where relevant, certain arguments and submissions have been mentioned in the text, either by direct quotation or by reference to themes or arguments, to assist stakeholders to understand the proposed positions that have been reached.

However, a failure to reference an argument or submission does not mean that it has not been taken into account in reaching the final decision. While not all of the positions put in the submissions have been adopted, all submissions have informed the consideration of each of the relevant issues and the competing viewpoints.

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Glossary of terms

ABS	Australian Bureau of Statistics
ADP	Adelaide Desalination Plant
AER	Australian Energy Regulator
Base year	The year for which the Commission has determined baseline operating expenditure (2014-15 in the case of RD16)
BOM	Bureau of Meteorology
CAC	Consumer Advisory Committee
CAM	Cost Allocation Model
CAPM	Capital Asset Pricing Model
Code	Water Retail Code for Major Retailers
Commission	Essential Services Commission established under the Essential Services Commission Act 2002
COTA SA	Council of the Ageing of South Australia
CPI	Consumer Price Index
CSO	Community Service Obligation
DCSI	Department for Communities and Social Inclusion
DEWNR	Department of Environment, Water and Natural Resources
DOT	Distribution Optimisation Tool
Draft RD16	Essential Services Commission, SA Water Regulatory Determination 2016, Draft determination: Statement of Reasons, February 2016
Drinking water retail service	A retail service constituted by the sale and supply of water of a quality fit for human consumption (but does not include an excluded retail service).
DTF	Department of Treasury and Finance
EPA	Environment Protection Authority
EPM	Energy Portfolio Management
ESC Act	Essential Services Commission Act 2002
EWOSA	Energy and Water Ombudsman SA

Excluded retail services	(a) standard and non-standard connection services (including developer services) (b) trade waste services (c) non-domestic hauled waste services (d) easement extinguishment and encumbrance services (e) hydrant and fire plug services (f) meter services, or (g) network analysis and audit services.
FFO	Funds from operations
GL	Gigalitre (one thousand ML)
GSP	Gross State Product
IS	Information systems
IT	Information technology
kL	Kilolitre (1,000 litres)
KPDs	Key practice documents
KPIs	Key performance indicators
Minimum production	Operating the ADP at a output of 30 ML per day for nine months of the year (this equates to approximately 8 GL per year)
Minister	Minister for Water and the River Murray
ML	Megalitre (1 million litres)
MLR	Mount Lofty Ranges
NPR	National Performance Report
NWI	National Water Initiative
NWI Pricing Principles	Pricing principles endorsed by the Natural Resource Management Ministerial Council on 23 April 2010.
OECD	Organisation for Economic Co-operation and Development
O&M Contract	Operating and maintenance contract between SA Water and the ADP operator (AdelaideAqua Pty Ltd)
PV	Present value
Price Determination	The determination made by the Commission under the Essential Services Commission Act 2002 as authorised by Section 35(1) of the Water Industry Act, and attached to this regulatory determination as a Schedule.
Pricing Order	Any Pricing Order issued by the Treasurer pursuant to Section 35(4) of the Water Industry Act
RAB	Regulatory asset base

RBA	Reserve Bank of Australia
Rate of return report	Commission's final report on the methodology for calculating SA Water's rate of return for RD16.
RBP13	SA Water Regulatory Business Proposal 2013
RBP16	SA Water Regulatory Business Proposal 2016
RD16	SA Water Regulatory Determination 2016-2020
RD13 period	Regulatory Determination 2013 (1 July 2013 to 30 June 2016)
RD16 period	Regulatory Determination 2016 (1 July 2016 to 30 June 2020)
RD20	Regulatory Determination 2020
Recycled water retail services	Sale and supply of water that has been generated from sewage, greywater or stormwater and treated to a standard that is appropriate for its intended use.
Retail services	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 regulations.
Revenue caps	Maximum drinking water and sewerage revenues permitted under the price determination
SACOSS	South Australian Council of Social Service
SAFCA	South Australian Financial Counsellors Association
SA Health	Department for Health and Ageing
Sewerage retail service	Sale and supply of sewerage services for the removal of sewage, but does not include an excluded retail service.
Statement	RBA May 2016 Statement of Monetary Policy
Treasurer	Treasurer of South Australia
WACC	Weighted average cost of capital
WI Act	Water Industry Act 2012
WWTP	Wastewater treatment plant

Executive summary

Following a detailed independent review and stakeholder engagement, the Essential Services Commission (**Commission**) has developed a regulatory framework to apply to SA Water for the period 1 July 2016 to 30 June 2020 (**RD16**). Stakeholder views and feedback have informed this RD16 final determination. The Commission thanks those who have contributed towards this review.

RD16 is the second regulatory determination under the legislative regime established for the water industry in 2012. The first determination (**RD13**) applies for the period 1 July 2013 to 30 June 2016. This new determination builds on the outcomes of that initial determination.

Overall, this RD16 seeks to continue to deliver the consumer benefits achieved through RD13, and provides incentives to SA Water to deliver additional financial and management efficiencies over the coming four years and beyond. It establishes:

- A robust, effective, simplified and customer focused consumer protection regime, informed by direct feedback from SA Water's customers, to ensure that South Australian customers have appropriate protections in their dealings with SA Water.
- Revenue caps over the four year period for drinking water and sewerage retail services that will deliver, on an annual average basis:
  - a drinking water revenue cap that is, in real terms, 2.5 percent lower than that applying in the RD13 period, and
  - a corresponding sewerage revenue cap that is 10.9 percent lower.

  Compared to the current revenue controls applying under RD13, those caps will deliver an average of $60 million per annum in savings for SA Water's customers during the RD16 period. The annual average saving of $60 million, combined with the ongoing $50 million annual savings arising from RD13, will lead to annual revenue reductions of around $110 million per annum for SA Water's customers (as compared with revenue outcomes in 2012, prior to the Commission commencing its independent regulatory role).

  While under the regulatory regime SA Water sets prices for its services, those prices can recover no more than the maximum amounts set by the revenue caps. This determination will, nevertheless, deliver overall price reductions for customers.
- A continuation of a fit for purpose pricing principles regime for other retail services provided by SA Water, including recycled water and customer connections, which focuses on driving efficiency.

The available evidence indicates that SA Water has responded to the challenges and incentives provided by the Commission for RD13. SA Water has materially changed its business practices over the past three years. It is actively seeking improvements and efficiencies, has a stronger customer and service delivery focus and has become more transparent.

In developing this RD16, the Commission has reviewed revenue and customer service proposals put forward by SA Water, as well as additional evidence obtained from stakeholder submissions, expert technical advisors, and from SA Water.

The Commission has found SA Water's proposals to be generally prudent and efficient. Nevertheless, it has identified the opportunity for further efficiencies in its proposed expenditure program over the RD16 period – some five percent in relation to capital expenditure and one percent in operating expenditure. The revenue reductions determined in this RD16 incorporate those efficiencies.

Background

Under the Water Industry Act 2012, the Commission is the independent economic regulator of the retail water sector in South Australia. Its role includes the regulation of SA Water, the State's major supplier of water and sewerage retail services.

The Commission regulates the customer service and revenue aspects of SA Water's retail operations because SA Water holds a monopoly provider position in the market for those services on its network. In the absence of competition, the potential exists for SA Water to exploit its monopoly position in its network, either by reducing services or earning excessive revenue.

Economic regulation provides a counterbalance to that position, with the Commission able (under statutory powers) to set binding consumer protection obligations and make determinations on revenue and some pricing matters. For example, in the case of drinking water and sewerage retail services, the Commission's regulatory approach aims to provide an incentive for efficient behaviour by encouraging SA Water to incur lower expenditure than that reflected in the maximum revenue caps, while still delivering its regulatory obligations.

The formal mechanisms of economic regulation therefore provide strong incentives for SA Water to deliver services at a level valued by customers, recover no more than prudent and efficient revenues and seek out management and financial efficiencies to reduce its costs over time. However, the regulatory process does not determine the specific projects and programs which SA Water must undertake.

Customers benefit from these regulatory arrangements because they can have confidence that SA Water is meeting its customer service obligations – with strong incentives to deliver cost reductions over time – and with any reductions being passed on to customers through lower prices (as has been the case during RD13 and as is proposed for RD16).

Consumer protections

In providing drinking water and sewerage services, SA Water is required to comply with the consumer protection framework set out in SA Water's retail licence and the industry codes, rules and guidelines established by the Commission.

Based on overall high levels of customer satisfaction observed during the period of RD13, and evidence that customers are not willing to pay more for higher levels of service, SA Water will be required to use its best endeavours to maintain the same level of service as it achieved over the past two years.

SA Water's customer service and network reliability performance will be assessed against 18 binding service standard measures. At the same time, the Commission will continue monitoring and publicly reporting on a wider range of performance measures, to give customers visibility of the nature and quality of the services provided by SA Water.

Drinking water and sewerage retail services

RD16 establishes two separate revenue caps (expressed in December 2014 dollars) for each of SA Water's drinking water and sewerage retail services for the four year RD16 period. They are:

- drinking water retail services: $2,841.3 million over the period, and
- sewerage retail services: $1,188.1 million over the period.

Those caps have been derived using the standard 'building blocks' regulatory approach: the Commission has assessed the costs that would be incurred by a notional 'prudent and efficient' firm to deliver the services required of SA Water during the period. That assessment has been informed by the proposals put forward by SA Water, as well as by public submissions made on those proposals. The key elements are as follows.

Demand

The demand forecasts, expressed in gigalitres (GL) for drinking water and connection numbers for sewerage retail services, are as follows:

- drinking water retail services:
  - 2016-17: 190.1 GL
  - 2017-18: 191.4 GL
  - 2018-19: 192.9 GL
  - 2019-20: 194.5 GL
- sewerage retail services: annual rate of sewerage connections growth of 1.2 percent.

The Commission has considered the demand forecasts proposed by SA Water and reviewed and assessed the efficacy of the model it used to derive those forecasts. It is satisfied that the model is robust and is reliable for the purposes of setting demand forecasts for RD16.

Operating expenditure

The building block assumption for operating expenditure is $1,795.3 million ($Dec14).

SA Water's operating expenditure costs include wages and salaries, pumping and treating water, carrying out maintenance activities, reading meters and sending customer bills and information. Unlike capital expenditure, which is gradually recovered over the life of SA Water's assets, operating expenditure is recovered as it occurs in each year.

In establishing forecasts of efficient operating expenditure, the Commission has considered the operation of the Adelaide Desalination Plant as a part of an overall optimised water supply portfolio. In that context, this determination provides for (but does not require) the operation of that plant over the coming four years in a 'minimum production' mode of no more than eight GL per annum (its maximum capacity is 100 GL per annum).

This position has been reached on the basis that, while there are some uncertainties, the financial difference between running the plant at that minimum capacity and not running it at all appears to be minimal ($4 million per year if it is run at that level and approximately $5 million per year in alternative water sourcing costs if it is not run). In addition, there are security of supply and operational flexibility benefits associated with having the plant available for rapid start, although, they cannot be quantified at this time based on available evidence.

The Commission has also considered labour costs for RD16. In doing so, it has reached the view that the base rate of increase in the cost of labour – which is an input to the calculation of SA Water's total labour costs – should be capped by the rate of change in the Australia wide Consumer Price Index (CPI). SA Water had proposed a base rate of change at half a percentage point above the CPI. However, given current evidence and economic circumstances in this State, the Commission is not persuaded that a higher base rate of change is prudent and efficient.

Finally, the Commission has considered SA Water's initiative for a self-imposed one percent per annum operating efficiency target. The Commission welcomes this initiative and has adopted the one percent target for the first two years of RD16. However, having regard to the continuous business improvement potential identified by SA Water, the Commission has determined that, for the final two years of the period, an operating cost efficiency target of 1.5 percent per annum is appropriate.

Capital expenditure

The building block assumption for capital expenditure in RD16 is $1,200.1 million ($Dec14).

Capital expenditure is expenditure on the purchase or creation of assets that can be utilised in the longer term. SA Water operates in a capital intensive industry. It owns many long life assets, such as pipe networks, dams, and water and sewerage treatment plants. Over time, existing assets may be upgraded or replaced, and network growth necessitates the construction or acquisition of new assets.

The Commission has examined a sample of the capital projects and programs proposed by SA Water for the RD16 period. The sample covered a wide range of planned investments, with the review including SA Water's governance, capital planning, cost allocation and asset management processes.

Overall, the Commission has found that SA Water's proposal generally reflects the expenditure that would be incurred by a prudent and efficient business. It accepts SA Water's proposal for a capital expenditure efficiency target equalling $60 million over the four year period. Nevertheless, it has determined that there is scope for some capital expenditure reductions. These arise from some of the proposed projects either not being considered to be prudent, or having been planned at a cost that is more than the efficient amount.

Rate of return

The regulatory rate of return reflects the cost of financing investments in regulated assets.

This determination sets four separate annual real rates of return to be applied within RD16, consistent with the 'trailing average' approach for calculation of the rate of return set out in the Commission's 2015 position paper on that matter.

The rates of return (on a real, post-tax basis) are as follows:

- 2016-17: 4.53 percent
- 2017-18: 4.33 percent
- 2018-19: 4.01 percent
- 2019-20: 3.81 percent

Additional features

This RD16 establishes a revenue cap regime that incorporates two additional features, to provide flexibility and ensure ongoing efficiency within the overall framework.

- A demand variation adjustment mechanism, to be given effect at the end of RD16, that will provide a regime for ensuring there are no windfall financial gains or losses arising from material variations between the forecast demand for retail services (as assumed in RD16) and the actual demand that eventuates during the period.
- A pass through mechanism, enabling the revenue caps to be adjusted (downwards or upwards) during the next regulatory period (commencing 1 July 2020) if there is a significant change in legal obligation or an extraordinary event during RD16 that is not within SA Water's direct control, is unavoidable and has a material impact on the costs of providing retail services.

Other retail services

SA Water provides other 'excluded services' outside of drinking water and sewerage retail operations. They include the provision of both standard and non-standard connection services, trade waste services, recycled water services, hydrant and fire plug services and metering services. In each case, the relevant service is not provided on a mass market basis (unlike drinking water and sewerage retail services). Therefore, while it is appropriate to regulate them, the form of regulation used is more light handed.

This RD16 regulates the price of excluded services through a set of principles with which SA Water must comply when setting prices.

Under that approach, the Commission will not take a direct role in setting or approving fees and charges for excluded services. Instead, SA Water will be required to demonstrate that its prices complied with the applicable pricing principles (for example, requiring them to reflect efficient costs). The Commission will continue to act as the independent dispute resolution body when a customer cannot resolve with SA Water a dispute as to whether or not those pricing principles have been properly applied.

Part A – Background and context for this determination

This part provides background and contextual information for this determination. It summarises the Commission's role and functions and sets out the broader context within which it is making RD16. This includes SA Water's broader business and operating context and the role of other parties in the water industry.

The Commission has also taken into account SA Water's response to the incentives provided in the RD13 period and an assessment of the ongoing evolution of the regulatory framework for RD16.

1 Introduction

1.1 The regulatory determination

The South Australian Water Corporation (**SA Water**) is a vertically integrated water and sewerage business, wholly owned by the South Australian Government.[1] SA Water provides drinking water and sewerage services to 1.6 million South Australians – about 95 percent of the State's population.

The retail services provided by SA Water are regulated by the Essential Services Commission (**Commission**) under the Essential Services Commission Act 2002 (**ESC Act**) and the Water Industry Act 2012 (**WI Act**).

SA Water is licensed under the WI Act to provide retail services, subject to conditions.[2] While some matters are addressed through licence conditions alone, the Commission is able to make industry codes or rules that prescribe the rules of conduct and procedures that SA Water must follow in providing retail services.[3] The Commission also has the discretion to make a price determination for SA Water's retail services.[4] Its overall approach to regulating SA Water aims to encourage economically efficient behaviour in the long term interests of consumers.[5]

This SA Water Regulatory Determination 2016-2020 (**RD16**) sets out the regulatory framework to apply to SA Water for the period 1 July 2016 to 30 June 2020. It brings together several of the Commission's regulatory functions into one review process covering:

- reviewing and amending the consumer protections contained in industry codes and rules
- reviewing and resetting the customer service and network reliability service standards with associated performance targets
- making three separate price determinations for drinking water retail services, sewerage retail services and excluded retail services, and
- reviewing and amending the compliance and performance monitoring and reporting framework.

This RD16 represents the independent review and determinations of the Commission, informed by its consideration and review of:

- SA Water's Regulatory Business Proposal 2016 (**RBP16**) and submissions made to the Commission on that proposal
- submissions made to the Commission on its Draft RD16
- consultation with other regulators and Government agencies responsible for setting obligations that SA Water must comply with, and

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1 The South Australian Water Corporation is established under the South Australian Water Corporation Act 1994. It is a public corporation subject to the Public Corporations Act 1993. Not all of the functions undertaken by SA Water are subject to regulation by the Commission.

2 Refer Section 25(1) of the WI Act. SA Water's licence is available at http://www.escosa.sa.gov.au/library/130102-WaterRetailLicence-SAWater.pdf.

3 Section 28 of the ESC Act and Section 25 of the WI Act.

4 Section 25 of the ESC Act and Section 35 of the WI Act.

5 Section 6 of the ESC Act.

- research conducted by the Commission, including expert engineering and financial advice.[6]

The RBP16 is comprised of a series of public documents and confidential information. Much of the detailed analysis conducted by the Commission relies on commercially sensitive information provided by SA Water. While the Commission's information gathering powers are broad, and do not limit its ability to collect and consider confidential information, it has preserved the confidentiality of commercially sensitive information in outlining its reasons for this RD16. It has sought to strike an appropriate balance between providing sufficient information to enable stakeholders to understand the basis of its decisions, while ensuring that confidential information that could adversely affect SA Water's commercial or competitive position is not disclosed.

The Commission has considered all relevant evidence available to it (including, but not limited to, all submissions provided to it) and all relevant legislative factors and objectives.

However, while this RD16 is informed by all representations received, it is not a judgment on those representations. Rather, it is the Commission's considered position on the appropriate form of regulation to be applied to SA Water over the next four year regulatory period to achieve a robust outcome for South Australian consumers, having regard to the requirements of the legal framework.[7]

1.2 The consultation process

The Commission's review process allows the South Australian community to provide submissions on proposed decisions prior to a final decision being made. The stages in this review process are set out in Table 1.1.

Table 1.1: Stages in the SA Water RD16 review process

Date	Action
November 2013 to February 2014	Interested parties were able to make submissions to the Commission on the framework and approach to regulating SA Water's revenues and services standards for RD16.
November 2014	The Commission released a Final Framework and Approach paper to provide SA Water with reasonable certainty as it developed RBP16.
September 2015	SA Water submitted RBP16 to the Commission.
September 2015 to October 2015	Interested parties were able to make submissions to the Commission on RBP16, or other issues related to the water and sewerage retail services to be provided by SA Water in the four year period commencing 1 July 2016.
February 2016	The Commission released the Draft RD16 for public consultation.
February 2016 to March 2016	Interested parties were invited to make submissions to the Commission on the Draft RD16.
June 2016	The Commission released this RD16.

6 Cardno, in association with Atkins, provided expert advice to the Commission from a water engineering and financial perspective on the prudence and efficiency of SA Water's capital and operating expenditure proposal for the RD16 period. Black and Veatch provided technical advice on the ADP.

7 This model is different to the propose-respond methodology required under national energy regulation. Under that approach, a regulated entity is required to provide the Australian Energy Regulator with a proposal, which it must either accept if it is considered to be reasonable, or substitute with its own proposal if it is considered to be unreasonable.

Date	Action
June 2016 to July 2016	SA Water will begin implementing RD16. Implementation will include setting new water and sewerage service prices, based on the maximum revenue allowable as determined by the Commission.
1 July 2016	RD16 commences.

1.2.1 Pre-RBP16 guidance

Economic Regulation of SA Water from 1 July 2016 framework and approach

From November 2013 until November 2014, the Commission consulted on the framework and approach to be used for RD16. The Final Framework and Approach paper explained the key regulatory and methodological issues for RD16 and set certain content and presentation requirements for RBP16, including a requirement to consult genuinely and closely with customers.[8]

Regulatory Rate of Return: Final report on proposed methodology

From November 2013 until November 2014 the Commission consulted on the proposed methodology for calculating a regulatory rate of return to apply to SA Water's regulated assets for RD16 from November 2014 until April 2015. The Final Report proposed an approach that aimed to provide SA Water with strong incentives for future investment and refinancing, by reference to forward looking market conditions.[9] At the same time, however, it recognised the need to reduce volatility – and hence costs – for customers over the long term, and sought to encourage responsible long term financing strategies, rewarding only prudent and efficient behaviour by SA Water.

1.2.2 RBP16

RBP16 outlines SA Water's plans for the delivery of its drinking water and sewerage services during the RD16 period. It sets out SA Water's response to the expectations of its customers and stakeholders, the levels of service it commits to provide, and its view on the efficient expenditure and investment required to deliver those services.

The key elements of RBP16 are summarised in Table 1.2.

8 Refer http://www.escosa.sa.gov.au/projects/206/economic-regulation-of-sa-water-from-1-july-2016-framework-and-approach.aspx.

9 An expert report, prepared by HoustonKemp Economists, was released to accompany the Final Report. That report explained the broader regulatory and economic context that supported the evolution of the rate of return methodology. Refer http://www.escosa.sa.gov.au/projects/218/sa-water-regulatory-rate-of-return-2016-2020-report-to-the-treasurer.aspx.

Table 1.2: Summary of proposals in RBP16[10]

Issue	SA Water proposal
Service standards	Consolidate current set of service standards from 66 to 18 Set targets at performance levels achieved during 2013-14 (ie at the time of undertaking customer engagement), rounded to the nearest five percent
Form of price regulation	Annual revenue caps for drinking water and sewerage Revenue impacts from demand variations shared equally between SA Water and customers Continuation of current classification of retail services
Pass throughs	No cost pass throughs for the RD13 period SA Water proposed that pass through events be dealt with as they occur, and allow cost pass throughs in RD16 for any significant change in interest rates
Demand	Forecast water demand of approximately 192 Gigalitre (GL) per annum on average, using a monthly regression model Forecast customer sewerage growth of 1.2 percent per annum
Operating expenditure	Proposed total of $1,830 million in operating expenditure for drinking water and sewerage
Value of Regulatory Asset Base as at 1 July 2016	Proposed opening Regulatory Asset Base (RAB) values of $8,179 million (water) and $3,804 million (sewerage)
Capital expenditure	Proposed total of $1,229 million in capital expenditure for drinking water and sewerage
Rate of return	Proposed real, post-tax rate of return of 4.2 percent, largely based on the Commission's methodology developed in March 2015
Tax	SA Water's approach to tax is consistent with the approach used in RD13, which assumed a corporate tax rate of 30 percent and gamma of 0.5. This leads to a tax liability of zero.
Regulatory modelling	SA Water has used the same regulatory models as the Commission used in RD13

[10] Table 1.2 reflects the context of RBP16 documents submitted to the Commission on 1 September 2015. However, all monetary values have been updated as of January 2016. This RD16 uses the updated numbers in the discussion.

1.2.3 Consultation to develop this RD16

The Commission invited stakeholders to provide feedback on RBP16 in September 2015. SA Water also provided a briefing on RBP16 to the Commission's Consumer Advisory Committee in early September 2015.

In seeking submissions, the Commission noted that while RBP16 itself was an important submission, the Commission needed to consider the broadest range of evidence available to it before reaching its decisions.

It sought feedback on:

- the levels of service SA Water proposed
- SA Water's proposed investments to deliver long term benefits to customers and the environment
- any other issues raised by SA Water
- the consumer protections contained in Water Retail Code – Major Retailers and Water Industry Rule 1 – Excluded Retail Services, and
- any other issues that stakeholders considered should be taken into account.

The Commission received 10 submissions. They came from:

- AdelaideAqua Pty Ltd[11]
- Business SA
- Council on the Ageing SA (COTA SA)
- Department of Environment, Water and Natural Resources (DEWNR)
- Environment Protection Authority (EPA)
- Osmoflo Pty Ltd
- SA Health
- South Australian Council of Social Service (SACOSS)
- South Australian Financial Counsellors Association (SAFCA)
- Technical Regulator, and
- Uniting Communities.

Following publication of those submissions on the Commission's website,[12] SA Water provided a further submission to clarify various issues raised by other stakeholders.

[11] The submission from AdelaideAqua Pty Ltd was received on 22 January 2016 and was too late to be considered for this RD16. The Commission will consider the submission in making its final determination in June 2016.

[12] http://www.escosa.sa.gov.au/projects/231/sa-water-regulatory-determination-2016.aspx.

The Commission received 51 submissions on its Draft RD16. They came from:

- Business SA
- Consumers SA, COTA SA and SAFCA (joint submission)
- DEWNR
- District Council of Orroroo Carrieton
- EPA
- Energy and Water Ombudsman SA (EWOSA)
- Orroroo residents (38 written submissions and five video submissions)
- SACOSS, and
- SA Water

In addition to seeking feedback from the South Australian community, the Commission consulted with other South Australian regulators and Government agencies to ensure RBP16 and the Draft RD16 was consistent with the obligations set by those bodies. The responses received have been made available on the Commission's website to ensure that the public is aware of other regulators' views, and to facilitate public consultation on SA Water's expenditure proposals.

1.3 Structure of this document

This RD16 is divided into four parts.

- Part A – This section provides background and contextual information for this review.
- Part B – This section discusses the decisions on industry codes and rules, service standards and the forms of price regulation to be applied.
- Part C – This section summarises the key findings from the review of the forecast maximum operating and capital expenditure for providing drinking water and sewerage retail services using a building block methodology.
- Part D – This section sets out the formal processes required to give RD16 legal effect.

1.4 Next steps

Following the formalisation of RD16, SA Water will begin its implementation from 1 July 2016. This will include setting new drinking water and sewerage service prices, based on the maximum revenue allowable, as determined by the Commission.

The Commission's revised Water Retail Code - Major Retailers and service standards will also come into effect on 1 July 2016.

2 Context for this review

While all periodic regulatory determinations are governed by an overall statutory framework, each occurs within a particular context. That context will change over time and drives the overall design, scope and form of a particular determination. For example, the manner in which regulatory discretions available under the statutory framework are exercised, the degree to which an overall determination is more or less prescriptive in approach, and the need for and form of incentive regimes will all depend on contextual matters.

Those contextual matters will include the maturity of the overall regulatory regime, the degree to which there is potential for market power to be exercised, the extent to which a regulated entity is provided with incentives to focus on efficient customer outcomes and, as a corollary, the extent to which it is observed to be responding to those incentives. Matters such as the broader economic and social environment come into play when considering the overall context.

As these matters are not static, and are important in understanding the context for a regulatory determination, it is useful at this point to explore the current context for RD16.

2.1 SA Water's business and operating context

2.1.1 SA Water's functions

SA Water's primary functions are to provide services for the:

- supply of water by means of reticulated systems
- storage, treatment and supply of bulk water, and
- removal and treatment of sewage by means of sewerage systems.

It also has other functions including:

- carrying out research and works to improve water quality and sewage disposal and treatment methods
- developing commercially and marketing products, processes and intellectual property produced or created in the course of its operations, and
- encouraging and facilitating private or public sector investment and participation, whether from within or outside the State, in the provision of water and sewerage services and facilities.

SA Water is also responsible for acting as the agent of the Minister for Water and the River Murray (Minister):

- in the capacity of the Constructing Authority under the Murray-Darling Basin Act 2008, and
- for the purpose of purchasing water entitlements under the River Murray Act 2003, for and on behalf of, and as instructed by, the Minister from time to time.

2.1.2 Obligations as a Government business enterprise

As a statutory corporation wholly owned by the South Australian Government, SA Water must comply with various State Government requirements. As a result, SA Water:

- has a Board that is accountable to the Minister and the Treasurer, for the sound management and stewardship of its business and assets, for and on behalf of its owners
- must undertake its commercial operations in accordance with prudent commercial principles and use its best endeavours to achieve a level of profit consistent with its functions
- must undertake its non-commercial operations in an efficient and effective manner, consistent with the requirements of its charter,[13] which are:
  - subject to a community service obligation agreement between SA Water and the South Australian Government.
  - subject to direction under Section 6 of the Public Corporations Act[14]
  - related to the operational responsibility of water and wastewater facilities for identified Aboriginal communities, or
  - agreed by the Minister and the Treasurer to be non-commercial
- must comply with relevant South Australian Government policies and Treasurer's Instructions on dividend and tax equivalent payments, including paying all rates, duties and taxes that would apply if SA Water was not a Government owned entity.[15]

2.2 The functions and powers of the Commission

2.2.1 Economic regulator and advisory body

As an independent economic regulator and advisory body, the Commission plays an important role in the South Australian economy. Its regulatory decisions can have a significant impact on consumers and businesses, while its advice can inform future policy and reforms that may improve the State's economic wellbeing.

As a statutory authority with responsibilities in the essential services sector and for providing advice to the Government, the Commission acts independently and objectively in performing its functions and exercising its powers.

The Commission provides benefit to the South Australian community by ensuring that customers of regulated services are adequately protected and that entities are accountable for their services. It provides robust, independent advice to Government that informs and provides an evidence base for policy making and public consideration of economic and regulatory issues.

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13 Refer Section 11 of the Public Corporations Act 1993. SA Water's corporate charter needs to be read in conjunction with a series of legislation and Government policy, including: South Australian Water Corporation Act 1994; Public Corporations Act 1993; Water Industry Act 2012; Essential Services Commission Act 2002; Rates and Land Tax Remission Act 1986; Public Finance and Audit Act 1987; Public Sector Act 2009; Public Sector (Honesty and Accountability) Act 1995; Metropolitan Drainage Act 1935; Linear Parks Act 2006; South Western Suburbs Drainage Act 1959; Code of Ethics for the South Australian Public Sector (July 2015); and Honesty and accountability for members of Government boards (March 2011).

14 Pursuant to Section 6 of the Public Corporations Act 1993 and Sections 6 and 7(2)(f) of the South Australian Water Corporation Act 1994.

15 Refer Section 29 and Section 30 of the Public Corporations Act 1993.

The Commission takes a risk based approach to regulation. It avoids imposing unnecessary regulatory costs and burdens and seeks to provide customers, regulated businesses and the broader community with regulatory stability and certainty over time. It therefore brings a long term view to its work and establishes stable, transparent and predictable processes – although it remains open to change where change will better meet consumers' needs. While it takes account of shorter term issues, those are considered in the context of consumers' long term interests.

2.2.2 Regulation of SA Water by the Commission

The WI Act declares the water industry to be a regulated industry for the purposes of the ESC Act.[16] This allows the Commission to regulate SA Water's operations in several ways:

- the WI Act requires SA Water to be licensed by the Commission to operate as a water industry entity and provide retail services[17]
- the licence issued by the Commission is subject to compliance with conditions[18]
- the industry code and rules made by the Commission sets out detailed behavioural standards, including minimum standards of service,[19] and
- the price determination powers allow the Commission to establish controls around the amount of revenue that can be collected.[20]

The legislative framework for RD16 is set out in more detail in section 2.5.

Why regulation of SA Water's retail services is required

Regulation of the retail services provided by SA Water is currently considered necessary because:

- SA Water is a monopoly service provider of drinking water and sewerage retail services to the majority of South Australian customers, and
- in the absence of competition, SA Water may have an incentive to act in an economically inefficient manner (by providing service levels that are not valued by customers and/or collecting revenue above efficient costs).

The potential detriment to customers that may result from those matters could be significant and materially greater than the regulatory costs of making the determinations.

The reasons for the forms of regulation proposed by the Commission are set out in more detail in Part B.

16 Section 17 of the WI Act.
17 Section 18 of the WI Act.
18 Section 25 of the WI Act.
19 Section 25(1) of the WI Act.
20 Section 35 of the WI Act.

Incentive based regulation

The Commission's regulatory approach is designed to incentivise efficient behaviour, by encouraging SA Water to incur lower expenditure than that reflected in the maximum revenue caps,[21] while still achieving its statutory obligations. It aims to achieve that goal in three ways:

1. It sets maximum revenues with regard to the forecast costs that would be incurred by a prudent and efficient entity with the obligations of SA Water, not necessarily SA Water's actual expected costs.

2. It does not adjust those maximum revenues during the course of the regulatory period. Any changes to SA Water's costs relative to the efficient costs underpinning the maximum revenues are not passed through to revenues or prices during that period. This means that SA Water incurs the cost of any overspend and retains the benefit of any underspend relative to the expenditure benchmarks. If it incurs costs during a regulatory period that are below the forecast costs used to determine revenues, those lower costs will be reflected in revenues in the subsequent regulatory period. This allows customers to benefit from any underspend relative to the efficient expenditure benchmarks. Any costs incurred that are above the efficient amounts used to set revenues are only taken into account if the expenditure is prudent and efficient. Expenditure on an activity is considered by the Commission to be prudent where there is a clear need for that activity. The efficient cost is the lowest possible lifecycle cost of delivering the prudent activity.[22]

3. The Commission monitors, reports and enforces compliance against service obligations to ensure that customer service levels are maintained at the required standards.

The incentive to incur only efficient costs is critical to the regulatory framework and is used by other economic regulators in regulating providers of monopoly services. It is designed to give regulated businesses the incentive to reveal their efficient costs – an incentive that does not exist in the absence of competition.

Long term interests

SA Water operates in an infrastructure intensive industry, with many physical assets having long economic lives. This means that periods of under investment or over investment are unlikely to be identified in the short term. Economic regulation needs to create incentives for efficient investment in assets and asset management to guard against periods of under or over investment.

In the case of under investment, if the maximum revenue allowance is set below the level required to recover the efficient cost of supply in one regulatory period, significant revenue increases may be necessary in later periods and result in price shocks for customers. If the maximum revenue allowance is consistently set below the efficient cost reflective level, it could threaten the financial viability of the regulated business and adversely affect the quality and reliability of the services it provides. Conversely, over investment can result in higher than necessary prices for service levels that customers may not value.

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21 A revenue cap sets the maximum amount of revenue a regulated firm is allowed to earn over an agreed period.

22 Further explanation of the 'prudent and efficient' test can be found in the Commission's November 2014 Framework and Approach paper, available at http://www.escosa.sa.gov.au/library/20141121-Water-SAWaterPriceDetermination_2016-2020-FinalFameworkApproach.pdf.

2.3 Roles and responsibilities of participants in water regulation

The Commission undertakes its role as an economic regulator within a broader legislative and policy framework. A summary of the key entities involved in the regulation of SA Water is provided in Table 2.1.

Table 2.1: Entities involved in the regulation of the water industry

Entity	Overview of role within the water industry	Relevant legislation
Consumer and Business Services	Responsible for administration of the Australian Consumer Law, covering consumer protection and fair trading, in South Australia Regulates the relationship between landlords and tenants for the payment of rates and charges for water and sewerage services Regulates the professional conduct of plumbers	Competition and Consumer Act 2012 Residential Tenancies Act 1995 Plumbers, Gasfitters and Electricians Act 1995
Department for Communities and Social Inclusion	Develops customer hardship and concession policies Administers the Consumer Advocacy and Research Fund	Water Industry Act 2012
Department of Environment, Water and Natural Resources	Regulates state water resources and other natural resource management matters	Natural Resources Management Act 2003
Energy and Water Ombudsman SA	Handles complaints from customers of water retailers that have joined the scheme	Water Industry Act 2012
Environment Protection Authority	Regulates the environmental impact of water businesses	Environment Protection Act 1993
Essential Services Commission	Regulates behavioural standards for the sale and supply of water and sewerage retail services Establishes average customer service and reliability service standards for water and sewerage retail services and assesses the prudent and efficient costs for delivery of water and sewerage retail services Regulator for the third party access regime (to commence 1 July 2016)	Essential Services Commission Act 2002 Water Industry Act 2012
Minister for Water and the River Murray	Administers the Water Industry Act Directs SA Water's Board in performing its functions	Water Industry Act 2012 South Australian Water Corporation Act 1994 Public Corporations Act 1993
Ombudsman South Australia	Investigates complaints about South Australian Government and local Government agencies	Ombudsman Act 1972
SA Health	Regulates public health requirements for providing drinking water supplies	Safe Drinking Water Act 2011
Technical Regulator	Regulates safety and technical matters	Water Industry Act 2012
Treasurer of South Australia	Sets licence fees for water industry entities Issues Pricing Orders	Water Industry Act 2012

The South Australian Government develops public policy in relation to public health, the environment, technical standards, health, safety and social welfare policy – all of which have an impact on SA Water's costs.

It is the role of independent regulators, such as the Commission and the EPA, to make decisions on matters assigned to them by the Parliament of South Australia. In performing their roles, regulators are often required to balance conflicting regulatory objectives.

The Commission assesses the prudence and efficiency of SA Water's forecast expenditure to meet its regulatory obligations. However, the Commission does not decide whether Government policies that have an impact on SA Water's costs are appropriate or correct. Nor does it make decisions about the governance of SA Water, as this is a matter for SA Water and its shareholder, the South Australian Government.

The Commission's role is limited to an assessment of the efficient costs of providing essential services – it does not extend to an assessment of customers' capacity to pay for essential services. It is the South Australian Government that makes decisions about social policy, including policies designed to assist customers to meet the costs of accessing essential services.

SA Water makes the day to day commercial decisions about the operations and investments required to deliver water and sewerage retail services that meet its regulatory obligations. It is also up to SA Water to set its prices for recovering its allowable revenue.

Consumer and industry advocates also have an important role in understanding and representing the views of their constituencies in consultation and engagement processes. They can also advocate for changes to legislation and policies where constituents' interests are not being met.

2.4 SA Water's response to the incentives provided in RD13 and the context for RD16

RD13 was the first determination under the new economic regulatory framework envisaged by the WI Act. The Commission's regulatory regime sought to establish a baseline for future regulation. The framework sought to facilitate economic efficiency gains in the water sector, greater protection for consumers, and greater transparency in the services delivered to customers by SA Water.

The information now available to the Commission suggests that the regulatory regime is delivering on those objectives. SA Water is responding to the incentives provided by the regime to become more efficient. For example:

- consistent with the revenue controls of RD13, prices have increased by no more than the Consumer Price Index (CPI)
- SA Water's asset management capabilities are improving, and
- the services SA Water delivers to its customers and the protections it provides for them are now more transparent, with its performance being monitored and reported publicly.[23]

SA Water's internal responses to the incentives the Commission provided through RD13 have been manifested in a variety of ways, all of which are relevant contextual considerations for RD16.

[23] http://www.escosa.sa.gov.au/library/20160120-SAWaterRegulatoryPerformanceReport2014-15.pdf.

2.4.1 Business transformation program and improved asset management practices

Over the past two years, SA Water has initiated a business transformation program to respond to changing customer expectations and the efficiency targets set by RD13. It has identified that the program has delivered a range of benefits, from more streamlined procurement processes to more efficient capital delivery.[24] SA Water has suggested that the program has been the main driver of its efforts to reduce costs in response to the efficiency targets set by the Commission through RD13.

SA Water has also undertaken a significant review of its approach to asset management and planning. It has introduced a line of sight between proposed expenditure and service levels, which minimises investment not clearly linked to customer focused outcomes. In doing so, it has enhanced its internal monitoring and reporting against an expanded set of Key Performance Indicators (KPIs), providing the data required to identify and promote opportunities for further efficiency gains.

2.4.2 Customer engagement

The Commission has observed a step change improvement in SA Water's efforts to identify customer preferences and make investment decisions that take into account an understanding of the customer outcomes of those investments.

The Commission set an express requirement for SA Water to consult with its customers in preparing RBP16. In responding to that requirement, it built on its existing customer satisfaction tracking work to develop a more comprehensive customer engagement program – the Your Say program.

An important element of Your Say was the feedback loop created between the customer and the business. SA Water sought initial customer views, used that feedback in its internal business planning processes, and then reported back to customers on how that feedback had been used. The results of the program were transparent and released publicly.[25] SA Water also sought feedback from a wider group of key stakeholders to test the views coming out of Your Say.

RBP16 drew on the customer insights arising from the Your Say program, however, the Commission is satisfied that SA Water's internal business planning process has not relied solely on customer feedback to justify expenditure. While it has demonstrated improvement in customer engagement, SA Water has acknowledged there is scope for further improvements in its processes to test and develop additional price/service trade offs.

2.4.3 Ongoing evolution of the regulatory regime

These matters indicate that SA Water is responding to the incentives in the Commission's regulatory regime. That response is evident in RBP16, which has a stronger customer focus and articulates a commitment by SA Water to drive and deliver new efficiencies for its customers.

While this does not suggest there is no longer a need for regulation, or that the Commission should do anything other than robustly analyse SA Water's proposals, it nevertheless highlights the need for ongoing evolution in the Commission's regulatory approach.

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24 SA Water's annual reports provide further detail on the changes it has made to its business in response to the introduction of economic regulation. Refer http://www.sawater.com.au/about-us/annual-reports.

25 The results of SA Water's consumer engagement program are available at: http://www.sawater.com.au/community-and-environment/community/customer-research-and-engagement.

2.5 Legislative framework for regulation of retail services provided by SA Water

2.5.1 The general functions and objectives of the Commission

The regulatory functions of the Commission are set out in Section 5 of the ESC Act. Functions relevant to RD16 include:

> *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.*

In performing these functions, the following objectives (including the Commission's primary objective when undertaking any function) inform and guide the Commission. They are set out in Section 6 of the ESC Act.

> *6—Objectives*
>
> *In performing the Commission's 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; and*
>
> *(b) at the same time, 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.*

With regard to the Commission's principal statutory objective, three elements of service delivery are captured – price, quality and reliability – and these are to be interpreted in a context of economic efficiency. That is particularly so in light of the fact that Sections 6(b)(iv) and (v) of the ESC Act expressly refer to efficiency considerations.

2.5.2 Price determination powers

Under the ESC Act

Part 3 of the ESC Act sets out a legislative scheme governing the exercise of the Commission's price determination powers and functions.

Sections 25(1) and 25(2) have the combined effect of empowering the Commission to make price determinations where authorised to do so by a relevant industry regulation Act, which, in this case, is the WI Act.

Section 25(3) provides that a price determination may regulate prices, conditions relating to prices, or price fixing factors in any manner the Commission considers appropriate. Examples include:

(a) fixing a price or the rate of increase, or decrease, in a price

(b) fixing a maximum price, or maximum rate of increase, or minimum rate of decrease, in a maximum price

(c) fixing an average price for specified goods or services, or an average rate of increase or decrease in an average price

(d) specifying pricing policies or principles

(e) specifying an amount determined by reference to a general price index, the cost of production, a rate of return on assets employed, or any other specified factor

(f) specifying an amount determined by reference to quantity, location, period or other specified factor relevant to the supply of goods or services

(g) fixing a maximum average revenue, or maximum rate of increase, or minimum rate of decrease in maximum average revenue, in relation to specified goods or services, or

(h) monitoring the price levels of specified goods and services.

These examples are not exhaustive and the Commission may make a price determination to operate in a manner it considers appropriate, subject to any specific requirements of an industry regulation Act. In the case of the WI Act, certain requirements do exist, as discussed below.

As well as the general factors set out in Section 6 of the ESC Act, Section 25(4) specifies additional factors to which the Commission must have regard when exercising its price determination function. They include:

(a) the particular circumstances of the regulated industry and the goods and services for which the determination is being made

(b) the costs of making, producing or supplying the goods or services

(c) the costs of complying with the laws or regulatory requirements

(d) the return on assets in the regulated industry

(e) any relevant interstate and international benchmarks for prices, costs and return on assets on comparable industries

(f) the financial implications of the determination

(g) any factors specified by a relevant industry regulation Act, or by regulation under the Act, and

(h) any other factors that the Commission considers relevant.

Two further statutory imperatives arise under Section 25(5) of the ESC Act in relation to price determinations. They are:

(a) wherever possible, the costs of regulation do not exceed the benefits, and

(b) the decision takes into account and clearly articulates any trade off between costs and service standards.

Finally, Section 25(6) provides that Subsections 25(3), 25(4) and 25(5) have effect in relation to a regulated industry, subject to the provisions of the relevant industry regulation Act for that industry (in this case, the WI Act).

Under the WI Act

Section 17 of the WI Act declares that the water industry is a regulated industry for the purposes of the ESC Act. Accordingly, the Commission has a general power to regulate prices in the water and sewerage industries.

Specifically, in terms of the price regulation function, the WI Act provides that:

> *7 — Functions and powers of Commission*
>
> *(1) The Commission has (in addition to the Commission's functions and powers under the Essential Services Commission Act 2002) —*
>
> *(a) the licensing, price regulation and other functions and powers conferred by this Act:…*

The provisions of the WI Act that confer pricing powers on the Commission are set out in Section 35. Consistent with the general discretionary powers under Part 3 of the ESC Act, the price determination power set out in Section 35 of the WI Act is discretionary:

> *35 — Price regulation*
>
> *(1) Subject to this section, the Commission may make a determination under the Essential Services Commission Act 2002 regulating prices, conditions relating to prices, and price fixing factors for retail services [emphasis added].*

A 'retail service' is defined in Section 4 of the WI Act to include 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.*

Accordingly, any operations or services falling outside the scope of the above definition are not subject to price regulation by the Commission – for example, the provision of network services on a stand alone basis. In addition, Section 5(2) of the WI Act states that services provided, or infrastructure held, by irrigation trusts (as defined in the Irrigation Act 2009), the Renmark Irrigation Trust or persons providing irrigation services designated by the Minister, are not subject to the provisions of the WI Act.

Pricing Orders

The price regulation provisions of the WI Act also include a framework for the Treasurer to issue Pricing Orders. Section 35(4) provides that the Treasurer may issue a Pricing Order that:

(a) sets out any policies or other matters that the Commission must have regard to when making a determination

(b) specifies various parameters, principles or factors that the Commission must adopt or apply in making a determination, and

(c) relates to any other matter that the Treasurer considers to be appropriate in the circumstances.

Pursuant to Section 35(3) of the WI Act, the Commission must comply with the requirements of a Pricing Order when making a determination.

To date, five Pricing Orders have been issued under Section 35 of the WI Act. The first and second were issued prior to RD13, the third was issued on 2 September 2014, the fourth on 18 November 2014 and the fifth on 30 March 2016.

Notwithstanding that the first and second Pricing Orders were issued for the purposes of RD13, certain aspects of them continue to apply to RD16. This is because, pursuant to Section 35(5), a Pricing Order cannot be revoked, and is therefore of cumulative effect. The requirements of a Pricing Order therefore have ongoing application, except to the extent that it expressly states that they have a finite application or a sunset date.

In issuing the first and second Pricing Orders, the Treasurer expressly limited the application of the vast majority of requirements to the RD13 period. The only requirement of ongoing effect is that the Commission adopt the National Water Initiatives (NWI) Pricing Principles (other than those for recovering the costs of water planning and management activities) to the extent they are relevant to the making of RD16.

In addition to the above requirement, the third Pricing Order also requires the Commission, in making RD16, to:

(a) adopt a four year regulatory period (commencing 1 July 2016) using a revenue cap form of control

(b) adopt separate total revenue cap controls for drinking water and sewerage services, but not apply revenue caps based on customer class or location

(c) include a mechanism to adjust the total revenue cap if there is any over or under recovery of revenue due to variations between actual and forecast water consumption or sewerage connections (such mechanism to operate on the basis of efficient costs associated with variations in demand, and so as to promote a stable price path)

(d) include an appropriate mechanism that allows for the adjustment of the total revenue cap where there is an event beyond the control of SA Water which has, or will, have a material impact of the cost of provision of a retail service (such mechanism to operate on the basis of efficient costs associated with the event, and so as to promote a stable price path)

(e) adopt regulated asset base values, as at 1 July 2013, of $7.77 billion for water assets and $3.58 billion for sewerage assets (in December 2012 dollars)

(f) allow SA Water to recover the efficient costs of assets acquired (or to be acquired) after 1 July 2013 which are required to support activities that SA Water is required to provide in accordance with a direction under Section 6 of the Public Corporations Act 1993

(g) adopt specified NWI Pricing Principles 2010

(h) in relation to costs relating to externalities (including water planning and management), allow SA Water to recover such costs as are attributable to and payable by SA Water in accordance with the law, including a direction under Section 6 of the Public Corporations Act 1993, and

(i) allow SA Water to recover such costs (less any relevant contributions to such costs that it receives) that are attributable to activities that SA Water is required to provide in accordance with a direction under Section 6 of the Public Corporations Act 1993, and either specified in that direction, or, if not specified, determined by the Commission to be efficient.

The third Pricing Order also sets out the following procedural matters:

(a) the determination must be based on a 'building blocks' approach and must set out all assumptions, methods and values assigned to the various building block components

(b) the draft determination must identify any areas where a forecast cost is likely to change materially between draft and final determination, including the cause and likely magnitude of the variation, and

(c) the Commission must provide the Treasurer with a separate report, on or before 31 December 2015, setting out its proposed approach to the calculation of the rate of return on the regulated asset base, which should be consistent with principle one of the NWI Pricing Principles.

The fourth Pricing Order was issued for the purposes of varying the due date of the report to be provided to the Treasurer about the proposed approach to the calculation of the rate of return on SA Water's regulated asset base. The date was varied to 31 March 2015 and the fourth Pricing Order has no other purpose or application to RD16.

The fifth Pricing Order was issued to vary the third Pricing Order to clarify the definitions of 'drinking water retail service', 'sewerage retail service' and 'excluded retail service' to apply to RD16.

The Commission has taken these matters into account in making RD16.

Ministerial directions relevant to RD16

As specified in the third Pricing Order, the Commission must allow SA Water to recover the efficient costs associated with a direction from the Minister under the Public Corporations Act 1993. On 25 June 2015, the Minister issued a direction to SA Water, under this Act, to provide a number of services, facilities and contributions from 1 July 2016 until further notice. Those services, facilities and contributions, which are the same as those that SA Water was directed to provide in RD13, include:

- emergency management services (to comply with requirements of the Emergency Management Act 2004) which are to be covered by contributions made by the South Australian Government
- Government radio network services, which are also to be covered by contributions made by the South Australian Government

- fluoridation services (to comply with recommendations made by SA Health regarding fluoride dosing)
- purchase of renewable energy or carbon offsets for the Adelaide Desalination Plant (ADP)
- statewide pricing facility – to ensure the tariff or tariff components for drinking water and sewerage services are the same, or result in a similar outcome, for any customer, irrespective of the customer's location (to be covered in part by contributions made by the South Australian Government)
- a contribution to the Department for the Environment, Water and Natural Resources to support water planning and management activities, and
- annual reimbursement to the Minister for fees paid to the Valuer General pursuant to the Valuation of Land Act 1971 for the valuation roll.

The Government provides direct funding for many of these services through Community Service Obligation (CSO) payments. However, where CSO funding is not provided, the Commission must allow the recovery of the efficient costs associated with such directions by SA Water through RD16.

The Commission has taken these matters into account in making RD16.

2.5.3 Industry licences, codes and rules

The Commission has additional powers to issue licences to entities providing water and sewerage retail services and make industry codes or rules that apply to the conduct or operations of such entities, once licensed.

Under the ESC Act

Part 4 of the ESC Act provides the Commission with broad powers to make, vary and amend industry codes or rules. Industry codes prescribe the rules of conduct and procedures that must be followed by regulated entities providing essential services. The use of industry codes allows for a high degree of regulatory flexibility while maintaining appropriate scrutiny, accountability and transparency in the process of their development. Industry codes can cover any number of areas within a regulated industry, from consumer protection to technical matters.

Section 28(3) requires the Commission to consult with the relevant industry Minister, representative bodies and participants in the regulated industry prior to making, varying or revoking a code or rule.

Section 28(8) requires that any codes or rules be periodically reviewed by the Commission to ensure they continue to be relevant and effective.

Under the WI Act

The WI Act requires the Commission to issue SA Water with a non-transferable perpetual licence, which it did on 1 January 2013. Section 25(1) requires it to make a licence subject to various conditions. While some conditions must be imposed as stand alone licence conditions, others must be prescribed in industry codes and rules made by the Commission under the ESC Act.[26]

In issuing licences under Section 25(1) of the WI Act, Section 25(2) requires the Commission to have regard to the scale and nature of the operations of the water industry entity – with the scale and nature being determined by it after consultation with the entity or a person or body nominated by the entity.

In addition, Section 25(5) requires the Commission, in making an industry code under Section 25(1), to include provisions to assist customers who may be suffering specified types of hardship relevant to the supply of any services (such provisions to comply with any direction of the Minister). This provision operates in conjunction with Section 37(1) of the WI Act which requires the Minister to develop and publish a customer hardship policy in respect of residential customers of water industry entities. In summary, the Minister's hardship policy must set out:

- the processes water industry entities must have in place to identify residential customers experiencing payment difficulties due to hardship, and
- the range of processes or programs that a water industry entity should use to assist hardship customers.

The Minister published the applicable hardship policy in February 2013. Section 37(3) requires a water industry entity to adopt the Minister's hardship policy and Section 37(4) makes compliance with the policy a condition of a licence issued to a water industry entity by the Commission.

[26] The Code has been made by the Commission pursuant to the requirements of Section 25(1).

Part B – Regulatory framework

Classification of services

The Commission has assessed the various retail services provided by SA Water to identify whether the nature and characteristics of those services require different forms of consumer protection and price regulation.

In allocating retail services to broad categories, the Commission has considered the extent to which those services are consumed by all, or a broad class, of customers, as opposed to only some customers.

Drinking water and sewerage retail services provided to all customers

The majority of SA Water's drinking water and sewerage retail services are provided on a common basis to all of its customers across the State. While there will be quality and reliability differences arising from issues such as geography, the core service is uniform. As such, these are currently charged on a state wide basis (for example, all customers of the same type pay the same prices for water regardless of their physical location).

Retail services provided to individual customers or distinct classes of customers

SA Water provides certain water and sewerage retail services to individual customers, or a distinct class of customers, where they are the direct beneficiaries of that service (for example, new customers connecting to SA Water's existing network where additional infrastructure is required). These services are categorised as 'excluded services' in Table B.1.

From a consumer protection perspective, it is important to provide customers with an understanding of the process, timelines and prices associated with excluded services.

From a pricing perspective, the specific costs of excluded retail service are easily identifiable and can vary greatly between customers. These retail services are not subject to state wide pricing, with individual customers required to pay for the efficient cost of providing that service.

As these individual costs can vary, there is the potential for disputes over fees and charges across the full range of SA Water's excluded retail services to occur from time to time. Customers need recourse to an independent dispute resolution body when the dispute cannot be resolved directly with SA Water.[27]

These retail services are categorised as 'direct control services' in Table B.1.

[27] The Commission's Excluded Services Industry Rule is available at: http://www.escosa.sa.gov.au/library/131218-WaterIndustryRuleNo1ExcludedRetailServices.pdf.

Non-regulated services

As set out in section 2.1 of this RD16, some services provided by SA Water are not retail services as defined under Section 4 of the WI Act. For the sake of completeness, and to allow the Commission to assess SA Water's internal cost allocation methodology, non-regulated services also have been identified and classified.

These services are categorised as 'non-regulated' services in Table B.1.

Table B.1: Service classifications and allocations

Regulated retail services		Non-regulated services
Direct control	**Excluded services**	
▶ sale and supply of drinking water services ▶ sale and supply of sewerage services	▶ standard and non-standard connection services (including developer services) ▶ trade waste services ▶ non-domestic hauled waste services ▶ easement extinguishment and encumbrance services ▶ hydrant and fire plug services ▶ meter services ▶ network analysis and audit services	▶ laboratory services that are not associated with retail services ▶ project management services and consultancy services that are not associated with retail services ▶ water transportation services provided to third parties ▶ operation and maintenance of the River Murray lock system and Salt Interception Schemes ▶ soil and sand testing services ▶ emergency functional services ▶ metropolitan floodwaters drainage administration

As SA Water is a monopoly supplier of retail services, the Commission's view is that it is appropriate to continue to require it to comply with various minimum conditions in providing retail services.[28] The protections include a set of customer service and reliability performance service standards.

Since SA Water's costs are impacted by the Commission's consumer protection framework, it is appropriate to consider those standards before discussing the required revenues.

The forms of price regulation to apply to SA Water's retail services are also discussed in this Part.

[28] Section 28 of the ESC Act and Section 25 of the WI Act.

3 Water Retail Code – Major Retailers

Final decision – Water Retail Code – Major Retailers

The Commission's final decision is that substantive amendments to the obligations contained in the Water Retail Code – Major Retailers are not required. However, the Commission has varied the Code to:

- clarify SA Water's ongoing requirements now that the initial suite of policies, procedures and other documentation has been assessed and approved by the Commission (as relevant) as part of the transition to economic regulation
- minimise regulatory duplication by removing clauses that restate obligations set by other regulators or Government agencies
- clarify the consumer protections for circumstances where there is a continuation of retail services on land transfers and where new customers seek to connect to SA Water's network as part of a retail service
- remove the requirement for SA Water to seek the Commission's approval for individual non-standard contracts for non-residential customers
- clarify that protections around reviewing a disputed bill and recovering overcharged amounts survive termination of a contract, and
- clarify the operation of several billing clauses, including the arrangements where customers do not allow access to their meter for the purposes of meter readings.

3.1 Introduction

The Commission has made an industry code applicable to SA Water: the Water Retail Code – Major Retailers (**Code**).

The Code[29] sets out the following behavioural standards and minimum requirements with which SA Water must comply in the sale and supply of retail services to customers.

- **Customer charter** – minimum information provision requirements about the respective rights and obligations of SA Water and its customers.[30]
- **Standard form customer sale contract** – the requirement for SA Water to seek the Commission's approval prior to using or amending a standard form customer contract for a broad class of customers.[31]
- **Connection obligations** – the requirement for SA Water to connect customers to its network in accordance with the terms of its connection and augmentation policies, as approved by the Commission, and provide for the termination of a standard customer sale contract by a customer, in limited circumstances.

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29 The Code is an industry code made by the Commission under Part 4 of the ESC Act. The Code applies to those licensees with greater than 50,000 connections – currently only SA Water. Clause 6 of SA Water's licence requires it to comply with the requirements of the Code. The codes are available at http://www.escosa.sa.gov.au/water-overview/codes-guidelines/water-codes.aspx.

30 SA Water's Customer Charter is available at http://www.sawater.com.au/__data/assets/pdf_file/0005/6773/customercharter.pdf.

31 SA Water's standard customer contract for drinking water, recycled water and sewerage services is available at http://www.sawater.com.au/__data/assets/pdf_file/0008/6776/standardcustomercontract.pdf.

- Retail supply obligations – the requirement for SA Water to minimise supply interruptions, provide information to customers on interruptions and use its best endeavours to meet the customer service and network reliability standards developed by the Commission.
- Enquiry, complaint and dispute resolution procedures – the requirement for SA Water to have internal procedures for handling customer enquiries, complaints and disputes, which must include escalation to an independent dispute resolution body[32] where the issue cannot be satisfactorily resolved by SA Water.
- Billing – minimum requirements around billing to ensure that customers receive accurate billing information in a timely manner and that their needs are addressed when billing errors are determined. These requirements also deal with undercharging and overcharging.
- Payments and payment difficulties – minimum requirements for payment terms, payment methods and managing payment difficulties experienced by customers. Includes a requirement for SA Water to inform residential customers about its Hardship Policy[33] at various points of contact with its customer, and assess customer eligibility for participation in that program.
- Disconnections and restrictions for non-payment – limitations on the grounds on which water and sewerage services may be restricted or disconnected and obligations on SA Water prior to restricting a customer.

SA Water is required to demonstrate to the Commission that it has adequate systems and processes in place to comply with the requirements of the Code. The Commission has worked with SA Water during RD13 to implement these requirements, including those relating to the assessment and approval of various operational policies and procedures.

The Commission's compliance framework[34] requires SA Water to report material breaches of its obligations as soon as practicable. The framework focuses on ensuring that SA Water identifies the root cause of the issues and puts in place systems and processes to minimise future non-compliances. Enforcement action is reserved for ongoing, wilful and/or material non-compliance.[35]

Complaints made to the Commission about SA Water's conduct can identify potential systemic issues of non-compliance, which the Commission then works with SA Water to resolve. EWOSA also informs the Commission of any potential non-compliance.[36]

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32 The Energy and Water Ombudsman SA is SA Water's approved independent dispute resolution body. Refer www.ewosa.com.au.

33 Section 37 of the Water Industry Act requires the Minister to develop and publish a residential customer hardship policy setting out the processes a retailer must have in place to identity residential customers experiencing payment difficulties due to hardship and the range of processes or programs that a retailer should use to assist hardship customers. Water retailers are required to adopt the Minister's policy or, with the Commission's approval, adopt a modified policy. Clause 9 of the Code requires SA Water to adopt the Minister's hardship policy. SA Water's hardship policy is available at http://www.sawater.com.au/__data/assets/file/0015/9141/hardshippolicyrescustomers.pdf.

34 The Commission's Compliance Guideline is available at http://www.escosa.sa.gov.au/library/130627-WaterIndustryGuidelineNo_1-WG1-02-ComplianceSystemsandReporting_0.pdf.

35 The Commission's Enforcement Policy is available at http://www.escosa.sa.gov.au/library/130905-EnforcementPolicy_V2-5.pdf.

36 Customers who cannot resolve their complaint with SA Water directly can access the free, independent dispute resolution service provided by the Energy and Water Ombudsman of South Australia. Refer www.ewosa.com.au

3.2 SA Water's proposal

RBP16 did not propose any changes to the Code. However, SA Water identified issues with implementing the Code requirements during RD13 that have been taken into consideration in the amendments.

3.3 Submissions

The Commission sought submissions on possible amendments to its consumer protection framework. No submissions on the proposed amendments to the Code were received.

However, EWOSA suggested that a process be established to enable SA Water to provide compensation to customers affected by burst water mains and then recover amounts paid from customers' insurance companies. It further submitted that additional revenue was unlikely to be required for this proposal.[37]

3.4 Discussion

3.4.1 Maintaining oversight of material amendments to SA Water's policies and procedures

The introduction of independent economic regulation in 2012 required SA Water to:

- develop policies, procedures and customer focused information for the Commission to analyse and approve, or
- where SA Water had existing policies and procedures, seek the Commission's approval of such policies.

The Commission assessed and approved the following policies and procedures in consultation with SA Water:

- standard form customer sales contract
- customer charter
- price disclosure information
- connections policy
- augmentation policy
- enquiries, complaints and dispute resolution procedures
- customer hardship policy[38]
- registration of customers with life support equipment
- leak monitoring/abnormal changes in water consumption, and
- estimation procedures where actual meter reads are not available.

37 EWOSA submission on Draft RD16, p. 2.

38 SA Water adopted the Minister's residential customer hardship policy without amendment, so the Commission was not required to assess this policy. The Department for Communities and Social Inclusion consulted with the Commission and SA Water in developing this policy.

The Code also requires SA Water to ensure it has in place, and adheres to, policies and procedures to minimise the interruptions to the provision of water services and the disposal of sewage caused by bursts, leaks, blockages and spills. While the Commission did not require such policies to be approved, it has given consideration to their adequacy as part of its monitoring and assessment of SA Water's performance against the service standards. Refinements and amendments to these policies and procedures have been discussed with, and implemented by, SA Water as required.

This initial implementation work during RD13 means that the Commission's focus is now on ensuring that SA Water complies with those policies and procedures. Clause 2 (Customer Charters), clause 3 (enquires, complaints and dispute resolution), clause 9 (hardship policy) and clause 16 (breaks, leaks, bursts and spills) of the Code have been amended to reflect that the Commission will continue to oversee amendments to those policy and procedures.

SA Water has adopted the Minister's hardship policy and any subsequent review of this policy would be undertaken in consultation with the Department for Communities and Social Inclusion (DCSI). Clause 9 has been varied to clarify SA Water's ongoing requirement to inform customers about its hardship policy at various points of contact with its customers.

3.4.2 Minimising regulatory duplication

The Commission has removed duplication of SA Water's regulatory requirements by removing clauses that simply restate its obligations to comply with requirements set by other regulators and Government agencies. For example, the clause requiring SA Water to provide retail services in accordance with all relevant health, environmental and other regulatory requirements has been removed. As it is required to comply with obligations set by other regulators as a condition of its licence, and because these regulators set the substantive obligations, this clause is not required.

The Commission will continue to work with SA Water and other regulatory bodies to identify additional opportunities to minimise duplication between regulatory instruments.

3.4.3 Clarifying the consumer protections at the commencement of a retail service

The Code currently contains clauses modelled on a vertically separated business model with multiple competing parties involved in the supply chain. In this type of competitive market, a contractual relationship between the retailer and the customer needs to take into account various scenarios. For example, the customer can change suppliers:

- without moving physical locations
- by moving physical locations, or
- by having new infrastructure installed to connect that customer to the network.

In each of these scenarios, the financial obligations between the old retailer, new retailer, old customer and new customer must be appropriately apportioned.

In comparison, there are three scenarios[39] for customers seeking a retail supply from SA Water. They are:

- where a property has a pre-existing physical connection and there is a change of ownership at that property
- where a customer is seeking a new physical connection to a property, or
- where a customer is seeking an alteration to an existing physical connection to a property (for example, where a parcel of land is sub-divided and multiple connection points are required).

Where a physical connection to SA Water's network already exists, the financial obligations of the old and new customers are calculated by a conveyancer or solicitor as part of the transfer of the property title. A customer's standard contract with SA Water for retail services at that property commences on the date the property is transferred. Thus, clauses in the Code to deal with establishing customer classes and the commencement of the contract can be streamlined.

Where SA Water's network has the capacity for new connections, a property owner, or a person authorised by the property owner, can seek to have that property connected to SA Water's network. Potential customers seeking a new connection, or an alteration to an existing connection, are required to submit an application to SA Water providing relevant details about the supply requirements. SA Water is required to assess applications for new connections (and alterations to existing connections) in accordance with its Connections Policy. It is also required to use its best endeavours to process connections within specified timeframes (Table 4.1).

If a customer chooses to proceed with a connection or alteration, that customer must pay all relevant fees and charges for installation. Once the physical connection has been commissioned, the customer pays for the provision of retail services and receives the ongoing consumer protections under the Code.

The Commission has amended Part B of the Code to more accurately capture the above processes and remove clauses that are more appropriate for a competitive market arrangement where more complicated financial reconciliation processes are required.

Clause 13 allows SA Water to require the new owner of land with a pre-existing connection to SA Water's network to provide basic information reasonably required by SA Water to establish an account. The prohibition on charging a new owner of land a security deposit, refundable advance or other form of security remains unchanged.

Clause 14 clarifies that where a connection service is required as part of a retail service, that service must be undertaken in line with SA Water's connection policy and within the timeframes required under applicable service standards. The service standards for connections are discussed further in section 4.4.2.

3.4.4 Approval of standard form contracts and non-standard contracts

The Commission worked with SA Water during RD13 to develop the standard contract for water and sewerage retail services that applies to all residential customers and the majority of non-residential customers. Now that the initial standard contract has been approved, clause 12.1 of the Code has been amended to clarify that SA Water must consult with, and seek the Commission's approval, before amending that contract.

[39] SA Water is also able to levy an availability charge for properties that are not connected to its infrastructure pursuant to the Water Industry Regulations 2012 (regulations 38) and the Government Gazette dated 6 June 2013.

While the majority of customers are subject to the standard contract approved by the Commission, SA Water needs the flexibility to enter into contractual arrangements with some non-residential customers on different terms. The Commission required SA Water to inform it of all such contracts entered into during RD13. SA Water developed classes of non-standard contracts that, with minor modifications, have been agreed with individual non-residential customers. The Commission has not identified any areas of concern with those contracts it has reviewed during RD13. Accordingly, the Code has been amended to remove the requirement for SA Water to provide individual non-standard contracts to the Commission. A new clause 12.2.2 includes a requirement for the standard contract approved by the Commission to apply as a safety net, in the event that an alternative cannot be agreed.

3.4.5 Preservation of customer's right to dispute a bill or recover overcharged amounts on termination of a retail service

As customers may still be required to pay SA Water for amounts allowed under the WI Act, a new clause 15.1.5 has been included in the Code to ensure that a customer's right to dispute a bill or recover amounts they have been overcharged survives the termination of a contract for retail services. This obligation is already reflected in clause 18.2 of SA Water's standard contract, as approved by the Commission.

3.4.6 Clarifying the operation of billing obligations

Several billing clauses have been clarified to address minor unintended consequences arising from the original drafting:

- Clause 18.1.2 - clarifies that a customer and a retailer must mutually agree to enter into a billing cycle that differs from the quarterly default.
- Clause 18.4.1(c) - clarifies that the Commission will approve estimation systems used by SA Water.
- Clause 18.5 - consolidates the existing requirements for issuing estimated bills and making adjustments to bills when an actual read is obtained.
- Clause 18.8.3 - clarifies that SA Water can issue bills without average daily usage information to a residential customer or a broader class of residential customers, with the Commission's approval.
- Clause 18.9.2 - clarifies that, in the event that a customer does not pay their bill in full by the pay by date, SA Water only needs to issue that customer with a reminder notice if it does not intend to roll over the unpaid amount to the next bill.
- Clause 19 - clarifies that the onus is not on the customer to inform SA Water about a change in land use at their property, as updated State Valuation data is provided automatically to SA Water.
- Clause 22.1.1 - clarifies that SA Water must inform a customer who has been overcharged that the amount will be credited towards their next bill, unless the customer contacts SA Water to request a refund of that amount.

3.4.7 Customers not allowing access to meters for meter reading purposes

SA Water has experienced an issue with approximately 2,500 customers not allowing access to their meter for over two years. SA Water developed an engagement program to attempt to obtain actual meter reads for as many of these customers as possible. This included:

- asking customers to provide gate codes and/or keys to locked premises to allow for ongoing access, and
- offering special appointments to have their meters read at a time convenient for the customer (at no cost to the customer).

SA Water was able to obtain actual reads for around 64 percent of customers using these methods, however, the remaining 36 percent did not respond to SA Water despite the additional options provided. Other options are still being explored by SA Water to allow permanent access to meters, such as moving meters or enabling remote meter readings. However, unlike the above measures, such options would be at additional cost to the customer.

The Code previously required SA Water to obtain an actual meter read at least once every 12 months. To reflect that there is likely to be some customers who do not allow access to their meter, a new clause 18.5 has been included in the Code to clarify that SA Water must use its best endeavours to perform an actual meter read at least once every 12 months. This includes requirements to attempt to engage with the customer on each occasion that access is denied.

A new clause 21.1.2 has also been included to clarify that where a customer has failed to allow access to their meter for the purposes of meter reading for more than 12 months, the ability for SA Water to recover only 12 months of undercharged amounts will not apply. Instead, SA Water will be able to recover all undercharged amounts that accrued during the period that the customer denied access to the meter.

A new clause 22.1.3 has also been included to ensure that any overcharging that has occurred as a result of a failure to provide access to a meter for meter reading purposes will be repaid to customers in full once an actual meter read has been obtained.

These amendments redress the potential incentive for customers to continue to not allow access to their meter and benefit from the limitation on any amounts undercharged as a result of a low estimate of actual water usage. However, the amendments also address the potential for a customer to be overcharged through high estimates.

3.4.8 Restriction of water services

SA Water is currently able to restrict a customer's water service in certain circumstance, including where the customer has failed to allow access to their meter for the purposes of carrying out a meter reading.[40] However, where a customer is not allowing access to their meter, a flow restriction device cannot physically be installed in the meter. Accordingly, this option has been removed from the Code.

Clause 24.2 has been amended to clarify that the limitation on commencing debt recovery action is only where a flow restriction device is currently fitted to a customer's meter.

[40] Clause 26.3.1(f) for residential customers and clause 26.2(c) for non-residential customers.

3.4.9 Service standards for RD16

The applicable service standards with performance targets (discussed in Chapter 4) have been included as a schedule to the Code. The following additional definitions have been included in the schedule:

- that the standard of endeavour required to meet the service standard performance targets is to use best endeavours
- clarification that the construction timeframes for connection services exclude instances where different timeframes have been agreed with a customer or where delays are caused by customers or third parties beyond SA Water's control, and
- the metropolitan Adelaide area has been extracted from Water Industry Guideline 2, with minor modification.

3.4.10 Customer compensation scheme

There are various regulatory tools that can be used to provide customers with payments when service issues arise:

- Customer compensation scheme – This type of scheme seeks to provide customers with payments at a level to allow the customer to make good any damage caused (for example, insurance). The average payment amount and the likely upper bound for payments have not been explored.
- Guaranteed Service Level Scheme – This type of scheme provides payments to customers who receive service below a pre-determined threshold. It could cover any number of customer service issues, or reliability issues, such as the frequency and duration of service interruptions. It recognises that in some instances it would be uneconomical to invest in infrastructure to improve the service provided to a small number of customers.

Any type of customer compensation scheme would be funded by all customers. Accordingly, before any such scheme is implemented, it would be important for SA Water to identify, as a minimum, whether customers are prepared to pay for any form of customer compensation scheme.

If a Guaranteed Service Level Scheme was the favoured response, SA Water would need to work with its customers to identify:

- any areas of service that customers determine are important enough to attract payments
- the minimum service levels below which payments should be made to customers, and
- how much customers are prepared to contribute towards such a scheme.

Further, the level of payments would need to be set at a level that balances the need to provide an incentive to SA Water to explore options to improve service levels where it is economical to do so, with the need to provide customers with payment at a level that appropriately recognises the lower level of service provided.

There are additional issues that would need to be considered in implementing a small claims scheme. Remedying water damage to property is likely to be more costly than the replacement of

spoiled food, as currently allowed for in the small claims scheme for electricity.[41] Thus, while the underlying purpose of EWOSA's suggestion was to expedite payments to allow customers to commence works to rectify water damaged property, the proposal assumes that customers have appropriate levels of personal insurance that can be pursued by SA Water. Actual levels of personal insurance have not been explored, nor has the willingness of the broader customer base to fund SA Water taking on the role of indemnifier of last resort for uninsured or underinsured customers.

Finally, it is important to note that any regulatory customer payment scheme could work alongside, and not replace, the common law mechanisms to seek damages for loss resulting from SA Water's negligence. However, a regulatory scheme would need to take into account the interaction between the various avenues available for customers.

The Commission will work with SA Water and other stakeholders during the RD16 period to ensure appropriate customer consultation occurs prior to any regulatory customer payment scheme being introduced for RD20.

41 Further details on the small claims scheme run by SA Power Networks is available at http://www.sapowernetworks.com.au/centric/customers/power_outages/claims_for_power_variations_and_interruptions.jsp.

4 Service standards with performance targets

Final decision – applicable service standards and performance targets

The Commission's final decision is that the applicable service standards for RD16 will:

- be set for 18 measures across SA Water's customer service and network reliability performance, and
- have performance targets set at levels that require SA Water to maintain its average performance over the past two years (2013-14 and 2014-15).

4.1 Introduction

As SA Water is a monopoly provider of water and sewerage retail services for the majority of South Australian customers, the Commission establishes a set of minimum service levels which, as a condition of its licence,[42] SA Water is required to use its best endeavours[43] to meet.

The Commission focused on four key areas of SA Water's retail service through the RD13 period:

- connection of new customers
- customer service and responsiveness to complaints
- field crew attendance at service issues, and
- timeliness of service restoration and clean up.

There is an inherent trade off between prices and service levels. In assessing this trade off and setting the average service standards, the Commission has taken into account:

- the views of customers and, in particular, the insights gained by SA Water through the Your Say program
- the matters raised by customer advocates on behalf of their constituents
- SA Water's historical performance, including consideration of any known areas of non-compliance identified through the Commission's performance monitoring
- how SA Water's future business plans are likely to impact on its performance, and
- any relevant national benchmarks developed from time to time.[44]

[42] Clause 6.3 of SA Water's licence requires it to comply with applicable service standards determined by the Commission. SA Water's current applicable service standards and performance targets are available at http://www.escosa.sa.gov.au/water-overview/codes-guidelines/service-standards.aspx.

[43] Best endeavours means to act in good faith and use all reasonable efforts, skill and resources.

[44] Section 25(1)(b)(ii) of the WI Act requires the Commission to make a licence issued to a water industry entity subject to the condition that it complies with any Code provisions made by the Commission under Part 4 of the ESC Act, as in force from time to time, relating to any minimum standards of service that take into account relevant national benchmarks developed from time to time.

4.2 SA Water's proposal

In preparing RBP16, SA Water consulted with customers on the current levels of service it provides and various initiatives aimed at providing service improvements. Participants were generally satisfied with the level of service provided in the areas of service covered by the Commission's current standards and were not willing to pay more for a better service, or to pay less for a lower level of service.

Using this feedback as its starting point, SA Water has proposed the following relatively minor amendments to the current service standards.

- A simplified list of 18 service standards for RD16, rather than the current 66 service standards. This would enable customers to understand and monitor its performance more easily and to correct for the impact of small data sets on its overall performance results under highly disaggregated service standards, and
- Service standard performance targets aligned with its performance levels at the time of undertaking its customer engagement, rounded to the nearest five percent.

SA Water submitted that the only exception to this approach was the percentage of telephone calls answered within 30 seconds. At the time of consultation, the business was achieving 88 percent against the 85 percent target for this measure. It noted that feedback provided through the Your Say program indicated that resolving issues at the first point of contact was important to customers. To address this, it has proposed maintaining the existing target of 85 percent and diverting resources to resolving customer issues at the first point of contact. (This may be through enhanced online, self service facilities).

4.3 Submissions

4.3.1 Average service levels and improvements to customer service experience

Business SA and COTA SA stated in their submissions that their stakeholders were generally satisfied with the level of service delivered by SA Water, although they suggested there was potential for improvements in customer service communications and supported SA Water's proposal to improve its customer service channels.

However, both Business SA and SACOSS questioned the level of Information System (IS) investment proposed in RBP16.

Business SA stated that its members do not support SA Water spending more to improve its customer interfaces (even though they expressed a desire to see customer communications improve).[45] It acknowledged that SA Water needs to continue to invest in IS to improve the efficiency of its business and deliver adequate service to customers. However, it submitted that customers had expressed mixed views about enhanced digital services, as they were satisfied with current service levels and were not willing to pay more for service improvements. Accordingly, Business SA took the position that it would only support such expenditure if it was shown to improve efficiency or reduce costs.[46]

SACOSS suggested that various service improvement initiatives were likely to provide cost savings to SA Water once implemented, and that this should be factored into future expenditure allowances.[47]

45 Business SA submission on RBP16, p.8.
46 Business SA submission on RBP16, p.6.
47 SACOSS submission on RBP16, p.23.

4.3.2 Aggregation of service standards and performance targets

Business SA expressed concern that the proposal to implement a simplified list of 18 rather than 66 service standards might result in high performance for the majority of events offsetting low performance for the remainder.[48]

Business SA submitted that the Commission must hold SA Water to account for its performance and that the existing service standards made that possible. It was not persuaded that the proposal to consolidate them should be supported purely on the basis of making it easier to report to customers.[49]

On the issue of public reporting, Business SA suggested that the average customer is unlikely to be aware of SA Water's service standards, or to be monitoring its performance against those standards. However, it believes an appropriate level of transparency is important for the benefit of the broader customer base and other stakeholders, such as consumer representative organisations.[50]

COTA SA was not concerned about the rationalisation of standards, so long as key regulatory and other best practice standards continued to be measured and improved.[51]

EWOSA was supportive of the aggregation of service standards, noting that many of the performance targets were more stringent than those applicable during RD13. However, it commented on two particular service standards where the proposed performance targets were lower than proposed in RBP16 and should thus be strengthened: 95 percent of sewerage connections and 99 percent of sewerage network restorations in metropolitan Adelaide.[52]

SA Water submitted that, while previously proposed in RBP16, the effect of rounding its average performance over the last two years to the nearest five percent would result in some targets it would be unable to meet, if maintenance of average historical performance was the aim of the targets.[53] It proposed that the targets instead be set at the nearest decimal place for the simple average, with a confidence interval of one percent applied. The intention of this proposal was to ensure that, where its performance was within one percent of the performance target, it would be deemed to have met the target, before the assessment of whether or not it had used its best endeavours to meet the standard was performed,

SA Water provided further comment on the proposed connection service standards. While broadly supportive of the proposed approach, SA Water submitted that separate service standards should be set for processing connection applications and construction of connections.[54] It noted that where a customer applies for both a water and sewerage connection it processes that application as a single application, rather than separately tracking performance for each connection.

48 Business SA submission on RBP16, p.8.
49 Business SA submission on RBP16, p.9.
50 Business SA submission on RBP16, p.9.
51 COTA SA submission on RBP16, p.5.
52 EWOSA submission to Draft RD16, p. 2.
53 SA Water submission to Draft RD16, pp. 8-10.
54 SA Water submission to Draft RD16, pp. 7-8.

SA Water further proposed that the connection construction performance targets should explicitly exclude any delays caused by customers or third parties that impact on its ability to meet the required timeframes. This includes:

- customer requested delays because they do not need, or are not ready for, the connection within the required timeframes
- obstructions on site that prevent construction of the connection (for example building materials), and
- third party approvals, such as SA Power Networks permits and the Department of Planning, Transport and Infrastructure approvals, which are beyond its control.

SA Water submitted that, using this methodology, the connections service standards and performance targets should be:

- process 95 percent of connection applications within 20 business days
- construct 96 percent of water connections within the required timeframes (Required timeframes: standard installation = 25 business days; non-standard installation = 35 business days)
- construct 95 percent of sewer connections within the required timeframes (Required timeframes: standard installation = 30 business days; non-standard installation = 50 business days),

SA Water suggested that its compliance with the above exclusions could be audited in the future if the Commission considered this necessary.

4.3.3 Public reporting

EWOSA submitted that the Commission should consider whether it should require SA Water to publicly release information on its ten or twenty 'worst performing' water mains to increase transparency around, and accountability for, SA Water's maintenance program.[55]

SA Water advocated for less frequent reporting and validation of reporting data, on the basis that it generally performs well against the service standards. It submitted that it could be trusted to put its customers first when it comes to service, as supported by its customer complaints data and the results of its Your Say program.[56] It proposed that, as the Commission sets the revenue requirements and the required service levels for a regulatory period, assessment of its performance against the service standards should be measured across the four year regulatory period rather than for individual years within the regulatory period.[57]

4.4 Discussion

4.4.1 Presenting the right level of information for various stakeholders

Basing service standards on 18 indicators is intended to drive SA Water's performance across all customers. It ensures that service problems that affect very few customers or are infrequent do not affect reported overall performance. However, it is still important to monitor service at a more detailed level so that the Commission can assess, whether service can be improved in a cost efficient manner.

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55 EWOSA submission to Draft RD16, p. 2.
56 SA Water submission to Draft RD16, p.7.
57 SA Water submission to Draft RD16, p.11.

SA Water will still be required to report on a broader range of service measures so that the Commission can continue to observe what is driving overall performance. This will help identify if SA Water has appropriate systems and processes are in place to enable it to adequately respond to service problems that might be infrequent, but could have a high impact on customers. This approach will also enable the Commission to more easily identify pressure points, and then perform detailed analysis of problem areas as required.

The Commission has not adopted SA Water's suggestion to assess its performance against the service standards over the four year period rather than on an annual basis. Such an approach would not provide sufficient transparency around SA Water's performance. Accordingly, SA Water's performance will continue to be assessed in each year of the four year regulatory period of RD16.

SA Water will continue to report on its performance in responding to all events during RD16[58] and the Commission will assess whether this detailed data is required in the longer term.

As is the current practice, the full data set will be made publicly available to allow interested stakeholders to perform their own analysis.

4.4.2 Clarifying the connections service standards

SA Water is required to perform physical connections for new customers in line with its connection and augmentation policies.[59] The costs for connections are recovered from individual customers that are connecting, rather than through the water and sewerage tariffs paid by all customers.

The Commission will monitor SA Water's performance at the following two stages of the connection process:

- the processing of the initial application to assess whether the connection is standard or non-standard, and
- construction of the physical infrastructure.

SA Water does not currently collect data on the time taken to process connection applications and the current connections service standards and performance targets were not tested in the Your Say program. Therefore, in the absence of direct customer feedback or historical data, the Commission will require SA Water to report on the number of connection applications processed within 20 business days, as contained in its approved connections policy.

SA Water will be required to work with individual customers to negotiate an appropriate construction timeframe. However, when no date has been agreed with a customer,[60] SA Water will be required to use its best endeavours to perform connections within the following timeframes:

- standard water connection – 96 percent within 25 business days
- non-standard water connection – 96 percent within 35 business days
- standard sewerage connection – 95 percent within 30 business days
- non-standard sewerage connection – 95 percent within 50 business days

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58 SA Water is currently required to prioritise its attendance at events that could be life threatening or otherwise have serious consequences (for example, impacting critical needs customers, hospitals, residential care facilities, schools and childcare centres). SA Water must use its best endeavours to attend and restore supply in high priority cases quicker than other interruptions.

59 Clause 6 of SA Water's Standard Customer Contract refers to a Connection Policy and an Augmentation Policy. Each of these documents has been reviewed and approved by the Commission.

60 Clause 14.3 of the Code.

The connection construction performance targets will exclude any delays caused by customers or third parties not employed by SA Water that impact on its ability to meet the required timeframes. This approach reflects the methodology used by the Commission during RD13, where connections that were delayed as a result of issues outside SA Water's direct control were removed from the performance data.

4.4.3 Customers' service expectations arising from the Your Say program

In its November 2014 Framework and Approach paper, the Commission required SA Water to engage with its customers to work through the price/service trade off and propose a draft set of service standards with performance targets. It also provided feedback on the customer survey and workshop materials used in the Your Say program. However, SA Water determined the final form of the information provided to customers.

The Commission was also invited to observe several customer workshops and this enabled it to assess whether or not:

- RBP16 was consistent with the services valued by customers, and
- customers understood that they would be required to contribute towards investments that would not benefit them directly.

At the workshops the Commission observed that customers involved in SA Water's consultation on service standards were:

- provided with a summary of its current service standards and its performance against those standards
- informed that its proposed investments may not have a direct impact on the level of service they would receive and were asked to take a broader community view when commenting on SA Water's proposed service offerings, and
- presented with the likely bill impact from their support (or otherwise) for their stated preferences.

It was evident that participants were generally satisfied with the current levels of service. The majority were not prepared to pay for service improvements or to accept bill reductions for a reduced level of service.

Survey methodologies can test customers' stated preferences for future services, but it is also important to assess the areas of service that resulted in customer complaints. The Commission's assessment of actual performance levels and complaint drivers supported SA Water's customer research.

With respect to network reliability performance, in the period 2008-09 to 2014-15, of SA Water's approximately 750,000 water customers and 580,000 sewerage customers:

- approximately 1,650 customers (0.22 percent of all customers) per annum experienced three or more interruptions to their water service, and
- approximately 80 customers (0.01 percent of all customers) per annum experienced an internal overflow of sewage as a result of a sewerage main choke.

About 290 complaints per annum related broadly to water and/or sewerage service issues. Analysis of the detailed breakdown of 2013 complaints data shows only two percent of all complaints received by SA Water (and its contractor All Water) were related to the timeliness of restoration of water and/or sewerage interruptions.

In addition to network reliability, the other main areas where SA Water received customer complaints were:

- water quality (approximately 750 complaints per annum), and
- billing and account issues (approximately 240 per annum).

While an assessment of historical performance is important, a customer's current experience does not limit his or her ability to see the potential benefits of service improvements in the future. The Commission observed that participants in the Your Say program drew on their experiences with other utilities and service providers and could see some value in SA Water providing similar customer services. It was also observed that while participants were not willing to pay for improvements to the response times for current service standards they were generally willing to pay for new or enhanced services when costs were in the order of $0.50 to $3.00 per customer per annum.

However, the issue raised by EWOSA about the 'worst performing' water mains suggests there is a need for greater transparency and understanding around SA Water's approach to asset management and maintenance. The Commission will work with SA Water to ensure it communicates openly and transparently on the reliability of its network and its overall approach to asset management during RD16.

4.4.4 Performance targets to reflect average historical performance

When considered from the perspective of both customer feedback and infrastructure performance, there is insufficient evidence to suggest that a step change in SA Water's performance standards is required. Therefore, SA Water's average historical levels of performance will continue to be the basis for setting service standard targets for RD16.

The performance targets have been set with reference to SA Water's performance in 2013-14 and 2014-15. Ideally, more than two years of data would be used to determine long term average performance, however, reporting against the Commission's service standards only began in July 2013. While SA Water initially proposed basing its standards on how it was performing at the time it was undertaking its Your Say program, the Commission has used the two years of data rather than relying on a single point in time measure.

Rather than rounding the targets to the nearest five percent as initially proposed by SA Water, the final targets have been set using the simple average of SA Water's performance in the two years, rounded to the nearest percent. Importantly, SA Water's performance was broadly consistent in the two reporting periods. In circumstances where the simple average over the two years has been 100 percent, the target has been set at 99 percent. This reflects the potential data bias from using only two years of data and acknowledges that SA Water is unlikely to achieve a 100 percent response rate in the longer term.

4.4.5 Transitioning to more customer-focused measures and metrics

The Commission's service standards currently focus on SA Water's operational responsiveness to customer service and reliability that arise regardless of the cause of the issues. This is because customers are concerned with the time taken to resolve an issue, rather that its cause.

However, the current service standards focus on responsiveness to service issues – they contain no meaningful measures of customer satisfaction with the services provided.

SA Water has acknowledged that developing more customer outcome based service standards requires that additional data be collected during RD16. This would include collecting data on the customer impacts of infrastructure investments and testing various service offerings with customers. Further analysis of existing customer satisfaction survey results is also likely to provide useful insights for future service standards.

During RD16, the Commission will work with SA Water to explore options for developing more customer focused service standards to apply from RD20. SA Water has signalled its intention to move towards focusing on 'first contact' resolution of service issues. This is a positive step and should be encouraged. However, first contact resolution is likely to result in longer average call times, at least in the short term.

From a network reliability perspective, SA Water's approach to capital asset management and planning for RD16 has introduced two new elements that are expected to enable it to better identify the customer impacts of its future capital and operating expenditure decisions. They are:

- the establishment of a clear line of sight from the service level beneficiary (customer, environment or owner) to the corporate strategic objectives, and
- a focus on optimal life cycle investment assessments.

To better assess the impacts of its investment decisions on customers, SA Water will internally monitor and report on a series of Infrastructure KPIs and Lower Level Business KPIs during RD16.

4.4.6 National benchmarks

When the Commission issues a licence to a water industry entity it must ensure that entity complies with any code provisions made by the Commission that relate to any minimum standards of service that take into account relevant national benchmarks.[61] However, there are currently no relevant national benchmarks that the Commission must take into account in setting its service standards.

However, SA Water is required to participate in the National Performance Report (**NPR**)[62] under the National Water Initiative.[63] The NPR compares the performance of 78 urban water utilities across Australia, using 150 indicators covering water resources, pricing, finance, customer, asset, environment, and health. The report compares performance between similar sized utilities, and SA Water is compared with 12 other utilities with 100,000+ connected properties.

Although the Commission has sought to minimise duplication of SA Water's reporting requirements by adopting NPR definitions wherever possible,[64] the NPR data does not track its responsiveness to the service issues covered by the Commission's service standards. In setting the service standards for RD16, the Commission has not drawn on NPR data.

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61 Section 25(1)(b)(ii) of the WI Act.

62 The National Performance Report is produced jointly by the Bureau of Meteorology, State and Territory Governments, and the Water Services Association of Australia. Refer http://www.bom.gov.au/water/npr/.

63 The National Water Initiative, signed at the Council of Australian Governments meeting on 25 June 2004, is the principal water policy agreement between the Commonwealth, State and Territory Governments. Its aim is to achieve a more cohesive national approach to the way Australia manages, measures, plans for, prices, and trades water. Refer http://www.nwc.gov.au/nwi.

64 The Commission's current performance reporting guideline is available at http://www.escosa.sa.gov.au/library/130926-WaterRegulatoryRequirements-MajorRetailers-GuidelineNo2-WG2-2.pdf.

4.5 Final decision

The Commission's final decision is that the current customer service and network reliability service standards should be consolidated from the current 66 measures down to 18 (Table 4.1).

This will:

- improve understanding of the Commission's public reporting on SA Water's performance – too much information, or the wrong information, can make it more difficult for customers to understand its overall performance, and
- reduce the statistical distortions that arise from infrequent events – under the current service standards, if three events occur in one sub-category and SA Water responds to two within specified timeframes, it can only achieve 66 percent against the target. This could provide an incentive for SA Water to over invest to improve performance when it is not warranted.

The Commission will publicly report only on SA Water's overall performance against the 18 broad service categories. However it will continue to monitor SA Water's performance against the broader set of disaggregated measures.

The performance targets have been set at levels that require SA Water to maintain its average performance over the past two years (2013-14 and 2014-15).

Table 4.1: Service standards for SA Water for RD16

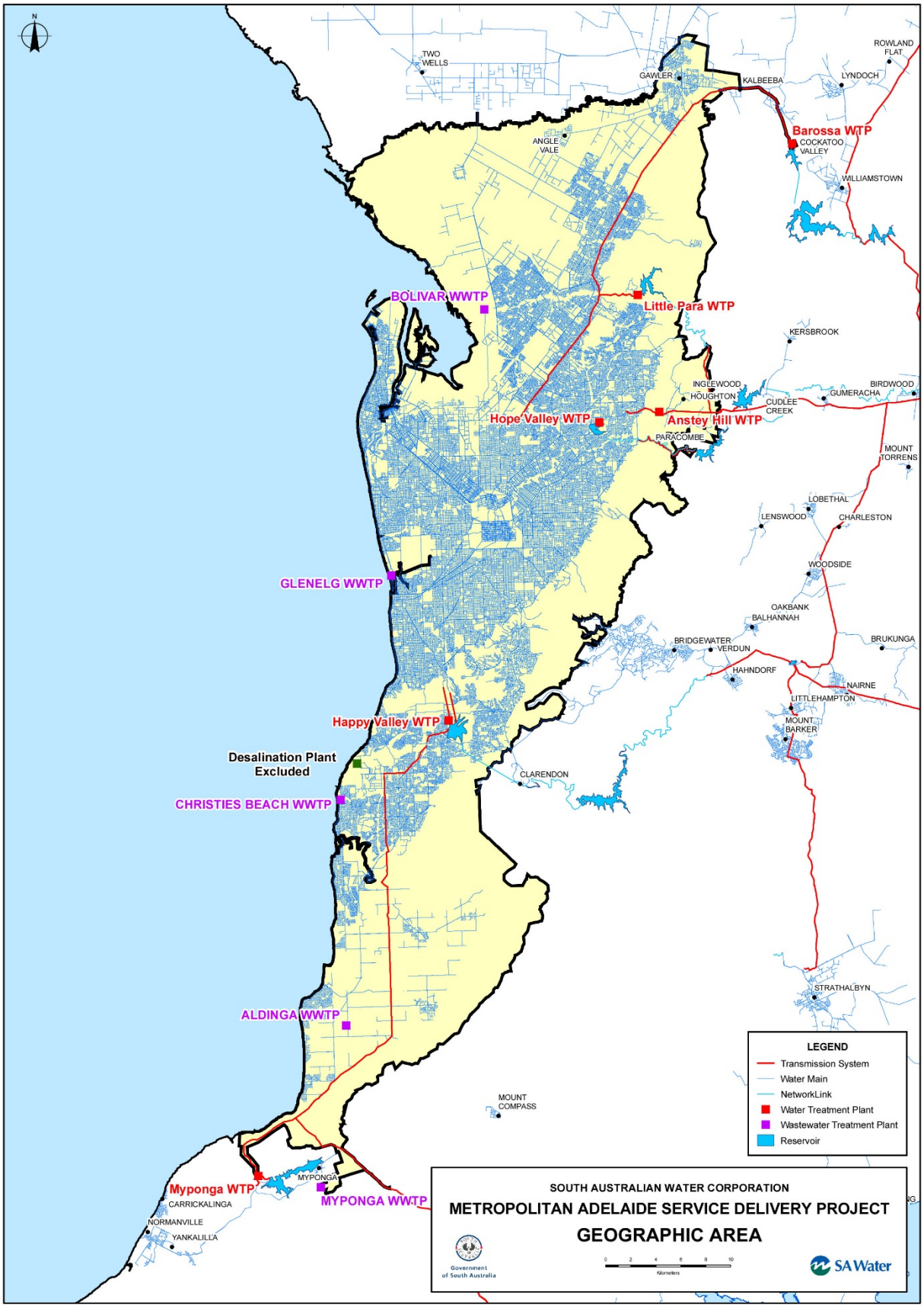
Service area	Service standard
Customer service and complaint handling	Answer 85 percent of telephone calls within 30 seconds
	Respond to 95 percent of written complaints within the required timeframes (Required timeframes: complaints that do not require investigation = 10 business days; complaints that require investigation = 20 business days)
	Respond to 96 percent of water quality complaints in metropolitan Adelaide within the required timeframes (Required timeframes: Priority 1 = 1 hour; Priority 2 = 2 hours; Priority 3 = 48 hours)
	Respond to 99 percent of water quality complaints in regional areas of South Australia within the required timeframes (Required timeframes: Priority 1 = 1 hour; Priority 2 = 2 hours; Priority 3 = 48 hours)
Connection services	Process 95 percent of connection applications within 20 business days
	Construct 95 percent of water connections within the required timeframes (Required timeframes: standard installation = 25 business days; non-standard installation = 35 business days)
	Construct 90 percent of sewerage connections within the required timeframes (Required timeframes: standard installation = 30 business days; non-standard installation = 50 business days)
	Process 99 percent of trade waste applications within 10 business days

Service area	Service standard
Field crew attendance at the site of service issues in the Adelaide metropolitan area	Attend 99 percent of water network breaks, leaks and bursts in the Adelaide metropolitan area within the required timeframes (Required timeframes: Priority 1 = 1 hour; Priority 2 = 5 hours)
	Attend 99 percent of sewerage network overflows in the Adelaide metropolitan area within the required timeframes (Required timeframes: inside building = 1 hour; outside building on customer's property = 2 hours; external to customer's property = 4 hours)
Service restoration and clean up in the Adelaide metropolitan area	Perform 99 percent of water network service restorations in the Adelaide metropolitan area within the required timeframes (Required timeframes: Priority 1 = 5 hours; Priority 2 = 8 hours; Priority 3 = 12 hours)
	Perform 95 percent of sewerage network service restorations in the Adelaide metropolitan area within the required timeframes (Required timeframes: Category 1 = 5 hours; Category 2 = 5 hours; Category 3 = 12 hours; Partial loss of service (such as slow drainage of sewage) = 18 hours)
	Perform 98 percent of sewerage network overflow clean-ups in the Adelaide metropolitan area within the required timeframes (Required timeframes: inside building = 4 hours; outside building on customer's property = 6 hours; external to customer's property = 8 hours)
Field crew attendance at the site of service issues in regional areas of South Australia	Attend 99 percent of water network breaks, leaks and bursts in regional areas of South Australia within the required timeframes (Required timeframes: Priority 1 = 1 hour; Priority 2 = 5 hours)
	Attend 99 percent of sewerage network overflows in regional areas of South Australia within the required timeframes (Required timeframes: inside building = 1 hour; outside building on customer's property = 2 hours; external to customer's property = 4 hours)
Service restoration and clean-up in regional areas of South Australia	Perform 99 percent of water network service restorations in regional areas of South Australia within the required timeframes (Required timeframes: Priority 1 = 5 hours; Priority 2 = 8 hours; Priority 3 = 12 hours)
	Perform 99 percent of sewerage network service restorations in regional areas of South Australia within the required timeframes (Required timeframes: Category 1 = 5 hours; Category 2 = 5 hours; Category 3 = 12 hours; Partial loss of service (such as slow drainage of sewage) = 18 hours)
	Perform 99 percent of sewerage network overflow clean-ups in regional areas of South Australia within the required timeframes (Required timeframes: inside building = 4 hours; outside building on customer's property = 6 hours; external to customer's property = 8 hours)

Service standard definitions

Adelaide metropolitan area	means the area indicated in the map in this schedule in which **customers** are supplied with **retail services** as agreed between **SA Water** and the **Commission** from time to time.
attendance at water breaks, bursts & leaks priorities	Priority 1 is a leak or service issue that: ▶ results, or may result, in a total loss of supply to a customer ▶ results, or may result in, a major loss of water ▶ causes, or may cause, damage to property, or ▶ poses, or may pose, an immediate danger to people or the environment. Priority 2 is any other burst or service issue.
best endeavours	means to act in good faith and use all reasonable efforts, skill and resources to achieve an outcome in the circumstances
connection services	Construction timeframes for connection services exclude: ▶ instances where a different timeframe has been agreed with a customer, and ▶ delays caused by customers or third parties beyond the control of SA Water.
regional areas of South Australia	means the areas outside of the **Adelaide metropolitan area** in the map in this schedule in which **customers** are supplied with **retail services** as agreed between SA Water and the **Commission** from time to time.
sewerage services restoration priorities	Full Loss Category 1 is where the interruption could be life-threatening or otherwise have serious consequences (for example, impacting critical needs customers, hospitals, residential care facilities, schools and child care centres). Full Loss Category 2 is where the interruption causes a disruption to a customer's business activities. Full Loss Category 3 is all other cases. Partial Loss is all cases (without reference to a full loss of service).
water complaint priorities	Priority 1 is where there is a potential for serious risk to human health Priority 2 is where there is the potential for low risk to human health, and Priority 3 is all other cases.
water services restoration priorities	Category 1 is where the interruption could be life threatening or otherwise have serious consequences (for example, impacting critical needs customers, hospitals, residential care facilities, schools and child care centres). Category 2 is where the interruption causes a disruption to a customer's business activities. Category 3 is all other cases.

Adelaide metropolitan area



5 The forms of price regulation to apply to SA Water's retail services

Final decision – Forms of price regulation

The Commission's final decision is that, in exercising its discretion to make price determinations, the following price controls will apply to SA Water's retail services.

It has established two separate determinations relating to the maximum revenues (**Revenue caps**) that SA Water can earn from drinking water retail services and sewerage retail services. The drinking water and sewerage revenue caps will apply over the four year period of RD16 and will provide for:

- a demand variation adjustment mechanism that allows an equal sharing between SA Water and its customers of the revenue impacts from any material differences between forecast and actual drinking water and sewerage demand, subject to a one percent materiality threshold and
- a pass through mechanism that allows maximum revenues to change if there is a change in legal obligation or an extraordinary event which is exogenous, unavoidable and materially impacts the costs of the provision of drinking water and sewerage services.

A third determination requires SA Water to comply with the NWI Pricing Principles in setting prices for recycled water and other retail services that are not drinking water and sewerage services (that is, excluded services).

5.1 Introduction

Different forms of price regulation will apply for four broad categories of retail services, namely:

- drinking water
- sewerage
- recycled water, and
- excluded retail services.

5.2 SA Water's proposal

SA Water has proposed annual revenue caps for drinking water and sewerage services, calculated under the cost based 'building blocks' approach. It has also proposed a demand variation adjustment mechanism, which would see the revenue impacts arising from a difference between forecast and actual demand (water consumption and sewerage connections) shared equally between SA Water and its customers.

SA Water's RBP16 explicitly states that it deals only with its proposed expenditure for drinking water and sewerage services. It notes that the Commission currently applies a different form of regulation to other retail services (excluded services) and does not propose any changes to this approach.

5.3 Submissions

No submissions commented directly on the form of price regulation to apply to SA Water's retail services.

5.4 Discussion

While the Commission has discretion to exercise its price regulation powers, the Pricing Orders require it to use a revenue cap form of regulation for drinking water and sewerage services (with separate revenue caps to be applied for each service). The Pricing Orders also preclude the revenue caps from applying on the basis of customer class or location.

5.4.1 Four year revenue caps

The Commission has established aggregate four year revenue caps for drinking water and sewerage services, rather than annual revenue caps as apply in the current regulatory period.

Annual revenue caps would mean that SA Water would need to set prices each year in a way that ensured that year's cap was not breached. Under a four year revenue cap, it has greater flexibility to set prices from year to year, as it only needs to comply with the aggregate revenue caps that apply over all four years.

One argument for applying annual revenue caps is that they could be set to align with the efficient costs that SA Water is expected to incur each year. However, regulators generally smooth revenues, even under annual revenue caps, so that revenues may depart from costs in any single year. It is important to ensure that total revenue over the four year period equates (in present value terms) to total costs in that period. The Commission considers that smoothing revenues is consistent with the price stability principle stated in the Pricing Orders. If it is accepted that revenues should be smoothed under annual revenue caps, the cost reflectivity argument does not apply.

Implementing four year revenue caps, rather than applying annual revenue caps, is expected to deliver a net benefit to customers because:

- it will avoid the administrative costs of annual pricing compliance assessments, for which SA Water must submit prices to the Commission for checking against the annual revenue caps
- it will create greater opportunities for tariff reform, by allowing more flexibility for SA Water to rebalance its tariffs over the four year period, and
- it will still ensure that SA Water does not earn excessive revenues over the regulatory period, because revenues in the subsequent regulatory period would be adjusted for any over or under-recovery of revenue during RD16.

The implementation of four year revenue caps is not expected to result in volatile price movements because SA Water has made a clear commitment to price stability during RD16. It has stated that it is 'committed to keeping price increases over the first and second regulatory periods below the rate of inflation'.[65] Based on support from its customers, SA Water's RBP16 proposes price changes in line with the CPI, following an initial price reduction on 1 July 2016. That approach is consistent with the South Australian Government's price stability objective, as reflected in the Pricing Orders.

5.4.2 Demand variation adjustment mechanism

Section 3.5 of the third Pricing Order requires the revenue determination for drinking water and sewerage services to include a mechanism to allow total revenues to be adjusted if there is a relevant and material variation between forecast and actual rates of drinking water consumption or sewerage connections. The mechanism must promote price stability.

[65] SA Water, Regulatory Business Proposal 2016-2020, September 2015, p.8.

A demand variation adjustment mechanism leads to a transfer of risk from customers to SA Water. In the absence of such a mechanism, the revenue caps would allow SA Water to recover revenue up to a ceiling amount, irrespective of actual demand. SA Water would not bear any demand risk. However, a demand variation adjustment mechanism allows maximum revenues to increase or decrease, depending on any material differences between forecast and actual demand (which would lead to a difference between forecast and actual revenue).

The Pricing Orders provide some flexibility on the extent to which the revenue caps may change as a result of variations in demand. SA Water has proposed a mechanism that allows for half of any difference between forecast and actual demand to be reflected in future revenues. This would effectively lead to an equal sharing of demand risk between SA Water and its customers.

As a principle, the Commission supports demand risk resting with SA Water rather than its customers. SA Water is able to manage demand risk through setting cost reflective prices, and this ensures that revenues move in line with changes in demand. The cost of managing demand risk is therefore likely to be lower for SA Water than its customers. Minimising the cost of risk management is consistent with the Commission's goal of promoting the lowest sustainable prices for customers. This principle was reflected through the implementation of an average revenue form of control in RD13. An average revenue form of control limits SA Water's revenue on a dollar per unit basis (dollar per kL for drinking water and dollar per connection for sewerage).

Having regard to that principle, it is more efficient for revenues to reflect variations in demand to the greatest extent possible. Should there be a material difference between forecast and actual drinking water demand or sewerage connections during RD16, the Commission would prefer the full revenue impact of that difference to be reflected in SA Water's future revenues, rather than keep its revenues fixed.

However, a mechanism that allows the majority of the difference between forecast and actual revenue to be adjusted would breach the requirement for a revenue cap, as it would have characteristics that are closer to an average revenue cap than a revenue cap. A sharing mechanism that allows for more than 50 percent of demand risk to be allocated to SA Water, is precluded under the Pricing Orders.

SA Water's proposal for an equal sharing of the revenue impacts of material demand variations between it and its customers therefore achieves a reasonable balance between the legal requirement for revenue caps and the objective of allocating demand risk to SA Water.

The Commission's decision is that SA Water's proposed 50:50 sharing mechanism is appropriate. Separate adjustment mechanisms would be implemented for drinking water and sewerage services.

Consistent with the demand variation adjustment mechanism that exists under RD13, a minimum threshold of one percent of revenue will apply. Where there is a difference of less than one percent between actual and forecast revenue, the mechanism will not operate. One percent of revenue (which equates to around $8 million per annum for SA Water's drinking water business), is considered to be relevant and material for the purposes of Section 3.5 of the third Pricing Order, and is consistent with the threshold that applies to the demand variation adjustment mechanism under RD13.

The revenue caps under RD16 are $2.84 billion for drinking water and $1.19 billion for sewerage. This implies that, at the end of the four year period, if changes in drinking water demand cause actual drinking water revenues to be within around $28 million of the forecast drinking water revenue, or if changes in sewerage connections cause actual sewerage revenue to be within around $12 million of the forecast sewerage revenues, the predetermined revenue caps would remain and no demand variation adjustment would occur.

5.4.3 Pass throughs

The extent to which unforeseen cost changes can be passed through to regulated revenues during a regulatory period is underpinned by the form of revenue control applied.

SA Water's RBP16 proposes that the pass through regime that applies under RD13 (described in section 11.4.7) should be continued, subject to:

- the inclusion of a significant change in interest rates that affects its financial viability as a further class of pass through event, and
- consideration of pass through events as they occur, with costs or benefits passed on to customers as part of the next annual price adjustment or, if practical, deferred to the next price determination to maintain price stability for customers.

The Commission is not persuaded that a significant change in interest rates affecting SA Water's financial viability should constitute a specific pass through event. For the reasons discussed below, the Commission's method for calculating the regulatory rate of return provides for the appropriate allocation of risk between SA Water and its customers. Accepting SA Water's proposal may provide a disincentive for it to operate and invest efficiently.

Risks should be allocated to the party most capable of managing them at an efficient cost. SA Water is responsible for managing its financing costs, which may include consideration of the need to hedge against future changes in interest rates. Its customers cannot influence these matters.

Further, insulating SA Water from its financing risk by passing costs on to customers is inconsistent with the Commission's approach to calculating the regulatory rate of return, as discussed in Chapter 9. In this area, risk measures (such as the credit rating) and market volatility measures (such as beta) have been set on the basis that SA Water will manage its own finance risks. Accordingly, it will already be financially compensated for its financing cost risks. Passing those risks back to customers through the proposed pass through mechanism would result in customers paying for the same risk twice.

In terms of the timing of any cost pass through, the Commission has decided that any potential cost pass through should be implemented after the RD16 period.

The Pricing Orders provide direction on this matter by stating that the pass through mechanism should promote a stable price path. The Commission interprets that requirement to mean the minimisation of year on year price movements (that is, price movements within the regulatory period). This supports an approach that avoids pass throughs being applied during the RD16 period, as it would avoid prices rising or falling from year to year in response to any unexpected and material cost changes that fall within the scope of the pass through regime. This would be consistent with the current pass through regime.

In support of its proposal, SA Water states that the current regime does not allow customers to receive, through reduced prices, the immediate benefit of any cost reduction arising from a pass through event. However, there is nothing preventing it from immediately passing on the impact of negative pass through events itself, through a reduction in prices. RD16 only regulates the maximum revenues that it can collect from its customers.

SA Water also states that the current pass through regime does not consider the financial impact on its business. However, it does give it the flexibility to make an assessment about whether or not it considers an event to be material, prior to making a pass through application.

The Commission recognises that, during the regulatory period, an event could occur that is of such magnitude that the cost impacts must be reflected in regulated revenues and prices more quickly – either to prevent SA Water experiencing extreme financial distress, or to ensure that customers do not end up paying prices excessively above cost. In such exceptional circumstances, the Commission would consider exercising its power to reopen the regulatory determination.[66]

The Commission supports SA Water's proposal for the RD13 materiality test to apply for the pass through regime under RD16. However, it will provide some guiding principles to assist SA Water and stakeholders understand how it will assess materiality. In particular, it will be guided by the financial impact of the pass through event in terms of SA Water's revenues and customers' bills.

5.5 NWI Pricing Principles for other retail services

Subject to the requirement to adopt the NWI Pricing Principles, the Commission can choose from various forms of regulation for retail services other than those for drinking water and sewerage.

The retail services currently subject to NWI Pricing Principles are:

- recycled water
- excluded retail services, which consist of:
  - standard and non-standard connection services (including developer services)
  - trade waste services
  - non-domestic hauled waste services
  - easement extinguishment and encumbrance services
  - hydrant and fire plug services
  - meter services, and
  - network analysis and audit services.

5.5.1 Regulation of recycled water

The Commission considers the costs of providing a recycled water scheme to be part of the costs of providing retail services, where SA Water can demonstrate that the scheme:

- is a prudent and efficient means of addressing environmental (sewerage discharge) obligations and forms part of a least cost mix of diversified water sources needed to achieve required security of supply, or
- is driven by the need to trial new technologies, with the aim of achieving more efficient ways to deliver a secure supply of water.

In the above cases, any revenues derived directly from the provision of recycled water must be used to offset the costs of providing those schemes.

66 Section 26(8) of the ESC Act allows the Commission to vary or revoke a determination by making a subsequent determination.

SA Water is currently required to publish a pricing schedule and an accompanying 'pricing policy statement', to demonstrate how it has applied the NWI Pricing Principles in determining its prices for recycled water. Further, it is required to provide, at the request of a customer, a copy of these documents. The Commission monitors those prices and can publish information on price changes and SA Water's compliance with the relevant NWI Pricing Principles.

The Commission's decision is to continue the current approach to regulating SA Water's recycled water charges for RD16. This remains appropriate because:

- SA Water continues to hold market power in the provision of recycled water services and ongoing price regulation is therefore appropriate.
- Recycled water is generally a substitute for drinking water, its price is constrained by drinking water prices, and this reduces the need for a heavier handed form of price regulation (such as direct price controls).
- The approach is consistent with the NWI. The NWI Pricing Principles state that a light handed form of regulation (included pricing principles) is preferable unless economic efficiency can be enhanced through a heavier-handed approach (Information Box 5.1).
- SA Water has been required to publish its recycled water prices and demonstrate that those prices comply with the relevant NWI Pricing Principles. It has complied with those requirements during RD13 and the Commission received no negative comments or customer complaints about recycled water prices during the period.

Information Box 5.1: NWI Pricing Principles for Recycled Water and Stormwater Use[67]

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 (for example, 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 costs shared across beneficiaries based on the scheme's drivers (and other characteristics of the recycled water/stormwater reuse scheme).

Principle 3: Water usage charge

Prices to contain a water usage (that is, 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.

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.

Note: 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 for consumer education and time for the community to adapt.

[67] NWC, *NWI Pricing Principles*, April 2010, page 16; available at http://www.environment.gov.au/water/publications/action/pubs/nwi-pricing-principles.pdf.

5.5.2 Regulation of excluded services

As noted in Chapter 3, SA Water provides certain water and sewerage retail services to individual customers, or a distinct class of customers, where they are the direct beneficiaries of those services. These 'excluded services' consist of:

- standard and non-standard connection services (including developer services[68])
- trade waste services
- non-domestic hauled waste services
- easement extinguishment and encumbrance services
- hydrant and fire plug services
- meter services, and
- network analysis and audit services.

The costs of providing these excluded retail services are not recovered through the maximum revenue caps. Rather, individual customers are required to pay SA Water for the efficient cost of providing them. Revenue from excluded services makes up around two percent of SA Water's total retail services (around $20 million per year). The Commission currently applies a more light handed approach to regulating the pricing of these services, through a combination of a pricing principles and price monitoring regime (as set out above for recycled water).

The Commission will apply a pricing principles framework to SA Water's excluded services in RD16. This is consistent with the approach taken in RD13. Under this approach, the Commission will not take a direct role in setting or approving fees and charges for excluded services, and will instead rely on pricing principles based on the relevant NWI Pricing Principles, as well as additional principles for excluded services developed by the Commission (as set out in Information Box 5.2).

The Commission considers this approach to be appropriate because:

- SA Water has reviewed its connection charges during the RD13 period to align with the current pricing principles and engaged closely with its customers, particularly developers. The Commission has not received any complaints from customers as a result of that review.
- The Commission received few queries from SA Water's customers over its charges for excluded services during the RD13 period. Where the Commission has reviewed SA Water's compliance with the relevant pricing principles for excluded services, it has concluded that SA Water has complied with the principles in each case.
- While experience over the RD13 period suggests there is no need to impose heavier handed regulation of excluded services, it is still important to promote transparency of SA Water's excluded services charges. The existing pricing principles require price transparency and facilitate customers' understanding of how the charges are calculated and applied.

[68] Developer services are connection and related services provided by SA Water to property developers.

Information Box 5.2: Pricing principles relevant to SA Water's excluded services

NWI Pricing Principles

Setting developer charges (Principles for Urban Water Tariffs: Principle 8)

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

Note: 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: 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: Principle 10)

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

Cost recovery for new capital expenditure (Principles for Recovery of Capital Expenditure: Principle 1)

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 return of capital (depreciation of the Regulated Asset Base (RAB)) and return on capital (generally calculated as rate of return on the depreciated RAB), or
- renewals annuity and a return on capital (calculated as a rate of return on an undepreciated asset base (Optimised Replacement Cost (ORC)).

Differential water charges (Principles for Urban Water Tariffs: Principle 7)

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.

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

Commission's additional Pricing Principles

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.

Principle 2: Where a service is provided to a distinct group of customers (for example, trade waste audits are provided to trade waste customers only), prices to a customer should reflect the incremental cost of supplying the service to that customer, and a reasonable allocation of the fixed costs of providing the service, where relevant.

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.

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.

During RD13, SA Water has undertaken a review of certain excluded services prices (for example, connection charges) to ensure greater cost reflectivity, consistent with the NWI Pricing Principles.

While the Commission has the ability to resolve any disputes about excluded services charges, no disputes have been referred to the Commission during RD13.

Having regard to the experience during the RD13 period and other matters discussed above, the Commission has decided to retain the current form of pricing principles regulation.

Part C – Drinking water and sewerage retail services

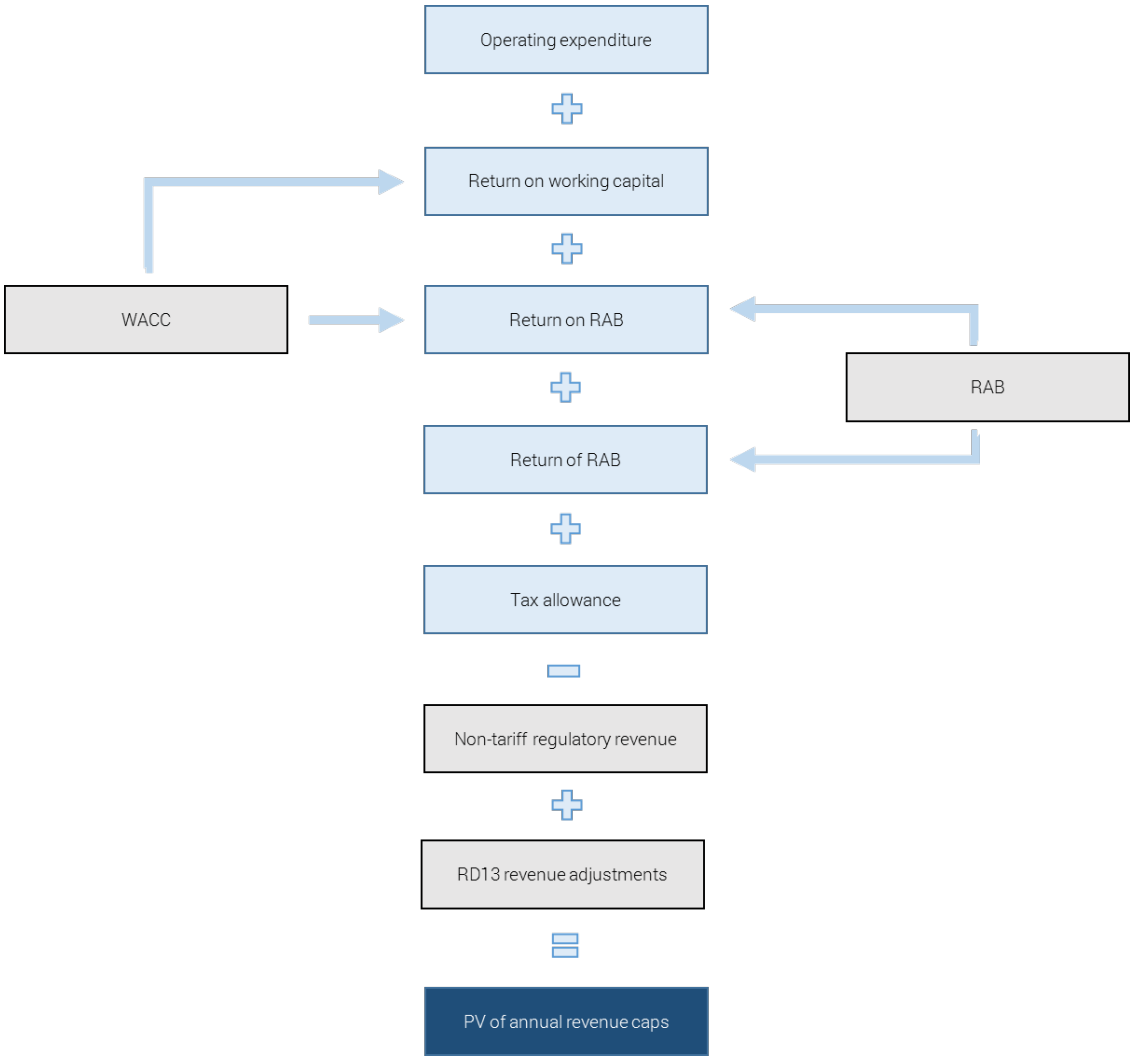
The Commission's revenue determination allows SA Water to recover the efficient cost of providing drinking water and sewerage retail services to customers. The cost components that the Commission has determined are:

- operating expenditure
- return on regulated asset base
- return on working capital
- return of capital (depreciation), and
- tax allowance.

In addition to determining those cost components, the Commission must also determine forecasts of drinking water demand and sewerage connections that can impact SA Water's costs and are important for the operation of the demand variation adjustment mechanism, as discussed in Chapter 5.

Figure C.1 shows how the total revenue cap is derived from these cost building blocks.

Figure C.1 building block methodology



SA Water operates a capital intensive business and the return on assets and return of capital components cover its fixed infrastructure costs, including forecast capital expenditure. Operating expenditure is included as a separate building block component. The working capital allowance addresses the funding cost associated with the mismatch in the timing of SA Water's revenue and expenditure cash flows. The tax allowance reflects the net impact to shareholders of the tax obligations of the benchmark efficient entity.

6 Demand

Final decision – Demand

The Commission's final decision is to use SA Water's demand model as proposed in RBP16. The Commission has tested the model and is satisfied that it produces robust forecasts of drinking water demand. The demand forecasts derived from that model, and adopted by the Commission, range from 190.1GL in 2016-17 to 194.5GL in 2019-20.

The Commission's final decision is to adopt a forecast sewerage connections growth rate of 1.2 percent per annum during the RD16 period. This is consistent with the long term population growth rate in South Australia.

6.1 Introduction

Demand for drinking water fluctuates from year to year, primarily in response to weather conditions, which are not predictable with precision in the long term. Underlying demand can vary according to changes in water restrictions, population or economic conditions – all of which can be modelled. As SA Water's costs are largely independent of demand (about 85 percent of its total drinking water costs are fixed),[69] the potential consequences of demand forecasting errors on the revenue caps are relatively immaterial. However, as discussed in section 5.4.2, the Commission is required to implement a demand variation adjustment mechanism.[70]

For the purpose of translating revenues to prices, drinking water demand forecasts can have a substantial impact, but consumer prices are not within the scope of this regulatory determination.

Demand for sewerage services can impact SA Water's sewerage costs, although those impacts occur mainly on a localised basis, as its sewerage system is divided into separate catchment zones. Sewerage systems in mature areas experience little growth, while those on the developing urban fringe can expect higher growth. Establishing statewide forecasts of sewerage connections is, however, relevant to the demand variation adjustment mechanism. The mechanism will therefore operate on the basis of any differences between forecast and actual total sewerage connections.

6.2 SA Water's proposal

6.2.1 Drinking water demand

The drinking water demand forecasting model proposed by SA Water is similar to that endorsed by the Commission in RD13.[71] It is a regression model that uses various explanatory variables to predict future drinking water sales. The variables are measures of:

- temperature
- rainfall
- evaporation

69 Refer to the Commission's 'Inquiry into Reform Options for SA Water's Drinking Water and Sewerage Prices – Final Inquiry Report', p.11.

70 The demand variation adjustment mechanism would allow 50 percent of the difference between actual and forecast revenue to be adjusted for in the RD20 period. Establishing robust demand forecasts is important for that purpose. A mechanism is required under Section 3.5 of the third Pricing Order.

71 Refer to the Commission's, 'SA Water's Water and Sewerage Revenues 2013-14 to 2015-16; Final Determination Statement of Reasons, May 2013', Chapter 6, available at http://www.escosa.sa.gov.au/library/130527-SAWater_Water_SewerageRevenues_2013-16-FinalDetermination-StatementOfReasons_0.pdf.

- South Australian economic growth
- water price
- water restrictions level.

When the model is used to make predictions for demand for the RD16 period, the weather related variables are normalised to their long term averages.

SA Water has proposed two changes to that model.

First, it proposed using monthly inputs to estimate drinking water demand, rather than annually. It has stated that the demand model used for RD13 has not explained the variation in demand over the RD13 period as well as its monthly demand model. It argues that, when updated for the latest information during the regulatory period, the model used for RD13 became less robust.

Second, it included two new explanatory variables (rainfall and evaporation) to provide greater statistical robustness.

SA Water's annual water demand forecasts for the RD16 period is shown in Table 6.1.

Table 6.1: SA Water's drinking water demand forecasts, 2016-20

Year	2016-17	2017-18	2018-19	2019-20
Drinking water sales (GL)	190.1	191.4	192.9	194.5

For comparison, drinking water sales in the first two years of RD13 were 184.2GL in 2013-14 and 190.9GL in 2014-15 (the latter being a hotter than average year).

SA Water raised two key points relevant to drinking water demand in RBP16.

First, over the decade immediately prior to RD13, average annual water demand had been on a downward trend, as water restrictions had been tightened and prices increased. During RD13, demand for drinking water has stabilised, due to the end of an upward price path at the commencement of the period, and the easing of water restrictions in December 2010. SA Water considers that fluctuations in drinking water demand are now primarily due to weather, rather than price or supply factors, and this is expected to continue over the RD16 period.

Second, drinking water demand has not returned to pre-drought levels and is not forecast by SA Water to do so during the RD16 period.

6.2.2 Growth in sewerage services

Although for RD13 the forecast and actual annual growth rate of sewerage customer numbers was 0.9 percent, for RD16 SA Water is proposing to use the 15year average customer growth rate of 1.2 percent across residential, commercial and non-residential customers. It states that use of a longer term average, rather than recent history, captures the overall trend for customer growth and provides a better (lower) pricing outcome for customers.

6.3 Submissions

No submissions commented on SA Water's demand forecasts.

6.4 Discussion

6.4.1 Improved robustness of the proposed drinking water demand forecasting model

Information provided by SA Water suggests that, when compared with the previous annual model, the monthly model more accurately explains changes in actual drinking water demand during RD13. The inclusion of rainfall and evaporation as variables in the model increases its ability to explain changes in demand.

However, that analysis was undertaken without weather normalising demand during RD13. As demand forecasts should be based on normalised weather, the Commission has used weather-normalised data for the first two years of RD13. With this data included, the SA Water model remained robust.

6.4.2 Updating and verifying the model

The Commission updated the SA Water monthly model to reflect the following changes to the inputs:

- Up to date Gross State Profit (GSP) for 2014-15
- GSP data updated to match the Australian Bureau of Statistics (ABS) dataset (the ABS had made some adjustments since SA Water did its modelling)
- GSP forecasts for the RD16 period updated to reflect the forecasts from the Department of Treasury and Finance (DTF) midyear budget review 2015-16
- Bureau of Meteorology (BOM) rainfall data for recent years updated to reflect the changes BOM has made since SA Water's modelling, and
- the use of weather normalised data for the forecast years (averaged over the past 38 years).

The updated model produces forecasts consistent with those presented in RBP16. On average, the adjusted forecasts of annual drinking water demand are within 0.5 percent of its forecasts, so the difference is immaterial. The demand forecasts derived from that model, and adopted by the Commission, range from 190.1GL in 2016-17 to 194.5GL in 2019-20.

6.4.3 Demand for sewerage services

In considering an appropriate forecast for sewerage connections, the Commission has taken into account recent data on connections and population growth, long term trends in that data, and available forecasts.

Although a growth rate of 0.9 percent per year was assumed for RD13 and proved to be accurate[72], the Commission acknowledges that there is uncertainty about whether this 0.9 percent growth rate will continue for the RD16 period, or if growth will return to the long term trend of 1.2 percent, as suggested by SA Water.

The forecast growth of sewerage customer numbers will have minimal impact on sewerage operating costs or capital expenditure during RD16. The difference between a 0.9 percent and 1.2 percent growth rate is an immaterial change in sewerage revenues and, even if that difference were to eventuate during the RD16 period, it would not trigger the materiality threshold of the demand variation adjustment mechanism.

[72] Australian Bureau of Statistics (ABS), 3218.0 – Regional Population Growth, Australia, 2013-14, available at http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/3218.0Main%20Features352013-14?opendocument&tabname=Summary&prodno=3218.0&issue=2013-14&num=&view= accessed 6 Jan 2016.

On balance, the Commission's view is that it is reasonable to forecast sewerage connection growth that is consistent with long term trends, noting that this decision has an immaterial impact on revenues. The Commission has therefore used a 1.2 percent sewerage connection growth rate for the purpose of RD16.

7 Operating expenditure

Final decision – Operating expenditure

The Commission's final decision is that $1,795.3 million ($Dec14) is a prudent and efficient operating expenditure amount to be included in RD16. This amount is one percent lower than that proposed in RBP16.

The final decision is based on:

- adjustments to the overall operating expenditure allowance identified through an assessment of the prudence and efficiency of SA Water's proposed base year expenditure, and proposed increases to the base year, and
- application of a general efficiency target above that proposed by SA Water for the third and fourth year of RD16.

7.1 Introduction

About 40 percent of SA Water's regulatory costs relate to operating expenditure. They include the cost of wages and salaries, pumping and treating water, carrying out maintenance activities, reading meters, sending out customer bills and the many other activities required to provide an ongoing service to customers. Unlike capital expenditure, operating expenditure is expensed as incurred.

In determining SA Water's revenue caps, the Commission has examined and tested RBP16 in detail, allowing only that operating expenditure it has judged to be prudent and efficient.

7.2 Overview

7.2.1 Review methodology

In determining the efficient amount of operating expenditure, the Commission has:

- Firstly, examined current operating expenditure to identify an efficient 'baseline' amount. It has used 2014-15 as the baseline year (**base year**) and made adjustments to the actual operating expenditure reported by SA Water in that year. This is to normalise for any non-recurring items and to remove costs that are not prudent and efficient. The Commission has had regard to benchmarking information and a 'bottom up' assessment of baseline costs. As a part of this exercise, SA Water's water supply optimisation has been examined (refer section 7.3.2), including consideration of the water supply distribution optimisation, River Murray and reservoir water and the Adelaide Desalination Plant (**ADP**). The Commission has also examined SA Water's electricity use and management (refer section 7.3.3).
- Secondly, examined SA Water's proposed changes to the baseline costs it expects to incur in the RD16 period. The Commission has tested the efficiency of the proposed new costs, taking into account the driver of the cost pressure (to determine if a new/expanded activity is prudent) and the lowest sustainable cost of undertaking that activity (to determine the efficient cost).

The Commission has accepted that a new or expanded activity is prudent where there is a clear obligation on SA Water to undertake that activity. If the activity is discretionary, the Commission has examined whether or not there is a net benefit to SA Water's customers through conducting that activity.

The efficiencies identified by the above processes represent the Commission's understanding of what a prudent and efficient regulated water utility could achieve, based on current operating best practice. It would also be expected that even the most efficient business could become more efficient over time, for example, through the application of new techniques and technologies.

The Commission has also sought advice from Cardno/Atkins and Black and Veatch (B&V) and has taken into account matters raised in stakeholder submissions to RBP16 and Draft RD16.

7.2.2 SA Water's proposal

RBP16 proposed a total of $1,830 million ($1,307 million for water, $523.2 million for sewerage) of operating expenditure over the period. Updated forecasts provided by SA Water in November 2015 revised this figure down by $25.9 million (or 1.4 percent) to a total of $1,804 million over the period. The pattern of expenditure is relatively flat over all four years of the regulatory period for both water and sewerage.

7.2.3 Submissions

Five submissions raised matters directly relating to SA Water's overall operating expenditure:

- In its submission to RBP16, SACOSS raised concerns about SA Water's level of operating expenditure and expected it to limit expenditure increases to the CPI.[73] It also stated that it supported SA Water's proposed Customer Assist Program expenditure.[74] In its submission to Draft RD16, SACOSS stated that it was unable to obtain the necessary information to make an assessment as to whether or not SA Water had the potential to realise a 5.5 percent reduction in total operating expenditure, due to this information being commercially sensitive and confidential.[75] SACOSS recommended that, for future regulatory determinations, the Commission and SA Water consider the model of consumer participation utilised for the Scottish Water determination process.[76]
- Both SAFCA[77] and Uniting Communities[78] raised concerns with the use of 2014-15 as the baseline year, stating that the abnormally high expenditure due to the construction of the desalination plant is unfair to customers.
- EWOSA stated that the Commission's proposed revenues for operating expenditure appear appropriate.[79]

73 SACOSS submission to RBP16, p.5.
74 SACOSS submission to RBP16, p.7.
75 SACOSS submission to Draft RD16, p.2.
76 SACOSS submission to Draft RD16, p.2.
77 SAFCA submission to RBP16, p.3
78 Uniting Communities submission, p.5
79 EWOSA submission to Draft RD16, p.1.

7.3 Base year

7.3.1 Selection of an appropriate and efficient base year

Final decision – Base year

The Commission's final decision is that the base year applied in RBP16 reflects the actual costs attributed to the regulated business and generally represents a typical year throughout the regulatory period, subject to the consideration of some adjustments discussed in this chapter.

As such, SA Water's proposed base year expenditure is an appropriate starting point for considering proposed efficiencies and additional costs.

SA Water's proposal

RBP16 included $432.4 million of operating expenditure ($311 million for water and $121.4 million for sewerage) in 2014-15, which SA Water stated was the operating expenditure it incurred in that year.

Some changes since RD13 have had an impact on the base year operating expenditure for RBP16. They include:

- SA Water's Business Transformation Project (decrease to base year)
  - A significant reduction in operating expenditure arising from this project has been a driver of reduced costs in RD13, with total operating expenditure across the three year period forecast to be around $130 million lower than the operating expenditure included in RD13. This reduction in expenditure flows through to the base year for the RBP16.
- Accounting treatment changes (increase to base year)
  - The capitalisation of connection fees was allocated to excluded services in RD13. Consistent with Australian Accounting Standards, these are now redistributed to direct control. This adds, on average, an extra $27 million per annum to the direct control operating expenditure.
  - Around $5 million per annum in 'contingent rentals' was treated as a funding (capital) cost in RD13. These costs are now classified as an operating cost in accordance with Australian Accounting Standards.
- Changes in SA Water's Cost Allocation Model (CAM) (a change in allocation between water and sewerage, no net increase to the base year)
  - The Water Planning and Management fee of approximately $18 million per annum, payable to DEWNR, was allocated between sewerage and water cost centres in RD13. Following SA Water's review of its allocation rules and cost drivers, this is now budgeted and allocated fully to a water cost centre, as it is directly attributable to water services.

SA Water proposed adjustments to its base year operating expenditure to remove the ADP proving costs and membrane costs that were still being accrued in that year. Those costs are treated as capital costs for regulatory purposes.

In support of the efficiency of its base year operating expenditure, SA Water has provided the results of a benchmarking study conducted by KPMG. That study concludes that SA Water has improved its efficiency since 2010-11 (the time of the previous benchmarking study) and is one of the most efficient major urban water utilities in Australia.[80]

The base year operating expenditure submitted was founded on a forecast of operating expenditure expected in 2014-15. In November 2015, SA Water provided updated analysis of its base year operating expenditure, following finalisation of its audited 2014-15 regulatory accounts. It made some further adjustments to assumptions relating to movements to the base year costs within RD16, following a review of the audited 2014-15 operating expenditure. These updated figures:

- result in operating expenditure over the RD16 period that is $27 million below that proposed in the original RBP16, and
- include $6.1 million of costs that SA Water has submitted should be added back into the base year to normalise that year (for example, to take account of matters such as vacant positions).

Submissions

As stated in section 7.2.3, both SAFCA[81] and Uniting Communities[82] raised concerns with the use of 2014-15 as the baseline year, due to the construction of the ADP.

Discussion

The Commission has analysed SA Water's past operating expenditure and has formed the view that operating expenditure in the base year is, generally, prudent and efficient. It represents an appropriate 'business as usual' year to base forecast operating expenditure. The Commission has considered SA Water's future capital and operating expenditure drivers and has undertaken functional expenditure benchmarking to test whether or not expenditure within the base year is generally comparable with that of other utilities.

The Commission accepts the adjustments that arise from changes to SA Water's CAM and other accounting related changes. It also notes the initial impacts that the Business Transformation Project has had on operating expenditure and is of the view that these will, at a minimum, continue over the RD16 period.

In response to submissions from SAFCA and SACOSS that the base year was inappropriate because of abnormally high expenditure due to the construction of the ADP, the Commission notes that the plant was fully constructed prior to 2014-15 and is of the opinion that SA Water has appropriately treated the ADP related (proving and membrane) costs in the base year.

80 Refer to SA Water, 'Business Proposal 2016-2020' Attachment F NPR Cost Benchmarking Study, KPMG available at https://www.sawater.com.au/__data/assets/pdf_file/0019/27055/Attachment-F_NPR_Cost_Benchmarking_Study.pdf.

81 SAFCA submission to RBP16, p. 3.

82 Uniting Communities submission, p. 5.

In forming the preliminary position that SA Water's base year is efficient, the Commission has:

- examined SA Water's governance, budgeting and cost allocation methodology arrangements and has concluded that these are sound
- reviewed SA Water's water supply optimisation (section 7.3.2) and formed the view that it is generally prudent and efficient, and
- reviewed SA Water's electricity expenditure (which makes up around 11 percent of the operating expenditure in the base year) and procurement practices (section 7.3.3), concluding that these are generally prudent and efficient.

The Commission notes the results of the KPMG study that shows that SA Water compares favourably against its peers with respect to operating expenditure benchmarks (Table 7.1).

Table 7.1 Operating expenditure per connection (2005-14)[83]

		SA Water $/connection	Median major utilities $/connection
2005-14	Water business	488	563
	Sewerage business	208	324
2014-15	Water business	397	407
	Sewerage business	198	309

However, there are some limitations to such an exercise (as the Commission stated in its review of SA Water's efficiency in RD13).[84] For example, differing business structures and scope of services make some comparisons difficult. Furthermore, while SA Water appears efficient compared with its peers, the benchmarking exercise does not address whether or not its peers are themselves efficient.[85]

In summary, while the results of the KPMG benchmarking study suggest that SA Water is relatively efficient, this view must be considered to be a part of the overall efficiency assessment, and not form the basis of it. This is the view the Commission took in RD13.

In considering the efficiency of the base year expenditure, the Commission has also considered whether or not SA Water's water supply has been optimised and examined its electricity use and management. This is discussed in section 7.3.2.

83 Refer SA Water Regulatory Business Proposal 2016-2020 Attachment F NPR Cost Benchmarking Study, KPMG, available at https://www.sawater.com.au/__data/assets/pdf_file/0019/27055/Attachment-F_NPR_Cost_Benchmarking_Study.pdf.

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

85 Refer, for example, to ABS productivity growth for year 2013-14 which indicates that the Electricity, Gas, Water and Waste Services sewerage and drainage sector had the lowest productivity growth of all sectors in the economy (refer to ABS Category No. 5260.0.55.002 - Estimates of Industry Multifactor Productivity, 2013-14, available at http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5260.0.55.002Main+Features12013-14?OpenDocument).

7.3.2 Base year: Optimisation of supply sources

Final decision – Base year: optimisation of supply sources

SA Water's water supply optimisation, and the associated operating expenditure incurred in the base year, is generally prudent and efficient, subject to changes in the way the business treats its additional water licences over RD16.

The Commission's final decision is that SA Water's distribution optimisation is prudent for the RD16 period.

SA Water's River Murray and Reservoir inflow assumptions for RD16 are considered reasonable. Its proposal to purchase additional water licences is prudent as a form of insurance against possible river water supply shortages. However, any possible income from the temporary sale of water entitlements during RD16 should be returned to its customers at the end of that period, taking into account any prudent and efficient costs incurred as a result of selling those entitlements.

The Commission's final decision is that the revenue caps will include an amount of $4.1 million per annum to account for the running of the ADP at 'Minimum Production' mode.

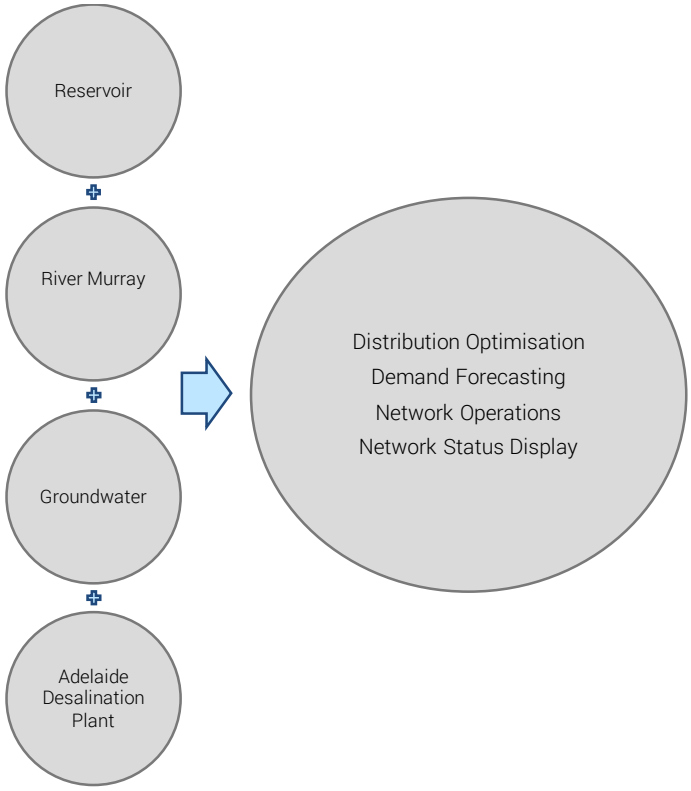
This final decision does not require SA Water to run the plant at that, or at any other, capacity. It simply acknowledges that it is prudent and efficient, given the available evidence, to make a revenue allowance which would permit the inclusion of water sourced from the ADP within an optimised water supply portfolio.

This is particularly so given that the extent to which benefits exceed costs appears to be small under both scenarios of operating the plant at no more than that capacity, and not making an allowance for operating the plant at all.

The Commission expects that a prudent and efficient water business would optimise its water supply portfolio, using its water sources in a way that minimises costs and avoids wasting water, while meeting system constraints and customer standards. Optimisation of water supply is particularly important for SA Water, which has several water sources with different, variable costs of supply.

Figure 7.1 provides a high level, simplified diagram of the main elements relevant to the optimisation of SA Water's supply.

Figure 7.1: Main sources of water and optimisation tools relevant to SA Water's supply



Note: SA Water's water supply sources include its reservoirs (including the Mount Lofty Ranges), River Murray, groundwater and the Adelaide Desalination Plant (ADP). In determining the appropriate supply mix, SA Water should use the least cost options first, which include reservoir and River Murray water. SA Water forecasts water availability from these two sources and, if needed, can supplement this from water from the ADP (and in some cases groundwater where possible). The distribution optimisation takes these water 'inputs' and optimises SA Water's network system to ensure the minimum overall cost of water supply is achieved.

SA Water's proposal

- SA Water has assumed that it will have sufficient supply from its surface water (largely its reservoirs and River Murray) and groundwater sources to meet demand over the RD16 period. However, it proposes to purchase additional River Murray water licences and rebalance its portfolio of water licences so that it holds a greater proportion of higher security entitlements as a water security measure.[86]
- SA Water has proposed using the ADP to produce 30 ML per day for nine months of the year (this equates to approximately 8 GL per year) over the regulatory period, using an operating mode termed 'Minimum Production', defined as operation at its minimum.[87]
- SA Water has forecast the cost of Minimum Production at $4.1 million per annum for the RD16 period (this is in addition to the annual fixed costs it incurs regardless of the ADP's use).

86 In this context, 'water security' is about ensuring that the supply of water meets demand.
87 Total drinking water demand for SA Water is approximately 520 ML per day.

- SA Water has implemented a new model, the Distribution Optimisation Tool (DOT), to optimise the supply of water throughout the distribution network for the regulatory period.[88] It provided information on DOT as a part of the RD16 review.

Submissions

Six submissions provided comments relevant to SA Water's supply optimisation with respect to the proposed use of the ADP.

- Osmoflo Pty Ltd disputed the accuracy of the assertion that re-commissioning a shutdown plant is difficult and costly, stating that a correctly shut down plant, with appropriate maintenance procedures, will only incur a small fraction of the cost of holding the plant in minimum production mode.[89]

- In its submission to RBP16, Business SA presented the results of a survey of its members who were asked whether or not they agreed to the ADP being used to support irrigators during the next drought, provided Adelaide's water security is assured. That matter is outside of the scope of this regulatory determination.[90] In response to the Draft RD16, Business SA stated that it supports the decision to allow SA Water to operate the ADP in minimum production mode, provided there is still a strong emphasis on ensuring efficient water use and prioritising the most cost effective water sources.[91] It also referred to a cost benefit analysis being undertaken by the State Government for operating the ADP to avoid River Murray irrigators losing their water allocations, and stated that the outcomes of that study could lead to further demand for the ADP and, as such, now would not be a prudent time to consider shutting it down entirely.[92]

- AdelaideAqua Pty Ltd stated that it did not recommend placing the ADP into a long term preservation mode. It provided arguments in support of running the ADP including reducing skill loss and assisting general asset maintenance.[93] AdelaideAqua Pty Ltd observed that only limited experience and literature exists on the risks of long term mothballing of large scale desalination plants. It added that due to the technology being relatively new and the significant design differences between desalination plants, extrapolating any findings from other plants to the ADP was 'necessarily uncertain'.[94]

- SA Water stated that it supported the Commission's decision with respect to operating the ADP during the RD16 period.[95]

Discussion

The Commission has tested several aspects of SA Water's operations, to gain confidence that its supply network is optimised. These are discussed below.

88 In contrast to the optimisation of supply sources, which relates to SA Water's water holdings portfolio, distribution optimisation relates to optimising the distribution of water throughout the network from source to tap.
89 Osmoflo Pty Ltd submission, pp. 1-5.
90 Business SA submission to RBP16, p. 8.
91 Business SA submission to Draft RD16, p. 1.
92 Business SA submission to Draft RD16, p. 3.
93 AdelaideAqua Pty Ltd submission to RBP16, p. 1.
94 AdelaideAqua Pty Ltd submission to RBP16, p. 1.
95 SA Water submission, p. 16.

Inflows - River Murray and reservoirs

The amount of water SA Water extracts from its available sources is dependent on a range of factors, including climate variability, climate change, availability of alternative sources, and policy for the use and sharing of water. In general, water sourced from the Mount Lofty Ranges is the cheapest, followed by water pumped from the River Murray and, finally, water produced by the ADP.

Forecasting inflows to the Mount Lofty Ranges reservoirs is necessary to determine availability of the most cost effective source, as this then impacts the amount of water required from other more costly sources.

SA Water submitted to DEWNR, for review, its methodology for estimating Mount Lofty Ranges reservoir inflows. DEWNR concluded that the key assumptions used in SA Water's inflow estimates, and the methodology used in arriving at these estimates, were appropriate for the purpose.

SA Water's proposed purchase of additional River Murray water licences is treated as capital expenditure, as discussed in section 9.4.6. That section concludes that the proposed purchase of additional water licences is prudent.

When purchased, the water entitlements arising from these licences can be traded on the temporary market in the years when SA Water does not need them. This serves as a revenue source for its customers. The Commission expects that a prudent and efficient business would do this. SA Water has advised that, in its proposed RBP16 revenues, it did not offset the sale of annual allocation water from its purchased entitlements.

However, these water entitlements are assets paid for by SA Water's customers. Any income from the temporary sale of surplus water entitlements should therefore be returned to its customers at the end of that period. Given the level of uncertainty in predicting annual water allocations and the value of temporary sales, the Commission proposed in its Draft RD16 to deal with this issue on an ex-post basis. This would allow for all actual revenue received during the RD16 period to be returned to customers.

In response to this proposal, SA Water stated that it supported returning the additional revenue to customers. However, it added that the costs of carrying out this activity will need to be recovered.[96] It stated that it would only seek to temporarily sell these water allocations where the allocation exceeds that required to maintain supply for SA Water's customers and where there is a net benefit to customers from selling the licences (that is where the revenue generated exceeds the costs of the sale).[97]

The Commission recognises that there are costs associated with holding and trading water licences. For example, there are annual administration fees and charges payable to the State agencies that regulate water licences. There are also administration fees and charges payable to these agencies when these licences are traded. Water market intermediaries, such as water brokers, also charge for providing water trading services including matching buyers and sellers and undertaking the necessary transactions to complete a trade.

SA Water recommended that the revenue from the sale of the temporary water allocations, less the costs of the sale, be passed back to customers.[98] The Commission agrees with this suggestion. However, SA Water must demonstrate that any costs associated with the sale are prudent and efficient.

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96 SA Water submission, p. 20.
97 SA Water submission, p. 20.
98 SA Water submission, p. 20.

At the end of the RD16 period, SA Water will be required to provide the Commission with a 'water licence revenue adjustment statement' that includes, for any River Murray water licence leased by SA Water, information which demonstrates:

- that the leasing of a River Murray water licence over RD16 was prudent and efficient, and
- it received an appropriate market price for any River Murray water licence leased.

Distribution optimisation

The Commission raised concerns with some aspects of SA Water's supply optimisation in RD13. Most of these have been addressed through the new DOT.

DOT takes into account water sources as well as inputs such as demand, inflows, power prices and network constraints. DOT has been subject to review by SA Water's technical consultant, MWH, which found it had been developed using appropriate inputs and constraints, and that it reflected operational realities.

This new tool represents a significant improvement to SA Water's supply optimisation, and is considered to be prudent for the purpose of reviewing base year operating expenditure.

While DOT represents a much more cost optimised approach to SA Water's water supply optimisation, as with many new systems there are likely to be further refinements and efficiencies in future years. The Commission has taken this into account in its final decision when considering the scope for ongoing operating expenditure efficiencies (section 7.4.9).

Adelaide Desalination Plant

For the purposes of forecasting SA Water's operating expenditure, the Commission must consider whether or not it is prudent and efficient for SA Water to operate the ADP during the RD16 period.

There are no requirements for SA Water to operate the plant. The decision will depend on the costs and benefits of running it compared to those of placing it in standby.

In considering SA Water's proposal to operate the ADP at Minimum Production (30 ML per day for nine months of the year), the Commission has evaluated financial and other costs and benefits. It has assessed the following as part of that review:

- documents provided by SA Water as a part of RBP16, including two technical reports prepared by its consultant Aurecon,[99] and supplementary information requested
- the Commission's own technical consultant's assessments of the assumptions and arguments in the Aurecon technical reports and SA Water's business case for using the ADP
- information from desalination industry representatives, and
- stakeholder submissions on RBP16 and Draft RD16.

SA Water provided evidence that it has considered various operating modes for the ADP's use, ranging from 'cold standby'[100] through to 100 GL per year (maximum capacity). The range of modes includes various options for achieving the proposed Minimum Production mode. SA Water has not proposed operating above Minimum Production, as it is of the view that it is not necessary to do so given the availability of other water sources during the RD16 period. It has proposed using the ADP in Minimum

[99] Refer to https://www.sawater.com.au/__data/assets/pdf_file/0008/26927/Attachment-J.pdf for summary report.
[100] The term 'cold standby' assumes that the ADP has a zero production output for one year or longer.

Production largely on the basis that it maximises the value of the plant in the long term and provides security of supply benefits.[101]

Financial arguments for running the ADP

The Commission has considered the various operating modes for the ADP to determine whether any one in particular maximises net benefits to customers. It has examined the costs and benefits that can be quantified (the financial case) under the various production modes.

The detail of that analysis relies on information that SA Water has claimed to be commercial in confidence. However the Commission notes that, at this time, the net benefits under both the 'zero' and Minimum Production modes are marginal.

There is, however, a great deal of uncertainty about the various costs and benefits that comprise those financial cases. A key element of that analysis is the trade off between the additional operating costs of the ADP in Minimum Production mode (which SA Water states is $4.1 million per annum) and the reduced maintenance and capital upgrade costs at other plants that would result from use of the plant (which SA Water states is around $5 million to $6 million per annum).

The Commission has examined those stated costs and benefits carefully and has found that it is difficult to conclude that there is a clear financial case for either of the options (Minimum Production or cold standby). In particular, the financial case stated by SA Water:

- Relies on a high (in a relative sense) level of capital related projects being deferred over the regulatory period. Sustaining this magnitude of deferrals over time is questionable.
- Assumes that the current cost profile of operating/not operating the ADP continues throughout the RD16 period. SA Water has some ability to reduce its ADP related costs under current contractual arrangements and through negotiation with desalination asset manufacturers. If it pursued these opportunities, costs could reduce if the ADP is either used, or if it is placed into cold standby for the RD16 period (section 7.4.9).

Asset stewardship

SA Water submitted that operating the ADP in Minimum Production mode would better preserve the quality of the plant in the long term, relative to the option of placing it in cold standby. It relied on the expert technical views of its consultant, Aurecon, in reaching that conclusion.

The Commission has considered those technical arguments, drawing on advice from Cardno/Atkins and B&V, and has formed the view that many of those arguments are not robust, for various reasons.

First, on analysis, it appears that many of the arguments are based on SA Water's consultant's theoretical assessment and opinion and, in some cases, do not reflect the fees and contractual obligations of the operating and maintenance (O&M) contract between SA Water and the ADP operator (AdelaideAqua Pty Ltd). Furthermore, the ADP operator and asset manufacturers were not consulted in SA Water's asset stewardship assessment. These matters tend to weaken the reliability and relevance of the conclusions drawn from that technical assessment.

[101] Note: The term 'security of supply' in this instance refers to the continuity of supply (that is, business continuity), not water security which is about ensuring that the supply of water meets demand. SA Water has assumed that it will have sufficient water from its surface water (largely its reservoirs and River Murray) and groundwater sources to meet demand over the regulatory period.

The Commission also disagrees with several of the assumptions and conclusions in the Aurecon report relied upon by SA Water. For example, Aurecon has argued that placing the ADP in cold standby mode results in material re-commissioning/restart issues. The Commission, having regard to advice from B&V and noting Osmoflo Pty Ltd's submission, does not accept the level of asset degradation assumed in SA Water's submission. In that context, it is important to note that, under current ADP contractual arrangements, the risk of any re-commissioning problems lies with AdelaideAqua Pty Ltd, not SA Water.

Aurecon has also stated that using the ADP will lead to expedient identification and measured resolution of equipment and process faults/issues. AdelaideAqua Pty Ltd made a similar statement in support of operating the ADP. It stated:

> *In terms of general asset maintenance, it is necessary to understand that the only way to know for sure that a plant is capable of producing water in accordance with the design intent is by testing it frequently. This feedback from the plant is necessary to identify any electro-mechanic assets that may be under-performing or showing signs of deterioration. When the plant is not running, you can only hope that the asset will perform as intended when you need it to, but you can never be sure of it.*[102]

The Commission agrees with the view that using the ADP will lead to expedient identification and measured resolution of equipment and process faults/issues. However, some of these benefits may not accrue to SA Water under the O&M contract arrangements; under those arrangements certain benefits accrue to AdelaideAqua Pty Ltd. Further, the strength of this argument diminishes over time, as feedback accrues from testing.

Other costs and benefits

SA Water has identified other, non-quantifiable benefits associated with use of the ADP in Minimum Production mode, including security of supply and risk management benefits. The Commission agrees that operating the ADP in that mode is likely to produce these benefits, and that they would not arise under cold standby mode for the RD16 period.

In particular:

- SA Water has stated that using the ADP will improve the security of supply to customers who rely solely on the Happy Valley water treatment plant. It has provided examples of recent events that would have resulted in a disruption of supply if the ADP had not been used. The Commission acknowledges that such events are possible in the future, although they are likely to be rare.
- Operating the ADP in Minimum Production mode also provides the flexibility for SA Water to undertake major maintenance work on assets for which the plant represents an alternative source of supply over the RD16 period.
- SA Water has also stated that the use of the ADP allows it to rapidly address disruption events in other supply sources, such as deterioration of water quality due to algal blooms in the reservoirs, poor quality inflow from reservoirs and elevated salinity in the River Murray. SA Water has provided some examples of these events in recent times, although it concedes these events are infrequent. Nevertheless, the Commission agrees that operating the ADP provides a readily available back up in those instances.

[102] AdelaideAqua Pty Ltd submission to RBP16, p. 1.

SA Water stated that running the ADP '*leverages staff experience and our investment in training by keeping a skilled workforce to operate and oversee a complex plant*'.[103] AdelaideAqua Pty Ltd also raised the potential for skill loss as a cost of not running the ADP.[104] The Commission notes that the provision, training and retention of experienced staff are the responsibility of the operator AdelaideAqua Pty Ltd, not SA Water, and the risk associated with keeping a skilled workforce resides with them.

In response to Business SA's comment that now would not be a prudent time to consider shutting down the ADP entirely due to the State Government's cost benefit analysis,[105] the Commission notes that the scope of this analysis is beyond the scope of this regulatory determination. In any instance, the Commission has made an assessment that, based on its consideration of costs and benefits to SA Water's customers, operating the ADP in the RD16 period is prudent and efficient.

The Commission acknowledges the existence of several non-quantifiable benefits of operating the ADP in Minimum Production mode. For example, operational flexibility and business continuity benefits from being able to undertake major maintenance work over the RD16 period. This position reflects that the ADP is a relatively new asset, a point raised by AdelaideAqua Pty Ltd, and SA Water has not yet developed fully integrated operational experience.

During the RD16 period, SA Water should identify the critical assets that could be impacted by the ADP's operation. For those critical assets, the risk profile of forthcoming major maintenance and renewal work should be ascertained and a prioritised works program developed. SA Water can then implement its program with a clear understanding of the impact of the works on its overall network resilience. It is expected that, in coming years, SA Water would be able to articulate how any major maintenance or renewal works alter (reduce) its risk profile.

In summary, the Commission has reached the final decision that the Minimum Production mode proposed by SA Water balances quantifiable costs and operational flexibility. Its final decision is that the revenue caps will include an amount of $4.1 million per annum to account for the running of the ADP in this mode.

Business SA stated that it supports the decision to allow SA Water to operate the ADP in Minimum Production mode, provided there is still a strong emphasis on ensuring efficient water use and prioritising the most cost effective water sources.[106] The Commission's final decision does not require SA Water to run the plant at that, or at any other, capacity. It simply acknowledges that it is prudent and efficient, given the available evidence, to make a revenue allowance that would permit the inclusion of water sourced from the ADP within an optimised water supply portfolio. This is particularly so given that there is only a marginal quantifiable financial difference between making an allowance for operating the plant at no more than that capacity and not making an allowance for operating the plant at all.

SA Water will be expected to prepare a robust business plan for the RD20 period addressing the above concerns. The Commission will make this a formal requirement of the RBP20 process.

103 SA Water RBP16, p. 97.
104 AdelaideAqua Pty Ltd submission to RBP16, p. 1.
105 Business SA submission to Draft RD16, p. 3.
106 Business SA submission to Draft RD16, p. 1.

7.3.3 Electricity use and management

Final decision – Electricity use and management

SA Water's total electricity costs are reasonable and its proposed electricity procurement practice within the period is prudent.

SA Water's proposal

SA Water did not include a specific proposal for electricity expenditure in RBP16. However, the Commission investigated its electricity expenditure and procurement practice. In summary:

- SA Water's electricity cost forecasts across the RD16 period are relatively stable. Electricity costs constitute about 11 percent of its proposed operating expenditure, totalling approximately $203 million over the RD16 period.
- In the past two years, SA Water has made significant changes to the way it procures its electricity, having implemented its Energy Portfolio Management (EPM) initiative. This includes moving from an electricity retail arrangement to a spot price, pass through arrangement. It has confirmed that the savings arising from the EPM have been included in the base year.

Submissions

No submissions commented on SA Water's electricity use and management. However SA Water provided supplementary information following the Draft RD16 stating that, since the preparation of RBP16, changes in the energy market had increased its risks of being able to meet its ongoing operating efficiency targets. This point is discussed further in section 7.4.9.

Discussion

The Commission has examined SA Water's electricity cost assumptions and has concluded the following:

- SA Water's forecast annual electricity wholesale prices (from July 2013), transmission and distribution network costs, over the regulatory period, are within other forecasts[107] obtained by the Commission.
- SA Water's electricity cost for the base year is materially lower than that forecast in the base year for RD13 (a difference of approximately $7 million).
- SA Water has the ability to avoid peak prices through the voluntary curtailment of its pumping, which forms a major part of its electricity usage. This, and its EPM initiative, enable it to effectively limit electricity cost increases to CPI over the RD16 period. Managing costs in that way was an outcome promoted by the Commission in RD13.

On the basis of the above, SA Water's total electricity costs (in the base year and in the RD16 period) are reasonable and its proposed electricity procurement practice is prudent.

As SA Water's new procurement and management practices would be embedded for the RD16 period, further efficiencies may be realised.

[107] For wholesale prices the Commission referred to ACIL Tasman's forecasts supplied from Department of State Development in October 2015. For transmission and distribution network costs the Commission referred to the Australian Energy Regulator.

7.4 Proposed expenditure in 2016-2020

RBP16 proposed some adjustments to the base year. These total $67.9 million across RD16. These are discussed in the remainder of this chapter.

7.4.1 Water industry licence fees

Final decision – Water industry licence fees

The Commission must include water industry licence fees in SA Water's allowed operating expenditure, as SA Water is legally obliged to pay the fees under the WI Act.

While the licence fees are still to be finalised by the Treasurer, the Commission's final decision is that the estimated licence fee contained in RBP16 should be replaced with an updated estimated licence fee, provided by the Department of Treasury and Finance on 24 November 2015, until the finalised licence fee is provided to the Commission for review under Section 24(3) of the WI Act.

The Commission has allocated the licence fee between SA Water's water and sewerage services, using the allocation methodology SA Water used in RBP16.

Section 24(3) of the WI Act provides 'that the annual licence fee for a licence is the fee fixed, from time to time, by the Treasurer in respect of that licence as an amount that the Treasurer considers to be a reasonable contribution towards prescribed costs after taking into account advice contained in a written report provided to the Treasurer by the Commission'.

This annual licence fee includes components associated with the Commission, the Technical Regulator, DEWNR and the DTF for regulatory functions performed within the water industry.

SA Water's proposal

RBP16 anticipates an increase in operating expenditure of approximately $4.2 million per annum, as a result of changes to SA Water's water industry licence fee. (The current fee of $3.1 million per annum is expected to rise to $7.3 million per annum).

RBP16 states that the increase is primarily due to the inclusion of costs of transferring functions to the Technical Regulator, as not all of these costs were transferred at the time of RD13.

SA Water has allocated the increased amount between its water ($2.7 million) and sewerage ($1.4 million)[108] services.

Submissions

The Technical Regulator stated that SA Water's RBP16 included statements regarding the increased licence fees being primarily attributed to the cost of functions transferred to it from SA Water. The Technical Regulator stated that it did not understand the basis for that statement and requested that it be reviewed and corrected by SA Water.[109]

[108] The difference between the sum of these services and the total licence fee is due to rounding.
[109] Technical Regulator submission, p. 1.

In its submission to the Draft RD16, Business SA stated that there is a lack of transparency as to why SA Water's industry licence fees have more than tripled to $9.5 million per annum. It acknowledged that this was a State Government decision and involves some transfer of functions from SA Water to Government, but its view was that this is ultimately paid for by water users who have a 'right to know how such costs are justified and on what basis they are levied on water users.'[110] Business SA requested the Commission clearly articulate if, and to what extent, 'additional costs through industry licence fees are being recovered via SA Water.' [111]

Discussion

On 24 November 2015, the Commission received a letter from DTF advising of the estimated water industry licence fee of $9.5 million per annum.

In response to Business SA's request for the Commission to provide more information relating to the increase in SA Water's licence fee, at this time the Commission has not been provided with this information. It is expected that it will be provided to the Commission to assist it prepare its report to the Treasurer under Section 24(3) of the WI Act, as mentioned above. This report will be tabled in the Parliament of South Australian and the Commission will subsequently publish it on its website.

The Commission does, however, note that any discussion about the costs of regulation to be recovered through licence fees should also consider the benefits that regulation achieves. The Commission's approach is to ensure that the benefits to consumers, for example through improved efficiency in the provision of regulated services, outweighs its regulatory costs.

7.4.2 Water treatment plant residuals

Final decision – Water treatment plant residuals

The Commission's final decision is that SA Water's proposal relating to the disposal of its water treatment residuals is prudent and efficient.

The RBP16 includes costs for disposing of its water treatment residuals.[112] Historically, SA Water disposed of these residuals in quarries or reused them as agricultural and landscaping material. However, EPA regulations now require it to dispose of them at an EPA licensed facility.

SA Water's proposal

RBP16 includes water treatment residual related costs of $8.5 million over the four years of the RD16 period (approximately $2.1 million per annum).

Submissions

The EPA has confirmed that its regulations now require SA Water to dispose of its water treatment residuals and that its old practice is no longer acceptable.[113]

Discussion

SA Water has provided calculations and assumptions to support its forecast costs of disposal. The Commission has reviewed its approach and is satisfied with the assumptions and calculations used.

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110 Business SA submission to Draft RD16, p. 1.
111 Business SA submission to Draft RD16, p. 3.
112 During the treatment of source water, water treatment plants remove contaminants that are unhealthy or undesirable for consumption. The generated waste streams are described as water treatment residuals.
113 EPA submission, p. 9.

7.4.3 Labour cost escalation

Final decision – Labour cost escalation

The Commission's final decision is to adopt a CPI based approach to labour costs for the RD16 period. That is, prior to the application of any ongoing operating efficiency target, it should be assumed that labour costs can be held within CPI.

SA Water's proposal

SA Water has proposed a labour cost escalation factor of 0.5 percent above inflation. It has then applied a one percent efficiency dividend to this, resulting in a 0.5 percent real decrease in the total labour cost envelope.

The SA Water proposal is one percent less than that proposed by BIS Shrapnel in a report from April 2015,[114] commissioned by SA Water. The cost impact of SA Water's proposal for real labour cost increases for direct control (water and sewerage) services is $7.6 million over the RD16 period.

Submissions

Four submissions raised the issue of labour cost escalation:

- In its submission to RBP16, SACOSS supported SA Water's proposal.[115]
- In its submission to RBP16, Business SA argued that labour cost escalations above CPI are difficult to justify in light of South Australia's current economic environment, particularly with regard to employment. It also disagreed with some of the assumptions underpinning future labour market growth, which were presented in the BIS Shrapnel report.[116]
- In its submission to Draft RD16, Business SA stated that it supported the Commission's draft position not to allow real wage cost increases for RD16, but would prefer that the South Australian inflation rate be used as the benchmark rather than the national CPI.[117]
- SA Water opposed the Commission's draft position on the following basis:
  - Its labour costs are not controllable within CPI under usual circumstances. In support of this argument, SA Water provided historical ABS data.[118]
  - The efficiencies achieved in RD13 were the result of a substantial restructure, where the number of people employed was reduced by approximately 10 percent. SA Water has stated that it has limited capacity to meet the Commission's proposed efficiency targets following this change in RD13.[119]
  - The limiting of labour cost escalation to CPI is an implied efficiency. To then apply an ongoing efficiency target is a double counting of possible savings.[120]

114 Refer to http://www.sawater.com.au/__data/assets/pdf_file/0009/26928/Attachment-I_Labour-cost-escalation.pdf.
115 SACOSS submission to RBP16, p. 21.
116 Business SA submission to Draft RD16, pp. 6-7.
117 Business SA submission to Draft RD16, p. 2.
118 This included CPI and wage increase data for the period June 2005 to June 2015. Refer to SA Water submission to Draft RD16, p. 14.
119 SA Water submission to Draft RD16, p. 15.
120 SA Water submission to Draft RD16, p. 14.

Discussion

The Commission considers that, given economic conditions now and anticipated through RD16, it is reasonable to expect that, as a minimum, an efficient company should be able to keep its wage costs within CPI. Any additional efficiencies are incremental to that starting point.

The Commission's final decision has been informed by the following factors.

SA Water's labour costs are controllable

SA Water's labour costs are a controllable and substantial component of total operating expenditure. SA Water has stated that internal labour makes up approximately 25 percent of its controllable operating costs.[121]

Three components contribute to a business's labour costs: wages (the price of labour including associated on costs such as superannuation, leave and personal injuries insurance); the number of people employed; and productivity, which influences both components. Total labour costs and labour prices are, therefore, not the same thing. SA Water's total labour costs are a function of all of these factors and, therefore, any of them can be adjusted to ensure that total labour costs are held within the limits of the CPI.

With respect to the efficient price of labour, the Commission has carefully considered SA Water's argument that this will be above inflation for RD16. This is discussed in detail below.

Efficient price of labour

In RD13, the Commission noted that a pure CPI based approach had worked well across other jurisdictions in driving efficiency and outperformance in regulated entities.[122] In RBP13, SA Water argued that the CPI not be used, and instead proposed cost indices for labour, material and contractor costs that were higher than GDP.[123] It argued for these on the basis of anticipated strong growth in State GSP based on, among other things, the expansion of the Olympic Dam mine. The Commission notes that a number of the assumptions proposed at that time have not held over RD13,[124] and that SA Water was able to outperform the targets set by the Commission through, for example, substantial reductions in total labour costs.

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121 SA Water submission to Draft RD16, p. 15.

122 The Commission, *SA Water's water and sewerage revenues 2013/14 – 2015/16, Final Determination, Statement of reasons*, May 2013, p. 52, available at http://www.escosa.sa.gov.au/library/130527-SAWater_Water_SewerageRevenues_2013-16-FinalDetermination-StatementOfReasons_0.pdf.

123 See Evans and Peck, *Attachment G.2, Review of indexation rates for operating expenditure, SA Water Regulatory Business Proposal 2013*, available at http://www.escosa.sa.gov.au/library/121011-G2_ReviewIndexationRatesOperatingExpenditure.pdf.

124 It is noted that economic conditions relevant to labour have changed since RD13, however these conditions should suppress labour costs, not increase them.

SA Water has stated that its labour prices have historically risen at a rate higher than CPI and has pointed to evidence from the ABS that wages have done the same. On this point, historical information does not necessarily reflect future costs and a more relevant consideration is forecast efficient cost of labour.

In support of its view, SA Water has also referred to the BIS Shrapnel report that says labour prices are expected to rise into the RD16 period. However, some forecasts for labour costs, employment and economic conditions differ from BIS Shrapnel's. For example:

- The Reserve Bank of Australia (**RBA**), in its May 2016 'RBA Statement on Monetary Policy' (**Statement**), states that labour cost pressures remain weak.[125] This follows the RBA's February 2016 Statement which stated that the RBA expects wage growth to remain low for some time.[126]
- The Australian Government Department of Employment outlooks for the five years ending November 2019[127] are not consistent with BIS Shrapnel. For example, the Department forecasts that employment in the Electricity, Gas, Water and Waste Services sector is expected to grow only 3.8 percent over the five years, the third lowest growth of all the industry sectors listed. Within that industry sector, water supply, sewerage and drainage services are expected to deliver employment growth of only 0.2 percent over the five years.
- The South Australian mining and exploration industry was placing upward pressure on wages in the utilities sector at the time RD13 was set, but that impact has slowed substantially.
- Business SA's submission to RBP16 disagreed with some of the assumptions underpinning future labour market growth presented in the BIS Shrapnel report.

SA Water did not propose any real labour cost escalation for its contracted delivery costs, suggesting that labour can be maintained within CPI for these externally delivered costs.

Based on the foregoing evidence, the Commission concludes that growth in the price of labour is not expected to exceed the change in CPI.

In relation to the measure of CPI to be used, although there are several cost indices available, some of which are specific to South Australia such as the South Australian CPI as proposed by Business SA, the Commission will use the Australian CPI[128] as a benchmark for labour costs in RD16. CPI is a measure of changes over time in the price of consumer goods and services acquired by Australian households.[129] Using it, rather than a South Australian or business specific equivalent, recognises that SA Water competes in the wider Australian market for its inputs. It is a commonly used measure in regulatory decision making[130] and the Commission has used it to arrive at other decisions in RD16.

125 Refer http://www.rba.gov.au/publications/smp/2016/may/price-and-wage-developments.html.
126 Refer http://www.rba.gov.au/publications/smp/2015/nov/pdf/05-price-and-wage-developments.pdf.
127 Refer http://lmip.gov.au/default.aspx?LMIP/EmploymentProjections.
128 Based on the ABS 'CPI - All Groups – Australia' measure.
129 For further information on the CPI, see ABS *6461.0 – Australian Consumer Price Index: Concepts, Sources and Methods, 2005*, available at http://www.abs.gov.au/AUSSTATS/abs@.nsf/66f306f503e529a5ca25697e0017661f/429515868B489F76CA25705F001ECA8B?opendocument.
130 The Commission notes that the UK water regulator Ofwat has recently moved to CPI as the primary inflation measure in the setting of price controls (see Utility Week, *Ofwat moves to 'more legitimate' CPI to set price controls*, 10 December 2015).

Quantity of labour and labour productivity

With respect to the number of people employed, SA Water has sufficient flexibility to adjust its number of staff. This has been demonstrated over the RD13 period. SA Water, has stated that it has limited ability to do this in RD16. The Commission notes that, to meet its position on labour costs, SA Water would not be required to make similar changes to the number of staff employed in the RD16 period as it did in the RD13 period, especially assuming a CPI labour price.

Cardno/Atkins concluded that it could not see any grounds for SA Water's total labour costs growing more quickly than general inflation for RD16. It stated that a business operating in a competitive market faces constant pressure to control the affordability of its product relative to overall prices and a regulated business should also. The Commission has taken this advice into account in developing its decision.

With respect to productivity, there is a link between productivity and efficiency. The Commission has considered that productivity attributable to wages (for example, changes in work practices such as rostering) is separate from the ongoing efficiency dividend. As the Commission expects that the price of labour over RD16 will not exceed CPI, it is not expected that, as a starting point, productivity improvements will also need to be achieved. Rather, the latter should form part of the efficiency dividend. Section 7.4.9 discusses the efficiency dividend in more detail. This addresses the concern raised by SA Water that imposing an efficiency target on top of a wage bill within CPI over the RD16 period is double counting the efficiency.

Having regard to all the available evidence, the Commission has made the decision to maintain the approach of limiting labour cost movements to changes in the CPI for RD16.

7.4.4 Defined benefit superannuation liability

Final decision – Defined benefit superannuation liability

The Commission's final decision is that SA Water's proposed operating expenditure to meet its defined benefit superannuation obligations is prudent and efficient.

SA Water's proposal

SA Water has an unfunded liability related to its defined benefit superannuation schemes for past and current employees. Its RBP16 proposes an increase in the level of annual deficit repair payments to $3.9 million in 2016-17, increasing by four percent per annum thereafter across the RD16 period.

SA Water also proposes to continue to operate the legacy defined benefit superannuation schemes across the RD16 period for existing employee members.

Submissions

No submissions commented on SA Water's defined benefit superannuation schemes.

Discussion

The Commission has tested whether or not the proposed deficit repair payments are efficient and whether there is any scope to minimise or avoid incurring further costs related to existing employees in its legacy defined benefit superannuation schemes. On both issues, based on the information available, it is the Commission's view that the proposed operating expenditure is prudent and efficient.

7.4.5 Safety, health, wellbeing and training

Final decision – Safety, health, wellbeing and training

The Commission's final decision is that SA Water's proposed safety, health, wellbeing and training expenditures (additional to the base year) are considered prudent and efficient.

However, the Commission would expect its safety, health and wellbeing related risks to be reduced in the future as a result of this expenditure.

SA Water's proposal

SA Water has proposed allocating $3.2 million over the regulatory period to fund initiatives relating to the safety, health and wellbeing of staff, as well as training to meet the minimum standards of competence for field operators. This amount includes increases to the base year totalling $2.8 million.

Submissions

No submissions commented on SA Water's safety, health, wellbeing and training.

Discussion

SA Water has stated that the nature of the activities undertaken by its staff put it among the highest risk industries. It is noted that SA Water's failure to comply with safety, health and competency standards may result in breaches of water quality regulatory standards (set independently).

The Commission accepts the high risk profile of SA Water's activities and notes that the purpose of additional expenditure (above the base year) is about reducing this risk.

SA Water has stated that, during its organisational restructure, investment in training was minimised to enable employees to transition to the new structure. This reduction largely occurred in the base year (2014-15), which means annual expenditure increases are necessary to reflect ongoing training needs for the RD16 period.

SA Water has argued that, due to the effect of the organisational restructure, its training costs per employee in the base year are significantly less than other utilities. The Commission has obtained benchmarking data to support this view and agrees that an increase in expenditure is appropriate to better reflect an ordinary level training expenditure. The Commission's technical consultant has also concluded that SA Water's proposed safety, health and wellbeing and training expenditures are prudent and efficient.

7.4.6 Customer Assist Program

Final decision – Customer Assist Program

The Commission's final decision is that SA Water's proposed expenditure to expand its Customer Assist Program (residential customer financial hardship program) is prudent and efficient for the RD16 period.

However, prior to any future proposals for further expenditure, it should report to the Commission on the effectiveness of the proposed payment incentive scheme funded through this additional expenditure.

SA Water's proposal

SA Water is proposing to introduce a payment incentive scheme for residential customers participating in its Customer Assist Program (financial hardship program) at an additional cost of $0.6 million per annum.

SA Water states that, based on the experience of other utility businesses, it expects the initiative will result in a positive impact on cash flow and debt reduction. However, it has not sought to quantify these positive financial impacts.

Submissions

Four submissions provided comments relevant to this initiative.

- COTA SA suggested that greater promotion of the hardship program was required, adding that its members were reporting poor awareness.[131]
- SACOSS noted that payment incentive schemes were widely recognised as best practice in helping hardship customers address their outstanding debt issues.[132]
- SAFCA noted that it had met with SA Water's hardship team to suggest some improvements to the proposed scheme, however it did not give details of its suggestions.[133]
- EWOSA supported the Commission's draft position to accept SA Water's proposed $0.6 million for its Customer Assist Program.[134]

Discussion

Two perspectives can be used for measuring the effectiveness of the additional operating expenditure on this initiative – impacts on customers and impacts on SA Water's business. Accordingly, the effectiveness of the payment incentive scheme should be assessed against both.

For example:

- from the perspective of the customer, the extent that hardship customers[135] have been able to repay debt or avoid debt, and
- from SA Water's perspective, improved debt recovery.

131 COTA SA submission to RBP16, p. 5.
132 SACOSS submission to RBP16, p. 7.
133 SAFCA submission to RBP16, p. 3.
134 EWOSA submission to Draft RD16, p. 1
135 As at 30 June 2015, fewer than 0.5 percent of SA Water's customers were participating in its hardship program.

The Commission has examined SA Water's bad and doubtful debt position and considers there to be some merit in a payment incentive scheme, as an improvement in the payment of arrears by hardship customers should have some impact on the level of bad debt carried by SA Water. However, this will only be relevant to the extent that this bad and doubtful debt is related to customers participating in, or eligible to participate in, the Customer Assist Program.

RBP16 did not seek to quantify any benefits that may arise from this initiative. However, given the overall low levels of bad and doubtful debt that SA Water already carries relative to other Australian water companies,[136] and the fact that this initiative will only target a proportion of such debts, it is unlikely that any operating expenditure savings would be material, or allow for such a scheme to be self-funding. The Commission therefore accepts the proposed expenditure of $0.6 million per annum for the RD16 period. However, at the end of RD16, SA Water should report to the Commission on the effectiveness of the proposed payment incentive scheme funded through this additional expenditure. This will inform future expenditure allowances.

7.4.7 Your Say program

Final decision – Your Say program

SA Water's proposed operating expenditure on its Your Say program is prudent and efficient.

However, the Commission would expect future Your Say program costs, beyond RD16, to be reduced as a result of this expenditure.

SA Water uses the Your Say program to understand its customers' needs and expectations.

SA Water's proposal

SA Water originally proposed a total of approximately $0.7 million in RBP16 for this program.

In November 2015, it provided updated forecasts of operating expenditure for the base year and RD16 period. These forecasts included changes to the treatment of Your Say program, decreasing costs by approximately $0.5 million across the RD16 period.

Submissions

No submissions commented on the cost of SA Water's Your Say program.

Discussion

The Your Say program that was used for RBP16 was a multi-stage process. It involved using expertise outside of SA Water to help deliver customer engagement sessions and interpretation of results. The goal was to determine how much customers were willing to pay for improvements.

SA Water has stated that the increased expenditure profile is required to develop in-house expertise so that, in future, similar programs can be run largely from within. As such, the Commission would expect to see future costs reduced as a result of this expenditure.

136 Comparison on key debt management metrics between SA Water, other Australian water companies and two major energy retailers for the period 2009-10 to 2012-13 was undertaken for the water pricing reform options inquiry. The analysis included: SA Water, Sydney Water, Water Corporation (WA), Queensland Urban Utilities, Yarra Valley Water (Vic), South East Water (Vic), City West Water (Vic), Barwon Water (Vic), Southern Water (Tas), Origin Energy and AGL Energy.

7.4.8 Adjustments to SA Water's operating expenditure arising from capital expenditure projects

Final decision – Adjustments arising from capital expenditure projects

The Commission's final decision is to remove $1.5 million in operating expenditure associated with the Murray Bridge wastewater treatment plant capital expenditure project and $1.8 million in operating expenditure associated with the Mandated Growth Wastewater Network capital expenditure project.

During its assessment of the prudence, timing and efficient level of expenditure of capital projects (refer section 9.4.4), the Commission identified two further adjustments to SA Water's proposed operating expenditure. They included:

- removal of duplicated operating costs for Murray Bridge wastewater treatment plant (WWTP) in the base year for a reduction of $1.5 million over the RD16 period, and
- a reduction of $1.8 million in operating expenditure over RD16 for the Mandated Growth Wastewater Network project, to reflect a proposed reduction in capital expenditure for this project.

7.4.9 Ongoing efficiency targets

Final decision – Ongoing efficiency targets

The Commission's final decision is to adopt annual efficiency targets of one percent for the first two years of RD16, followed by 1.5 percent for the following two years.

SA Water's proposed efficiency targets consist of information systems (IS) and other, general, efficiencies. The Commission has identified the potential for further significant efficiency savings over the regulatory period, and has proposed targets that are above those prepared by SA Water.

The Commission is of the view that SA Water's proposed ongoing IS enabled efficiencies over the RD16 period are, generally, appropriate.

In making its determination on SA Water's proposed operating expenditure, the Commission must consider the following two efficiency related matters.

- Catch up efficiency – This considers how SA Water is currently performing, taking into account its performance in relation to other similar companies (or, where SA Water is positioned in relation to the 'efficiency frontier'). Catchup efficiency is the productivity gains that may be realised when a company moves from its current position to that of the 'frontier' utility. The Commission has not proposed a catchup efficiency target, on the basis that SA Water's operating expenditure is relatively efficient compared to its peers (as discussed in section 7.3.1).
- Continuing (or ongoing) efficiency – This considers future efficiency gains that can be achieved by efficient businesses (the rate at which frontier businesses become even more efficient). This section deals only with ongoing efficiency for the RD16 period.

SA Water's Proposal

SA Water has proposed an incremental one percent per annum reduction in operating costs for both water and sewerage services over the RD16 period. It proposes achieving this through a combination of IS enabled efficiencies, and other unidentified measures (general efficiencies) within its business (Table 7.2). These general efficiency savings are not directly attributable to specific initiatives – they are stretch targets that the business has set for itself.

Table 7.2: Efficiencies proposed by SA Water in RBP16 (Dec14$m)

Efficiencies	2016-17	2017-18	2018-19	2019-20	Total
IS enabled	3.7	6.4	9.3	11.4	**30.8**
General	1.0	2.6	4.7	7.2	**15.5**
Total	**4.7**	**9.0**	**14.0**	**18.7**	**46.3**

Submissions

SACOSS estimates that additional efficiencies of at least $23 million are achievable in SA Water's total proposed expenditure, although it provided no detailed analysis or evidence to support this.[137]

In its submission to the Draft RD16, SA Water recommended the reinstatement of its proposed one percent efficiency target across all base operating costs.[138] SA Water stated that it has already undergone significant business change, and the levels proposed by the Commission would risk the achieving of regulatory service standards.[139] SA Water also raised a number of matters in response to how the Commission estimated its further general efficiency targets, in supplementary information to its submission.

Discussion

The methodology for determining the continuing efficiency target to apply to SA Water for the RD16 period is broadly similar to that applied in RD13.

In forming its view on the appropriate level of continuing efficiency to apply over RD16, a combination of 'bottom up' and 'top down' assessments has been considered. The Commission is conscious of avoiding potential double counting of efficiencies and is of the opinion that its proposed approach, whereby the top down efficiency target is informed by bottom up identified efficiencies, provides a sound basis for determining the efficiencies that SA Water can reasonably achieve in RD16.

IS-enabled efficiencies

SA Water's total one percent per annum proposal, as stated in RBP16, has been developed with the aim of meeting a commitment to water prices not increasing by more than the rate of inflation over the second regulatory period. It has stated that it is not certain how it will achieve the target.

However, SA Water provided business cases for its IS projects that included efficiency estimates arising from them. It also provided an assurance report, prepared by KPMG, in support of these benefits.

137 SACOSS submission to RBP16, p. i.
138 SA Water submission to Draft RD16, p. 13.
139 SA Water submission to Draft RD16, p. 13.

The Commission has reviewed a sample of SA Water's proposed IS projects as a part of its capital expenditure review, and has concluded that the savings targets it has set are, generally, appropriately challenging for this part of its business. As stated in section 9.4.7 it is recognised that, as this is based on a sample, operating efficiency gains resulting from the IS capital investment may be understated in some programs.

General efficiencies

The Commission has identified a number of potential efficiency savings that could arise over the RD16 regulatory period. These represent a significant proportion of SA Water's proposed general efficiency savings. The Commission has not undertaken a comprehensive project and function level assessment, and has relied primarily on those matters identified through the operating expenditure review. In this respect, these will be a subset of the efficiencies available to SA Water over RD16. Some of the most significant include:

- Business transformation – Further efficiencies are likely to eventuate over the RD16 period as new structures and systems are bedded down. There is also potential for SA Water to undertake further new business transformation programs, although in the setting of efficiency targets, the Commission has not assumed SA Water will achieve the same level of savings as it did it in RD13. These cumulative benefits are likely to be significant and are more likely to increase towards the end of the regulatory period.
- Changes to major contracts governing SA Water's operating expenditure – A large proportion of SA Water's annual operating expenditure is accounted for by its major contracts. Small efficiencies to the way these contracts are managed could yield potentially large savings.
- Water supply distribution optimisation: DOT has been used since 2014 and was used again in the preparation of the supply mix optimisation for RBP16. SA Water has identified further efficiencies throughout 2015. The Commission expects further DOT related efficiencies to arise in the RD16 period.
- Understanding the relationship between cost, service level and risk – SA Water's current understanding of the relationship between cost, service level and risk is still developing. The benefits arising from those opportunities over the RD16 period are expected to be significant.
- ADP related efficiencies – The Commission has identified areas where SA Water could seek to achieve savings relating to the operation of the ADP. These include savings opportunities it could pursue with the ADP operator. These savings are more likely to increase towards the end of the RD16 period.

In Draft RD16, the Commission included within estimated ADP related efficiencies, savings relating to ultra-filtration membranes replacement.[140] Following the publication of Draft RD16, SA Water provided further information confirming that it had factored these membrane savings into its five percent capital efficiency proposal, since ADP membrane costs are capitalised for regulatory purposes. The Commission acknowledges that these costs are treated as capital expenditure, rather than operating expenditure, and has made a downward adjustment of -0.25 percent to the ongoing efficiency targets in the last two years of RD16. This adjustment reflects the value of the potential efficiency benefits from membrane replacement that were incorrectly taken into account. This adjustment reduces the efficiency factor in 2018-19 and 2019-20 from 1.75 percent to 1.5 percent.

[140] The Draft RD16 Statement of Reasons incorrectly referred to reverse osmosis membranes rather than ultra-filtration membranes.

In further support of SA Water's submission that the Commission should reinstate a one percent ongoing efficiency target, it argued that the Commission had not appropriately taken into account factors likely to produce cost pressures when setting these targets. SA Water provided one example, relating to electricity costs. It stated that there has been increased volatility in the South Australian electricity market since submission of RBP 2016 and:

> *…There is significant risk to our proposed energy procurement and management as a result of the closure of a major electricity generator in the state's north before the end of this financial year. Volatility in the electricity markets has already been experienced since the announcement and has resulted in higher electricity prices. This was not factored into RBP 2016.*

On this matter, the Commission notes:

- SA Water has not submitted any revised electricity cost estimates.
- While SA Water has provided an example of a factor that could influence electricity cost increases, there are other factors that may contribute to electricity cost decreases over RD16. For example, there are potential decreases in electricity demand as a result of changes to a large South Australian mining firm's production levels, which was not known at the time of RBP16.

On the basis of the above points, the Commission has not been provided with sufficient information to change its draft position on electricity costs. If unforeseeable events do arise during RD16 that cause SA Water in incur materially higher electricity costs, then this can be considered as a possible pass through at the end of that period.

On the broader point that the Commission has not appropriately taken factors likely to produce cost pressures into account when setting these targets, as stated in Draft RD16, the Commission has taken a conservative view on these potential efficiency savings. For example, it has not assumed that all of the potential savings will be realised. Furthermore, the Commission also note that it had not undertaken a comprehensive project and function level assessment, and relied primarily on those matters identified through the operating expenditure review. In this respect, these will be a subset of the efficiencies available to SA Water over RD16.

Apart from the matters above, SA Water did not provide additional or specific information to support its recommendation to reinstate its efficiency proposal.

In summary, the Commission has taken a conservative view of a range of efficiency opportunities available to SA Water, based on the qualitative and quantitative information available. Those opportunities suggest that, while it is difficult to quantify a precise actual target, the information currently available indicates potential for enhanced targets in the last two years of the regulatory period.

For the reasons discussed above, the Commission has determined annual targets of 1.0 percent for the first two years of RD16, followed by 1.5 percent for the following two years (Table 7.3). This takes into account the change from Draft RD16 relating to ADP efficiencies, as discussed above, and equates to a total of $21.4 million over the period. This is $6 million more in savings than proposed in RBP16.

Table 7.3: Forecast operating expenditure efficiencies in RD16

Efficiencies	2016-17	2017-18	2018-19	2019-20
General (%)	1.0	1.0	1.5	1.5
General (Dec14$m)	1.0	2.6	7.0	10.8

The Commission has formed a different view than SA Water in response to its suggestion that its targets put at risk SA Water's ability to achieve regulatory service standards. Taking into account Cardno/Atkins analysis, the Commission's view is that:

- All of SA Water's regulated activities should be considered 'core services', and therefore for RD16 there is no meaningful distinction between core and non-core services.
- The Commission's proposal equates to a total of $6.0 million over RD16, or around 0.3 percent of the total operating expenditure proposed by SA Water. SA Water has made the link between reducing operating expenditure and a risk of not meeting the levels of service expected by customers. While this association is appropriate, the issue relates to materiality; that is, whether or not the $6.0 million of additional operating efficiency savings will meaningfully impact on the provision of service. Given SA Water met 65 of its 66 service standards in 2013-14, there is little reason to consider that SA Water has consumed its operating headroom now, or will do so in achieving these additional efficiency gains in coming years.
- Furthermore, in its assessment, Cardno/Atkins noted that investigating the links between expenditure, asset performance and service provision is an area for SA Water to develop further in RBP16. A further distinction is applicable and that is to understand how levels of service impact on the customer experience and in turn, impact their future expectations for service provision. Although these are not easy relationships to quantify, in attempting to do so SA Water will be able to identify areas in which it can reduce operating expenditure without meaningfully impacting customer service.

7.5 Final decision

The Commission's final decision is that $1,795.3 million ($Dec14) is a prudent and efficient operating expenditure amount to be included in RD16. It is one percent lower than that proposed by SA Water in RBP16 (Table 7.4).

The final decision is based on:

- adjustments to the overall operating expenditure allowance identified through an assessment of the prudence and efficiency of SA Water's proposed base year expenditure, and proposed increases to the base year (as discussed in sections 7.1 to 7.4), and
- application of a general efficiency target above that proposed by SA Water for the third and fourth year of RD16.

Table 7.4: Final decision on operating expenditure (Dec14$m)

Operating expenditure Dec14$m	2016-17	2017-18	2018-19	2019-20	Total[141]	Difference from RBP16
Base year expenditure	439.0	435.6	433.4	429.0	1736.9	-
Increase adjustments						
Water Industry Licence fees	6.4	6.1	6.0	5.9	24.4	8.3
Information technology business change projects[142]	1.9	2.9	4.3	4.6	13.7	-
Network growth[143]	1.6	2.3	3.3	2.9	10.1	-1.8
Water treatment plant residuals	2.2	2.2	2.2	2.2	8.8	-
Labour-cost escalation	0.0	0.0	0.0	0.0	0.0	-7.6
Past service superannuation liability	1.1	1.1	1.1	1.1	4.3	-
Safety, health, wellbeing and training	0.7	0.7	0.8	0.7	2.9	-
Customer Assist Program	0.2	0.6	0.6	0.6	2.1	-
Your Say program	-0.2	0.2	-0.3	-0.3	-0.5	-
Other adjustments						
Murray Bridge WWTP	-0.4	-0.4	-0.4	-0.4	-1.5	-1.5
Additional efficiency adjustment off base	-	-	-2.4	-3.6	-6.0	-6.0
Final decision	**452.5**	**451.4**	**448.7**	**442.7**	**1795.3**	**-8.6**

141 Totals may not add up due to rounding.

142 'Information technology business change projects' refers to operating expenditure that arises from corresponding capital projects (see Chapter 9).

143 'Network growth' refers to operating expenditure that arises from corresponding capital projects (see Chapter 9).

8 Value of the regulatory asset base at 1 July 2016

Final decision – Value of the regulatory asset base at 1 July 2016

The Commission's final decision is to set the initial values of the Regulatory Asset Bases (RABs) marginally lower than those proposed in RBP16, as follows:

- for drinking water, the value of the RAB at 1 July 2016 is $8,137.4 million, and
- for sewerage, the value of the RAB at 1 July 2016 is $3,783.9 million.

8.1 Introduction

The drinking water and sewerage industries require significant investments of capital resources to fund infrastructure developments. Substantial infrastructure is required by SA Water to provide drinking water and sewerage services to its customers, and the value of that infrastructure is a critical driver of its revenues and prices.

The RAB reflects the regulatory value of assets associated with the provision of drinking water and sewerage services. The Commission's revenue determinations are designed to allow SA Water to recover the costs of providing regulated assets over the period of their useful lives (otherwise known as regulatory, or allowable, depreciation) and to earn an appropriate rate of return on the value of those assets.

Two elements of the RAB are critical to determining SA Water's revenue allowances. The first is to establish the value of the initial RAB to apply at the commencement of the RD16 period. The second is to determine how that value should be updated, or rolled forward, over the course of the regulatory period.

This chapter deals with the first of these elements. It outlines the Commission's final decision in relation to the values of the RAB that will apply as at 1 July 2016 for the purposes of establishing the revenue caps for RD16.

8.2 SA Water's proposal

SA Water has proposed 1 July 2016 RAB values of $8,179 million and $3,804 million for drinking water and sewerage respectively to determine the return on assets and the return of assets building block components for the RD16 revenue caps.

These RAB values were calculated by applying a RAB roll-forward methodology, consistent with the requirements of the Pricing Orders, to the RAB values as at the commencement of the RD13 period (as stipulated through the Pricing Orders).

The RAB roll forward methodology incorporates adjustments to the RAB value for capital expenditure, disposals and depreciation. It also requires that the RAB value be re-indexed for inflation at the commencement of each new regulatory period.

In its application of the RAB roll-forward methodology, SA Water applied actual capital expenditure (except for the remainder of the current financial year, for which estimates were used), actual disposals, actual depreciation and actual CPI data in relation to the re-indexing.

8.3 Submissions

Uniting Communities submitted that customers have already paid for the ADP and, on this basis, the Commission should question whether SA Water is seeking to have them pay for it more than once.[144]

The Commission confirms this is not the case. The RAB regulatory mechanism operates such that customers pay for the capital cost of assets over the lives of those assets, including the costs of financing those assets.

8.4 Discussion

The Pricing Orders (section 2.5.2) specify that, for the purposes of RD16:

- the methodology for rolling forward the values of the RABs must be consistent with Principle 5[145] of the NWI Pricing Principles (section 2.5.2), and
- that the values of the RABs must be based upon the RAB values specified by the Treasurer in the second Pricing Order.

The Commission has reviewed the RAB roll-forward calculations as undertaken by SA Water and is satisfied that the methodology applied is consistent with the requirements of the Pricing Orders.

The Commission has formed the view, however, that the adjustments for capital expenditure and depreciation should be amended. The reasons for these views are set out below.

To ensure that only prudent and efficient capital expenditure is funded by customers, the Commission, with the support of Cardno/Atkins, has carried out an ex-post review of actual capital expenditure incurred during the RD13 period. This review was foreshadowed in RD13.

The methodology for carrying out this review was to examine in detail a sample of completed projects, testing for prudence and efficiency. Eight projects, with a total investment of $28.1 million, were selected because each had been substantially completed during the first two years of the RD13 period, and expenditure had been materially overspent against the forecast provided at the time of RD13.

Having considered the sampled projects against the prudence and efficiency test, the Commission's final decision is to make adjustments in three areas: IS, asset renewal and advancement of capital expenditure.

- Two IS projects were examined as part of the ex-post capital expenditure review – records management upgrade and Microsoft operating environment replacement. Expenditure on both had been considered prudent in RD13, however, one element of the records management upgrade did not deliver its stated outcome of addressing State Records legislation. As the project did not clearly specify the intended outcomes to be met by the vendor, leading to capital expenditure being incurred without the benefits being realised, expenditure on this element is not deemed to have been prudent. As a result, the Commission has determined that a downward adjustment of $0.6 million be made to the RAB, allocated equally between the drinking water and sewerage businesses.

144 Uniting Communities submission, pp. 4-6.
145 Principle 5 of the NWI Pricing Principles refers to the recovery of capital expenditure.

- Funding for upgrade works at the Wingfield Capelli Road Wastewater pumping station was included in the allowance for RD13. Based on subsequent condition assessments, SA Water determined that the pump station was in a structurally poorer condition than previously identified, and concluded that construction of a new pump station was the preferred option. The Commission believes this is prudent, however, the cost of the new pump station is higher than benchmark costs, and detailed analysis of project documentation has found no supporting justification. The Commission has, therefore determined that a downward adjustment of $1.4 million be made to the sewerage RAB to reflect the efficient cost of works.
- During RD13, SA Water chose to advance a number of capital expenditure projects ahead of the timing considered prudent. Analysis of the completed projects shows that works to a value of $16.9 million were advanced by one to two years. The Commission's final decision is to add this investment into the RAB at the time when it was prudently required, rather than follow the actual profile of expenditure.

SA Water provided a submission on the issue of ex-post reviews, and the specific adjustments detailed above. Further information on this submission, and the Commission's response, is provided in section 9.5. For clarity, the Commission notes that the large capital expenditure adjustments in 2015-16 are due primarily to updated actual and forecast capital expenditure data provided by SA Water since RBP16 was published.

The Commission's proposed adjustments arising from the ex-post capital expenditure review are summarised in Table 8.1.

Table 8.1: 2013-14 to 2015-16 capital expenditure adjustments

Ex-post capex adjustments	2013-14 (Dec12$m)	2014-15 (Dec12$m)	2015-16 (Dec12$m)	Total (Dec12$m)	Total[146] (Dec14$m)
Drinking water					
SA Water proposal – Nov 2015	193.5	116.7	187.8	498.0	525.3
Adjustments	-8.1	0.4	-35.7	-43.4	-45.8
Adjusted capex	**185.4**	**117.1**	**152.0**	**454.6**	**479.5**
Sewerage					
SA Water proposal – Nov 2015	86.4	86.9	126.5	299.8	316.2
Adjustments	-0.7	-1.4	-21.1	-23.2	-24.5
Adjusted capex	**85.7**	**85.5**	**105.4**	**276.6**	**291.7**

8.4.1 Depreciation

The RAB roll-forward calculations performed by SA Water (and underpinning the calculations in RBP16) used actual (or latest estimates for the second half of 2015-16) regulatory depreciation as a basis for reducing the RAB values.

The roll-forward of the RAB values is designed to ensure that, at any given time, the RAB value reflects historical capital expenditure and historical allowed returns of assets. The adjustments to the RAB should therefore reflect actual historical (prudent and efficient) capital expenditure and the allowed historical return of the asset.

[146] All $Dec12m amounts are re-indexed to Dec14$m for RD16.

The allowed historical return of the asset is the same as the historical allowed depreciation, not the actual historical depreciation. The depreciation allowed during the RD13 period represents the return of the asset allowed over that period.

It is therefore appropriate to adjust the value of the RABs as at 1 July 2016 for the difference between the depreciation amounts used by SA Water and the depreciation amounts allowed over the first regulatory period. These adjustments are set out in Table 8.2.

Table 8.2: 2013-14 to 2015-16 depreciation adjustments

Depreciation adjustments	2013-14 (Dec12$m)	2014-15 (Dec12$m)	2015-16 (Dec12$m)	Total (Dec12$m)	Total[147] (Dec14$m)
Drinking water - depreciation					
SA Water proposal - Nov 2015	163.4	166.5	169.6	499.4	526.7
Adjustments	-2.8	-1.2	-0.3	-4.3	-4.5
Adjusted depreciation	160.6	165.3	169.3	495.1	522.2
Sewerage - depreciation					
SA Water proposal - Nov 2015	89.6	91.9	94.8	276.4	291.5
Adjustments	-1.6	-1.1	-1.2	-3.9	-4.1
Adjusted depreciation	88.0	90.8	93.6	272.5	287.4

8.5 Final decision

The impact of the draft adjustments, as set out in Table 8.1 and Table 8.2 on the values of the RABs as at 1 July 2016 is set out in Table 8.3.

Table 8.3: Summary of draft adjustments to RAB values at 1 July 2016 (Dec14$m)

Roll-forward adjustments	RBP16	SA Water Nov 2015 update	Capex adjustments	Depreciation adjustments	Proposed July 2016 RAB values
Drinking water	8,291.4	8,178.7	-45.8	4.5	8,137.4
Sewerage	3,838.7	3,804.3	-24.5	4.1	3,783.9

147 All Dec12$m amounts are re-indexed to Dec14$m for RD16.

9 Capital expenditure

Final decision – Capital expenditure

The Commission's final decision is that SA Water's total drinking water and sewerage capital expenditure forecast should be adjusted from $1,272.8 million to $1,200.1 million ($Dec14). This amount is 5.7 percent lower than that proposed in RBP16.[148]

The final decision is based on:

- adjustments to the overall capital expenditure allowance identified through a bottom up assessment of the sample of projects and programs
- application of a top down efficiency factor, and
- extension of the application of an efficiency factor to cover information systems investment.

9.1 Introduction

Capital expenditure is expenditure on the purchase or creation of an asset that can be utilised into the longer term. SA Water operates in a capital intensive industry and owns many long life assets, such as pipe networks, dams, and water and sewerage treatment plants. Over time, existing assets may be upgraded or replaced, and growth of the network requires that new assets be constructed or acquired.

The Commission will add forecast capital expenditure to the RAB if it deems that expenditure to be prudent and efficient. SA Water is then allowed to earn a return on, and of, the value of the assets over their life. In contrast, operating expenditure is expensed as incurred.

Capital planning is a continuous and ongoing process. While SA Water develops a longer term view of its assets under its 25 year capital plan, the key focus of RBP16 is on the expenditure required for the four years of RD16.

For the purpose of setting a prudent and efficient capital allowance, the Commission has examined a sample of the capital projects and programs proposed by SA Water for RD16. (Information on the sampling methodology is provided in section 9.4.2.)

The approach taken to assess the prudence and efficiency of SA Water's RBP16 proposal is as follows:

- make adjustments to reflect updated information provided by SA Water subsequent to the preparation of RBP16
- identify particular projects or programs that are not prudent, and thus should either not be reflected in the revenue caps or should be subject to timing changes
- identify particular projects or programs that have not been estimated at the efficient cost of the proposed works, and
- identify the scope for efficiency gains, both continuing and catch up, that are likely to be available during RD16.

[148] Values as adjusted for updates received following publication of RBP16, and the consequential impact of revised 2015-16 forecast. See Section 9.2 for further information.

While the Commission has made a point in time assessment of the prudence and efficiency of SA Water's capital plan, it recognises that the business operates in a dynamic environment and must decide on appropriate expenditures to meet its obligations and maintain the long term integrity of its network. For this reason, SA Water's governance, systems, and processes should ensure that the actual investment decisions made during the regulatory period are likely to be prudent and efficient.

9.2 SA Water's proposal

RBP16, as published on 31 August 2015, proposed net capital expenditure of $1,243.9 million across the RD16 period. In November 2015, SA Water submitted an updated capital expenditure proposal, providing 2014-15 actuals and consequential impact into later years, and addressing queries that arose from the Commission's initial analysis. The revised proposed net capital expenditure, used as the basis of the Draft RD16, was $1,229.3 million.

In RBP16, SA Water applied a flat five percent efficiency target to all infrastructure capital expenditure (that is, all capital expenditure except IS), removing $60 million from its net capital expenditure proposal. IS was excluded from the efficiency target as SA Water considered there is much less opportunity for efficiencies in this area than in infrastructure works.

9.2.1 Updated 2015-16 forecast and consequential impact

In March 2016, the Commission asked SA Water to provide an updated forecast of its capital expenditure for 2015-16, based on eight months actual spend and a forecast for the final four months of the year. This updated information allows the Commission to set the opening RAB for RD16 as accurately as possible. (The 2015-16 actuals will be used to further update the RAB as part of the RD20 review.)

The Draft RD16 was based on the RBP16 forecast for 2015-16 of $331.5 million. However, the updated forecast provided by SA Water, at $263.2 million, is $68.3 million lower than the RBP16 forecast, the reduction driven by both efficiency savings and the deferral of capital expenditure into later years. SA Water identified $43.5 million of deferred spend from 2015-16 that it forecast would be required during the RD16 period, and requested that this be added to the RD16 capital expenditure allowance.

Taking account of the above, on an annualised basis, the revised RBP16 proposal is nine percent lower than the capital expenditure amounts reflected in the Final Determination for the RD13 period, while being 23.5 percent higher than the capital expenditure that SA Water now expects to incur during RD13.

The Commission has reviewed the 2015-16 deferred capital expenditure and allowed $26.9 million as prudent in RD16. The remainder ($16.6 million) was assessed as arising from newly identified capital works or re-profiled programs, rather than being consequential capital expenditure from 2015-16 deferrals.

9.3 Submissions

Various submissions to both the RBP and the Draft RD16 provided comments on capital expenditure issues.

Business SA questioned the overall level of proposed capital expenditure, and whether or not SA Water has been efficient in its capital delivery during RD13.[149] SACOSS expressed concern at the overall level of capital expenditure proposed, and 'strongly recommends that the Commission undertake detailed analysis about business cases and allowances'[150] on the proposed projects and programs of work.

149 Business SA submission to RBP16, p. 6.
150 SACOSS submission to RBP16, p. 6.

Further, SACOSS sought the Commission's assurance that sufficient review has been undertaken to ensure that final project costs do not exceed budget estimates.[151] Both the review methodology outlined below, and the ex-post review of capital expenditure detailed in section 8.4.1, provide assurance that customers are funding only prudent and efficient capital expenditure.

SACOSS also expressed concern at the level of proposed investment to reduce salinity levels in regional areas, suggesting that, due to the low population at Orroroo, SA Water may wish to consider lower cost alternative solutions to improve drinking water quality.

COTA SA noted that some of its stakeholders had raised the potential issue of water quality in some regions of South Australia, in particular, problems with salinity.[152]

Business SA raised the specific issue of the cost of works to improve safety at Kangaroo Creek Dam.[153] This project was reviewed in detail by the Commission during the RD13 process and was deemed to be prudent and efficient. The project is currently in progress and SA Water's latest forecast is that, due to additional work required to reinforce the dam structures against seismic events, it will overspend by around $7 million (8.9 percent). Following completion, it is likely that this project will be subject to an ex-post review for RD20, which will ensure that only prudent and efficient expenditure is funded by customers.

The EPA was supportive of numerous projects and programs of work within SA Water's proposed capital expenditure program, and confirmed that it had been 'heavily engaged by SA Water during the development of its Regulatory Business Proposal 2016'.[154]

EWOSA expressed support for investment in Information Technology (IT) systems and the continuing implementation of a digital strategy to improve customer services.[155] Business SA, however, in its response to the Draft RD16, expressed concern over the level of planned IT investment, and supported the extension of the application of capital expenditure efficiencies into IT spend.[156]

In its response to the Draft RD16, the EPA supported the Commission's draft position to include funding for both the Murray Bridge and Port Lincoln wastewater treatment plant projects.[157]

SA Water provided a submission in response to the Draft RD16 which urged the Commission to reconsider its draft position on the Orroroo Water Quality Improvement project, and to adopt a revised methodology for the ex-post review of capital expenditure and reinstate the expenditure that it is proposed to disallow from the RAB.[158]

Further consideration of the Orroroo project is provided in section 9.4.5, while further discussion on the ex-post review of capital expenditure is provided in section 9.5.

Additionally, in response to the Draft RD16, the Commission received over 40 written and video submissions from individual customers and representatives of organisations within the Orroroo community.[159] These are considered in section 9.4.5.

151 SACOSS submission to Draft RD16, p. 2.
152 COTA SA submission to RBP16, p .5.
153 Business SA submission to RBP16, p. 6.
154 EPA submission to RBP16, p. 1.
155 EWOSA submission to Draft RD16, p. 2.
156 Business SA submission to Draft RD16, p. 2.
157 EPA submission to Draft RD16, p. 17.
158 SA Water submission to Draft RD16, pp. 17-18.
159 All public submissions from the Orroroo community are available at http://www.escosa.sa.gov.au/projects/231/sa-water-regulatory-determination-2016.aspx#stage-list=3.

9.4 Discussion

9.4.1 Review of key SA Water planning documents

The Commission, with the assistance of its technical consultant, Cardno/Atkins, has reviewed various policies, procedures and key practice documents outlining SA Water's approach to strategic asset management planning, and underpinning the development of RBP16.

The review found that SA Water has made considerable progress in its approach to asset management since RD13. Its asset management framework has been reviewed and shaped to ensure that it is closely aligned to the ISO55000 Asset Management Standard.[160] SA Water undertook a gap analysis by developing its future asset management architecture and plotting its current processes against this framework. It has indicated that it will be working to address various improvement opportunities over the next four years as it continues to move towards best practice asset management. This is a realistic, evolutionary approach and is supported by the Commission.

Further, since RBP13, the Commission has seen evidence of improvements in SA Water's capital planning approach in the following areas:

- development of a line of sight between what customers value and capital expenditure
- better identification of risk ratings associated with alternative options, and
- improved modelling of the 25 year replacement profile of its assets.

SA Water has also developed a series of Key Practice Documents (KPDs) to explain how it puts asset management principles into practice. These KPDs provide an overview of particular asset management concepts, together with the rationale for their consistent application, or the basis on which exceptions are made.[161]

The KPDs allow it to:

- provide internal guidance to asset planners on the application of key asset management principles in the capital planning process
- provide the wider organisation with an appreciation of the practices and procedures underpinning a consistent and robust asset planning approach, and
- demonstrate to external parties, such as the Commission, that SA Water understands and applies sound asset management practices.

The Commission has observed that, within the RD13 period, SA Water has moved towards aligning with industry best practice and has developed a culture of seeking continual improvement in business practices to drive efficiency.

9.4.2 Bottom up review using project/program sampling methodology

The RBP16 capital expenditure plan comprises more than 130 individual projects and programs of work. With support from Cardno/Atkins, the Commission reviewed a sample of 18 of these and tested them for both prudence and efficiency. It also examined SA Water's wider Governance, Capital Planning, Cost Allocation, and Asset Management processes.

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160 ISO55000 is an international standard for the optimised management of physical assets that has been widely adopted in utilities, transport, mining, process and manufacturing industries worldwide. Refer http://www.assetmanagementstandards.com/.

161 To date, SA Water has developed 10 KPDs covering major areas within asset management, for example: Asset Information; Optimised Life Cycle Decision Making; Criticality; Condition and Performance Monitoring.

This sample was chosen to ensure a wide range of areas of planned investment and covered:

- the key driver of the investment (that is, asset renewal, customer/demand growth, external obligations, water security, and IS projects and programs)
- water and sewerage operations
- metropolitan and regional operations
- larger and smaller value projects and programs.

In selecting the sample, the Commission also took account of those investment areas previously reviewed in RBP13, with the aim of ensuring that, over a number of regulatory periods, the full range of different types of investment were covered.

The sample also was designed to ensure that a material percentage of the total planned investment was subject to review. The selected sample covered over 45 percent of SA Water's proposed net capital expenditure.

Issues identified through the review of this sample are set out below.

9.4.3 Asset renewal

The following projects and programs of work were chosen to assess the prudence and efficiency of SA Water's proposed investment of $597.8 million for renewal of water and sewerage assets.

- Water Network – Reticulation Mains – Asset Program – to prioritise water mains renewal to avoid failure and resolve existing low pressure issues ($77.9 million)
- Water Network – Pressure Management Initiatives – Asset Program – to improve pressure related issues, including investment in pressure reducing valves ($12.6 million)
- Water Network – Structures – Asset Program – to renew and replace elements of structures (for example, concrete) to avoid failure and eventual loss of water supply ($98.3 million)
- Wastewater Network – Trunk Mains – Asset Program – to prioritise wastewater mains renewal to avoid failure ($9.9 million)
- Wastewater Network – Structures – Treatment Plants – Asset Program – to renew and replace elements of structures (for example, concrete) to avoid failure and expensive replacement costs ($43.1 million), and
- Mechanical and Electrical – Wastewater Treatment Plants – Asset Program – to renew and replace mechanical elements (for example, pumps) and electrical equipment (for example, switchboards) to avoid failure ($33.9 million).

Based on a detailed review of this sample, SA Water's proposed investments for renewal of water and sewerage assets are assessed to be broadly prudent and efficient. However, the following matters were identified.

- While SA Water has used a risk based approach to prioritise its renewals works on Water Network – Structures, there is a level of uncertainty as to the condition of the remaining uninspected assets. As the condition assessment exercise undertaken to date has focused on structural assets that were clearly identified as problem sites, it would be expected that the remaining assets are less likely to fall into the poorest condition grades when the remaining assessments are performed. Currently, two expenditure lines within this program allow for uncertainty uncovered through the conduct of the remaining asset condition assessments, a contingency allowance and an undefined works allowance. The contingency allowance of $10 million is considered adequate to cover the uncertainty around the condition of the remaining structural assets. The Commission's draft position, therefore, was that the additional $12 million for undefined works based on condition assessments should be removed from this program.

  Subsequent to the Draft RD16, SA Water provided further confidential information on this program of work in support of its position that the $12 million for undefined works be included within total capital expenditure. It argued that the $10 million contingency for addressing known problem sites is separate from the $12 million required to address sites that not yet been assessed.

  The Commission reviewed this new information and sought further advice from its technical consultant, Cardno/Atkins. Taking account of the advice received, the Commission has decided that the allowed $10 million of contingency is sufficient to address those sites that have already been assessed, and those still to be assessed. Having already assessed the high risk sites, the review of lower risk sites by SA Water is unlikely to identify a significant number of further sites that will require work during the RD16 period. The Commission's final decision is to remove the $12 million contingency for RD16.

- Greater understanding is needed by SA Water of the criticality of individual assets. Where network vulnerability from the potential failure of an asset is confirmed, operational response plans should be developed for use in the event of failure, before the backlog of capital works has been resolved. For the development of future programs, the risk matrix needs to consider the impact of operational solutions to mitigate risks and invoke contingency plans. As this issue is a matter of prioritising works within the programs, no adjustment to the proposed capital expenditure allowance is justified.

- The inter-relationship between programs needs to be considered when prioritising works during RD16. (For example, expenditure on Pressure Modulation Initiatives reduces the required expenditure on the Reticulation Mains Renewal Program.) However, as the benefits from the deferral of mains replacement within the pressure managed zones will not be accrued until beyond RD16, no adjustment to the proposed capital expenditure allowance is justified.

Overall, a reduction of $12 million has been made to take into account the issues identified through the review of the sample of projects and programs for asset renewal.

9.4.4 Growth

The following projects and programs of work were chosen to assess the prudence and efficiency of SA Water's proposed investment of $173.2 million for growth of water and sewerage assets.

- Wastewater Treatment Plant – Murray Bridge WWTP relocation project – to construct a new treatment plant to address issues at the existing site and to meet future growth ($66.6 million)
- Wastewater Network – Mandated Growth WW Network SFL – Asset Program – to meet growth in demand within the wastewater network ($17.7 million)
- Wastewater Network – North Lefevre Peninsula WW Diversion project – to upgrade the network to meet growth in demand ($8.5 million), and
- Wastewater Treatment Plant – Bolivar Capacity Growth Upgrade project – to increase the capacity to meet environmental concerns and future growth ($24.8 million).

Based on a detailed review of the above sample, SA Water's proposed investments for growth of water and sewerage assets are assessed to be broadly prudent and efficient. However, the following matters were identified.

- Benchmarking of the unit costs for the new sludge plant planned for Murray Bridge showed that the forecast costs were above benchmark estimates from comparable plants built in Australia.

  SA Water has provided detailed costing information on this project and evidence that its proposed cost has been independently verified. The Commission reviewed all information provided by SA Water and has sought expert advice from its technical consultant, Cardno/Atkins. The benchmarking evidence shows that the efficient cost of the plant is likely to be $14.0 million lower than the cost proposed by SA Water ($7.0 million in the RD16 period; $7.0 million in the RD20 period), notwithstanding SA Water's independently verified estimate. It is the Commission's final decision to reduce the capital expenditure for the Murray Bridge WWTP by $7.0 million for RD16.

- As part of the mandated growth program, SA Water included an allowance for infill development (further development within established areas). Encouraging infill development will, all else being equal, lead to a reduction in costs for servicing growth elsewhere. More efficient use of existing network assets will lead to business savings. It will also make use of general excess capacity in the metropolitan sewer networks, due to a reduction in per capita discharge over the past decade or so. The Commission's position is that current levels of expenditure should be maintained rather than increased. An adjustment of $3.3 million has therefore been made.

Overall, a reduction of $10.3 million has been made to take into account the issues identified through the review of the sample of projects and programs related to growth of water and sewerage assets.

9.4.5 External obligations

The following projects and programs of work were chosen to assess the prudence and efficiency of SA Water's proposed external obligations investment of $383.3 million.

- Improve Environmental Performance (Wastewater) SFL – Asset Program – to improve effluent quality and to increase re-use of sewage ($37.2 million)
- Water Network – Orroroo Water Quality Improvement project – improve quality of water supply to township ($12.6 million)
- Wastewater and Water Networks – WHS Improvement – Asset Program – to reduce safety risks to employees by enhancing or renewing existing infrastructure ($75 million), and

- Water Network – Tailem Bend to Keith Pipeline Water Storage Structure project – to construct additional water storage to improve security of supply ($5.7 million).

Based on a detailed review of the above sample, SA Water's proposed investments relating to external obligations for water and sewerage assets are assessed to be broadly prudent and efficient. However, the following matters were identified.

Improve Environmental Performance (Wastewater)

The detailed costing provided by SA Water for the Improve Environmental Performance (Wastewater) program did not reconcile with the level of investment requested in RBP16. The Commission has reviewed the detailed costing, which is $10.2 million lower than the amount presented in RBP16, and removed this unsupported value in the final decision.

Planned expenditure related to energy efficiency initiatives is not considered prudent, as no detail was provided to justify the planned works or the benefits that would accrue from the initiative. The Commission would expect that a net present value positive business case would support any such discretionary investment (that is, that it would be self-funding). As a result, a further $4 million adjustment has been made.

Based on the above, the Commission's final decision is that the capital expenditure allowance for the Improve Environmental Performance (Wastewater) asset program should be reduced by $14.2 million.

Orroroo Water Quality Improvement

The Orroroo township is currently supplied by locally sourced bore water, which is of relatively poor quality in terms of both hardness and salinity. Through RBP16, SA Water has proposed that it will build a new pipeline to link it into the existing River Murray sourced water supply network at Peterborough, at a cost of $12.6 million.

Importantly, while the water supplied to Orroroo is of poor quality, SA Health has confirmed that it is safe to drink. The issue for Orroroo is that, along with approximately 30 other regional townships, SA Water has identified that the water supplied is not compliant with water supply aesthetic guidelines.[162]

There has not been uniform support for this project through the RD16 consultation process.

Some respondents, particularly the District Council of Orroroo Carrieton and the majority of residents of Orroroo, strongly supported it, while others, such as SACOSS, expressed concern at the level of proposed investment to reduce salinity levels in regional areas.

In Draft RD16, the Commission reached the view that the proposed business case for the Orroroo upgrade was insufficient to demonstrate the prudence or efficiency of the project on a stand-alone basis. It noted that there are some 30 townships in this State which receive poor quality water and that SA Water had not explained why the Orroroo project, as opposed to some other project, should proceed. Therefore, the draft revenue caps did not include an amount which would reflect the costs of the project as proposed.

The Commission's assessment of discretionary projects and programs, such as the Orroroo water quality improvement project, involves a consideration of the proposed business case for undertaking those works.

[162] SA Water has measured compliance against the Australian Drinking Water Quality Guidelines 2011, prepared by the National Health and Medical Research Council and the Natural Resources Management Ministerial Council. The Commission notes that these are guidelines not mandatory obligations.

This extends to a consideration of whether or not there are broad societal costs and benefits. In that context, the Commission takes into account the willingness of the broader customer base to subsidise such investments (as identified by SA Water's customers through the Your Say engagement program). Further, it examines the predicted outcomes to the direct beneficiaries and their attitudes towards the project.

It is helpful to turn to those two matters first.

In terms of the wider customer base, through the Your Say program, SA Water sought views about improving water quality in regional areas. In response, 68 percent of respondents were prepared to pay up to $1.30 per annum to support SA Water investing in projects to improve water quality in regional areas.[163]

The Commission accepts the survey finding that consumers are willing to contribute to projects that improve regional water quality during the RD16 period, at a price of up to $1.30 per customer per annum (which equates to approximately $10 million in the period).

In terms of the views of the Orroroo residents, in 2014, SA Water surveyed the direct beneficiaries of the proposed project, and received a response from one third of residents of Orroroo. While they were made aware that they would directly benefit from the investment, customers stated at that time that they were unlikely to use SA Water mains water as their primary source of drinking water.

However, following release of Draft RD16, the District Council of Orroroo Carrieton conducted a further survey of residents, which found that 98 percent of respondents were likely to use an improved water supply as their primary source of drinking water.

That change in community support for the project is also evidenced by the many submissions received from Orroroo residents and representatives from organisations within the Orroroo community, all strongly supporting the proposed pipeline. The Commission accepts that there is now strong local support for the proposed project.

The Commission therefore concludes that there is wider community support for a project such as the proposed Orroroo upgrade and that the residents of Orroroo are keen for the project to proceed.

The next question is: is the Orroroo project prudent and efficient on its own merits as a stand-alone project as proposed by SA Water? That is, should customers pay for this project as opposed to some other project undertaken by SA Water?

Information provided by SA Water does not demonstrate that the Orroroo project should be undertaken as a stand-alone project ahead of projects in other townships with poor quality drinking water. The Commission has reviewed the business case material and found it to be insufficient to support the project on a stand-alone basis in Draft RD16.

However, that does not mean that SA Water should not look to improve poor quality supplies more generally, through a targeted, prioritised, upgrade program.

As noted above, there is wider customer support for regional water quality improvement projects, with customers willing to pay approximately $10 million during the RD16 period. The Commission has accepted that such expenditure would be prudent and will include it within the revenue caps for RD16, on the basis explained below.

163 The Commission notes that the proposed project (during RD16) to upgrade the water supply to Warooka and Point Turton, while primarily driven by supply reliability issues, will also address water quality in an area currently identified as having poor water quality.

Given the wider context of water quality upgrades explained above, to deliver better customer outcomes in rural areas during the RD16 period, SA Water should identify, define and prioritise the regional water quality upgrade projects, including Orroroo, and then undertake a high priority project during that period.

In doing so, it should evaluate and prioritise the works required across townships with water quality issues, taking into account matters such as cost (both on a total cost and per supply point/per beneficiary basis), level of local and wider community support, and consideration of all supply options, including non-potable options, to produce a long term, prioritised program of regional water quality improvement works.

Given its current state of knowledge on these matters, this should be a task readily and quickly undertaken by SA Water.

Through that process, SA Water may well identify that Orroroo is the highest priority. In that circumstance, it would be prudent and efficient for SA Water to spend the allowed $10 million to complete the Orroroo upgrade during the RD16 period.

Further, if it satisfies the Commission up front as to the validity of its prioritisation program, demonstrating that the funds will be used in a prudent and efficient manner, investments made by SA Water in accordance with that program will be considered prudent and an ex-post expenditure review would not be conducted in relation them.

Tailem Bend to Keith Water Storage

Benchmarking of the unit costs for the proposed Tailem Bend to Keith water storage structure showed that the forecast costs were above benchmark estimates. However, SA Water has provided the Commission with site specific information that justifies the additional costs above comparable benchmarks. The Commission has, therefore, accepted SA Water's proposed costs.

Little Para Water Treatment Plant Filter Refurbishment

RBP16 included a project (Little Para Water Treatment Plant filter refurbishment – $3.9 million) that SA Water has confirmed can be deferred if the ADP remains operational. As the Commission proposes to allow funding to run the ADP at minimum production across RD16 (refer section 7.3.2), an adjustment has been made to remove this project.

Taking into account the issues identified through the review of the sample of projects and programs to meet external obligations related to the water and sewerage retail services provided, an overall reduction of $20.7 million has been made.

9.4.6 Water security

To examine the prudence and efficiency of proposed water security investment, the proposed project to purchase additional River Murray water licences was reviewed.

SA Water proposes rebalancing its portfolio of water entitlements so that it holds more entitlements from upstream states, which have historically demonstrated a higher level of allocation against entitlements compared to South Australia. It is generally recognised that Victoria has more reliable allocations in times of drought, because of the way its water accounting framework allows for water to be carried over from year to year.

SA Water explained that it would undertake the purchase and sale of entitlements when market conditions are favourable and this may lead to a different expenditure profile than that put forward in RBP16. This approach is considered appropriate and, if warranted, the actual capital expenditure can be tested through an ex-post review as part of RD20. Further discussion of the treatment of potential revenue from the temporary sale of water entitlements is contained in section 7.3.2.

No adjustment has been made to SA Water's water security expenditure proposal.

9.4.7 Information systems (IS)

The following projects and programs of work were chosen to assess the prudence and efficiency of SA Water's proposed investment of $126.9 million for IS assets:

- Information and Communications Technology (ICT) Assets Lifecycle Program – Asset Program – to renew IS software and hardware ($19.6 million)
- Field Process Re-engineering – Asset Program – to enhance information and systems access to field staff ($13.9 million)
- IS Business and Management Application lifecycle program – Asset Program – to refresh core business systems ($11.3 million), and
- Information Management Program – Asset Program – to extend the Business Intelligence initiative into more areas of the business ($2.7 million).

Based on a review of this sample, SA Water's proposed investments for IS assets are assessed to be broadly prudent and efficient. While the planned level of IS spend is higher than during RD13, the increases are driven by either the provision of an improved level of service to customers, or to generate operating cost efficiencies in the wider business. However, the potential for efficiency gains resulting from the IS investment has not been fully explored and may be understated in some programs. This has been a consideration in setting the ongoing efficiency targets for operating expenditure detailed in section 7.4.9.

No specific project or program adjustments have been made to the proposed IS capital expenditure, however, the Commission will apply a general efficiency target to the IS capital expenditure program (section 9.4.8).

9.4.8 Efficiency target

Efficiency in regulated utilities is typically assessed using the concept of an efficiency frontier to determine the scope for achieving efficiencies. This type of assessment results in two types of efficiency improvements:

- continuing efficiency – the amount by which the efficiency frontier moves over time (that is, the rate at which the frontier company becomes more efficient), and
- catch up efficiency – the rate at which the regulated entity closes the gap between its current level of performance and that of the frontier company.

Continuing efficiency

Continuing efficiency reflects the rate at which a frontier company will continue to improve through innovation and the application of new technology. It is, therefore, an industry wide measure and, for mature industries such as water engineering, should be broadly consistent across regulatory decisions in different jurisdictions.

Cardno/Atkins recommended setting a 0.25 percent annual continuing efficiency target, citing a recent Organisation for Economic Co-operation and Development (OECD) study[164] that is supportive of this figure, describing it as a conservative and achievable target. As part of the RD13 determination, the Commission set a continuing efficiency target of 0.4 percent per annum. There have been relatively few relevant regulatory decisions in the period since RD13. However, both Australian Capital Territory Electricity and Water Corporation (now Icon Water) and Hunter Water have been set continuing efficiency targets of 0.4 percent per annum. Further, since the publication of the Draft RD16, the Independent Pricing and Regulatory Tribunal of New South Wales (IPART) has published draft determinations for both Sydney Water and Hunter Water for the 2016-17 to 2019-20 period, in both cases setting continuing efficiency targets of 0.25 percent per annum. Those decisions have not yet been finalised and are subject to change.

The Commission has reviewed the OECD study and notes that, while the analysis is wide ranging and may not be directly applicable to the Australian water industry, all of the observed efficiency improvements were in excess of 0.25 percent per annum. The Commission considers that, taking account of the above, and given that there is a national drive for innovation and productivity, a target of 0.4 percent per annum is appropriate.

Catch up efficiency

The level of catch up efficiency should reflect the specifics of the entity at a point in time and, as such, may vary greatly over time and between businesses.

SA Water has made considerable efforts to improve the efficiency of its capital program delivery through initiatives in the following areas:

- scope management
- estimating and cost management
- risk based governance
- contingency management
- greater standardisation
- program versus project level delivery
- targeted procurement, and
- category management.

Many of the initiatives in these areas are currently in the implementation phase with the efficiency benefits to be fully realised during the RD16 period.

164 OECD, The Future of Productivity, 2015, p. 34, available at http://www.oecd.org/eco/growth/OECD-2015-The-future-of-productivity-book.pdf

In assessing the scope for efficiency gains in the delivery of capital expenditure over RD16, Cardno/Atkins identified the following:

- SA Water has demonstrated through RD13 that it is able to realise substantial efficiencies in capital delivery. Its analysis identified that, through being more efficient and taking advantage of favourable market conditions, it reduced expenditure (compared with RD13) by 4.2 percent.
- Capital costs have increased at a rate less than CPI in recent years and there is sufficient reason to consider that this will continue over coming years. This will help SA Water efficiently deliver capital works.
- While the capital cost benchmarking exercise showed good agreement between SA Water's cost estimates and the benchmark costs in some areas, there was considerable variance in others. This suggests that SA Water's estimating processes are still maturing and there is scope to deliver more efficient outcomes in RD16.
- Many of the initiatives being rolled out under the Efficient Capital Delivery program (and the broader Business Transformation program) will reach maturity during RD16.
- SA Water's owner's costs (corporate overheads) applied to capital projects are significantly higher than benchmarks. Cardno/Atkins considers that SA Water will be able to achieve cost savings through tighter control of these costs in coming years.

The Commission has considered the above advice and accepts that these are relevant factors in setting a catch up efficiency target. Further, it considers that, as SA Water continues to improve its approach to asset management, additional opportunities for efficiency in capital delivery, driven by improved asset information, and mature, integrated systems and processes, will present themselves.

The Commission considered the following two options in assessing how to set a catch up efficiency target.

- Adopt a flat percentage reduction to the capital expenditure allowance. This methodology, presented in RBP16, takes a simple five percent off the bottom line capital expenditure requirement in each year. Cardno/Atkins advised that it considers this challenge to be broadly appropriate in magnitude and that it sends a clear message to the business that cost control is an imperative in delivering the capital expenditure program. This methodology sets a catch up efficiency challenge of around $60 million across the RD16 period.
- Set a compounding annual percentage reduction to the capital allowance. This methodology was used by the Commission in RD13, and has been commonly used by regulators in other jurisdictions over many years. It sets an incremental efficiency target that seeks to mirror the rate at which an entity is likely to be able to improve the efficiency of its activities, by applying an annual compounding percentage efficiency challenge. The Commission considers this to be a more appropriate form of target, as it better reflects the rate at which SA Water will be able to make improvements in its processes and, as a consequence, its level of costs. Cardno/Atkins advised that it supported this methodology and recommended that a two percent annual catch up efficiency target be applied. This would also set a catch up efficiency challenge of around $60 million across the RD16 period.

To test the level for the catch up efficiency target, the Commission has also built on the sampling analysis undertaken. As discussed above, the Commission reviewed, in detail, 18 of the projects and programs of work that make up the RBP16 capital expenditure submission. In total, these projects/programs represent more than 45 percent of SA Water's proposed capital expenditure. Extrapolating the results of the sample analysis over the entire capital expenditure proposal would also set a catch up efficiency challenge of around $60 million across the RD16 period.

Taking account of all of the above information, it is the Commission's decision that a catch up efficiency challenge of two percent per annum (compounding) be set across the RD16 period.

Summary of efficiency target

The Commission's final decision is to set a capital efficiency target as set out in Table 9.1.

Table 9.1: Capital efficiency target (Dec14$m)

	2016-17	2017-18	2018-19	2019-20
Annual continuing efficiency target	-0.40%	-0.40%	-0.40%	-0.40%
Annual catch up efficiency target	-2.00%	-2.00%	-2.00%	-2.00%
Total annual efficiency target	-2.40%	-2.40%	-2.40%	-2.40%
Compounding efficiency target	**-2.40%**	**-4.74%**	**-7.03%**	**-9.26%**

Extension of application of efficiency target

As stated above, SA Water proposed applying a flat five percent efficiency target over the RD16 period to all infrastructure capital expenditure (that is, all capital expenditure except IS). IS investment was excluded, as SA Water considers that there is much less opportunity for efficiencies in this area than in infrastructure works.

It is the Commission's final decision that, to ensure that productivity is a focus across all areas of the business, the efficiency challenge should be extended to include SA Water's IS capital expenditure. Various initiatives to improve the efficiency of capital delivery, as proposed by SA Water for infrastructure capital projects, could equally apply to IS projects. The Commission has, therefore, included an IS capital expenditure efficiency challenge of $6.2 million across the RD16 period.

9.5 Ex-post review of capital expenditure

SA Water stated, in its submission to the Draft RD16,[165] that it considers the current ex-post review methodology to be out of context and unbalanced, and suggested that a fairer approach would be to consider any individual project variation in the context of the overall capital allowance, and only disallow the investment when a project has significantly exceeded the original forecast and the overall investment is above that allowed in the determination. SA Water cited the Australian Energy Regulator's (AER) methodology as an example of this regulatory practice for ex-post reviews, and requested that the Commission adopt this criteria. Under that approach, no capital expenditure in the RD13 period would be disallowed, as SA Water's total capital expenditure during the period was below the amount forecast in RD13.

[165] SA Water submission to Draft RD16, pp. 18-19.

The Commission has considered SA Water's submission, and makes the following points:

- There are two main reasons for conducting an ex-post review:
  - to promote efficient capital expenditure behaviour, and
  - to ensure that customers do not pay for inefficient expenditure in perpetuity through its inclusion in the RAB.
- The inclusion of an ex-post review formed part of RD13, and was designed to incentivise efficient behaviour in that period. Changing the nature of the review after the period, irrespective of whether it produces a favourable or unfavourable outcome to SA Water, is not preferred by the Commission as it does not promote regulatory certainty.
- There is no relationship between an underspend/overspend at total capital expenditure level, and whether the work actually completed was prudent and efficient.
- The efficiency of work execution cannot be assessed ex-ante.
- The AER model provides a balanced suite of supplementary incentive measures covering capital expenditure, operating expenditure, and service quality. It aims to encourage regulated entities to make efficient decisions on when and what type of expenditure to incur, and to balance expenditure efficiencies with service quality. It would not be appropriate to adopt one aspect of this framework in isolation.
- Adoption of a revised capital expenditure review methodology should be considered as part of the SA Water RD20 framework development, rather than as a reason for making an adjustment in the current period.

For the above reasons, the Commission will therefore maintain its draft position on both its current ex-post review methodology, and the RAB adjustments detailed in section 8.4.

9.6 Final decision

The Commission's final decision is that SA Water's total water and sewerage capital expenditure forecast should be adjusted from $1,272.8 million to $1,200.1 million (Dec14$m).

This final decision is based on:

- adjustments to the overall capital expenditure allowance identified through a bottom up assessment of the sample of projects and programs
- application of a top down efficiency factor, and
- extension of the application of an efficiency factor to cover IS investment.

Table 9.2: Final decision on capital expenditure (Dec14$m)

Capital expenditure (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total[166]	Difference from RBP16
Asset renewal	135.3	154.7	148.2	140.5	578.7	-19.1
Growth	25.1	32.0	50.0	45.6	152.7	-20.6
External obligations	105.3	137.4	73.1	51.8	367.6	-15.7
IS	34.1	28.5	30.6	15.8	109.0	-17.9
Other	0.2	-6.8	-0.3	-1.1	-7.9	0.5
Final decision	**300.0**	**345.9**	**301.6**	**252.5**	**1200.1**	**-72.8**

Note: 'Other' comprises capitalised ADP membrane replacement costs and customer contributions

[166] Totals may not add up due to rounding.

10 Rate of return

Final decision – Rate of return

The Commission's final decision is that the rate of return to apply for the purposes of calculating the revenue caps for RD16 is:

- 4.53 percent (real, post-tax) for 2016-17
- 4.33 percent (real, post-tax) for 2017-18
- 4.01 percent (real, post-tax) for 2018-19
- 3.81 percent (real, post-tax) for 2019-20.

These rates represent the Commission's final estimate of the real, post-tax costs of capital that a benchmark efficient entity would require to provide drinking water and sewerage services, including sufficient incentive to continue to invest in those services.

The adoption of year specific rates of return represents a deviation from RD13, and is an outcome of the implementation of a trailing average cost of debt calculation (updated annually).

10.1 Introduction

The regulatory rate of return is a measure of the opportunity cost of investment in regulated assets. Setting it at an appropriate level is integral to ensuring that customers do not pay prices higher than necessary, while providing sufficient incentives for the regulated utility to provide for ongoing investment in relevant infrastructure. It is a key input into the building block approach used in the regulation of monopoly services, such as those provided by SA Water.

Consistent with the standard regulatory building block approach, the rate of return attempts to forecast the efficient cost of capital that would be incurred by a prudent and efficient water utility during the RD16 period. It should not, and does not, attempt to estimate the rate of return that SA Water itself might be expected to achieve in practice.

The Commission considers that the appropriate regulatory rate of return can, and should, change over time, as economic and market conditions change. To account for recent changes to the cost of capital, the Commission has, in this final determination, set the regulatory rate of return to apply to SA Water's regulated assets from 1 July 2016 as close as possible to that date, so that the most up to date data is used.

As discussed in Chapter 2, the third Pricing Order required the Commission to provide a report to the Treasurer on its proposed approach to the calculation of the regulatory rates of return to apply for the purposes of RD16. The Commission issued its final report (Rate of Return Report), setting out the proposed approach, in March 2015.[167] The Rate of Return Report sets out the Commission's reasoning in relation to all inputs into the estimation of the regulatory rates of return to apply for RD16 and, unless a compelling case has been made to deviate from its proposals, the Commission has maintained the approach established in that paper. This chapter should therefore be read in conjunction with the Rate of Return Report.

[167] The Commission's SA Water Regulatory Rate of Return 2016-2020 Final Report to the Treasurer, March 2015.

10.2 SA Water's proposal

In RBP16, SA Water proposed a single (average) rate of return of 4.2 percent (real, post-tax), albeit based on data that was current at, or shortly prior to, the release of the document. A comparison of its proposed rate of return, against the rates of return determined by the Commission using updated market data, is set out in Table 10.1.

Table 10.1: SA Water proposed rates of return (real, post-tax, %)

Summary rates of return (real, post-tax, %)	2016-17	2017-18	2018-19	2019-20
SA Water (RBP16)	4.20	4.20	4.20	4.20
Impact of updates/adjustments				
Updated risk free rate	0.05	0.05	0.05	0.05
Updated trailing average cost of debt	0.23	0.03	-0.29	-0.49
Updated inflation estimate	0.05	0.05	0.05	0.05
Total impact on rate of return	0.33	0.13	-0.19	-0.39
Final decision	4.53	4.33	4.01	3.81

10.3 Submissions

Many of the submissions received by the Commission in relation to RBP16 raised issues concerning specific aspects of the rate of return proposed in RBP16. In addition, several of the submissions received in relation to the Draft RD16 also raised issues concerning the draft rate of return position. The remainder of this chapter sets out the basis for the Commission's decision on the rate of return, having regard to the Rate of Return Report and consideration of relevant issues raised in submissions to RBP16 and the Draft RD16.

10.4 Discussion

10.4.1 Methodology

Under the National Water Initiative (NWI), to which South Australia is a signatory, the rate of return should be developed using the weighted average cost of capital (WACC), with the cost of equity element derived using the capital asset pricing model (CAPM).

Consistent with RD13, the Commission will use a real, post-tax framework for developing the revenue caps for RD16, with the WACCs calculated using the following formula:

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

where:

k_e	=	cost of equity
k_d	=	cost of debt
i_{exp}	=	adjustment for expected inflation
E	=	market value of equity
D	=	market value of debt
V	=	market value of the firm (V = E + D)

This is consistent with the Rate of Return Report, and is also the basis proposed in RBP16. No issues were raised in relation to the rate of return methodology in the public submissions made to RBP16 or the Draft RD16.

10.4.2 Cost of debt

10 year trailing average approach, with no weightings applied

The Commission's longer term regulatory approach is based on a prudent debt financing strategy that assumes long term (10 year) bonds are issued and re-financed as and when they mature. The long term nature of the bonds reflects the long lives of regulated drinking water and sewerage assets. The cost of debt approach assumes that 10 percent of total debt is refinanced each year, and that the assumed cost of debt for a single year is the average of long term financing costs over that year and each of the preceding nine years. In a regulatory context, this approach is called the 10 year trailing average cost of debt.

The 10 year trailing average cost of debt approach avoids over reliance on prevailing market rates, whereby the resultant cost of debt could be significantly different to the efficient costs that would form part of an ongoing business debt portfolio. The risk that the cost of debt is under or over stated during the regulatory period is reduced, providing a downward influence on the benchmark cost of equity.

In the Rate of Return Report, the Commission proposed using a 10 year trailing average approach that is weighted to reflect the capital expenditure incurred in each of the 10 years. In RBP16, SA Water argued that, in the context of relatively stable annual capital expenditure requirements, a 10 year trailing simple average approach would:

- produce outcomes not materially different to those derived using the weighted-average approach, and
- eliminate the additional complexity associated with defining and applying the weighted-average approach (which, to provide a more accurate estimate, would also need to take assumed debt refinancing into account).

The Commission has compared the 10 year average cost of debt (on a simple basis) to that derived using weightings attributable to the sum of new debt required in each year (to refinance existing debt and to fund new capital expenditure). Based on yield data between 1 July 2006 and 30 June 2015 (extrapolated to June 2016), and assuming a gradual transition to the trailing average approach over this 10 year period, the annual average weighted trailing average cost of debt was 23 basis points higher than its simple trailing average counterpart.

The Commission has formed the view that this difference (being three percent of the cost of debt) is not material. It also agrees with SA Water's argument that, in the context of stable capital expenditure, the weightings would have no impact on the result.

In relation to the longer term regulatory approach, SACOSS submitted (in response to RBP16) that it was inappropriate to assume a longer term debt profile than the seven year term to maturity undertaken in RD13. In response, the Commission notes that the assumption in RD13 was always intended to form the basis on which a 10 year bond yield could be extrapolated. The use of a seven year term to maturity reflected that, at the time of RD13, the only term to maturity available for the Bloomberg BBB fair value curve was seven years, rather than 10. The Commission also notes that:

- most utilities use the longest possible term to maturity—anywhere between seven and 15 years (or longer, if possible, to match the life of the asset)—to avoid the risk of refinancing (albeit at a slightly higher cost to compensate investors for the increased term), and
- most regulators in Australia are shifting towards adopting a 10 year term.

In preparing its submission to the Draft RD16, SACOSS sought additional advice from the South Australian Centre for Economic Studies (SACES) which recommended a seven year tenor as the appropriate benchmark bond yield. SACES points to the higher cost of debt for 10 year versus seven year instruments in support of its position. These higher costs were factored into the Commission's draft position, and are offset by the additional risks and costs associated with more frequent refinancing.

The Commission will therefore maintain its draft position to adopt a 10 year, simple trailing average as the basis for determining the cost of debt for RD16.

An inevitable outcome of this approach is that there will be a different WACC for each of the four years in the regulatory period, as the trailing average will change from year to year. While SA Water has calculated a single WACC that produces the same present value of regulatory revenues over the RD16 period, the Commission does not believe this additional step is required, because the revenue cap for RD16 would be expressed in present value, rather than annual terms.

Immediate application of 10 year trailing average approach, from 1 July 2016

The Commission's final decision is that the 10 year trailing average cost of debt should be immediately adopted (with no transition period) at the commencement of the RD16 period.

The Rate of Return Report did not address the question of whether or not to apply an immediate and full transition to the 10 year trailing average methodology (from on the day based approach), or allow for a gradual transition to the new approach.

The alternative to an immediate transition to a 10 year trailing average approach is a gradual transition over a number of periods. Under a gradual transition approach to a 10 year trailing average cost of debt from an on the day cost of debt, during the transition period an ever increasing component of the cost of debt will be based on an historical average cost of debt (with a corresponding reduction in the component that is measured by reference to the on the day cost). By way of example, if a gradual transition from an on the day approach to a 10 year trailing average approach over a 10 year period commencing in period *n* is assumed, then the cost of debt would be calculated as set out in Table 10.2.

Table 10.2: Gradual transition to 10 year trailing average cost of debt over 10 years

Transition year	Period	Cost of debt (Kd)
1	*n*	= Kd_n
2	*n + 1*	= (0.10 X Kd_n) + (0.90 X Kd_{n+1})
3	*n + 2*	= (0.10 X Kd_n) + (0.10 X Kd_{n+1}) + (0.80 X Kd_{n+2})
4 - 10		…and so on, until in year 10, the cost of debt becomes the simple average of the current year and each of the previous nine years costs of debt

In RBP16, SA Water stated that it preferred an immediate transition to the new regime, commensurate with the commencement of the RD16 period.

Two submissions to RBP16 were received on this issue. Business SA[168] and SACOSS[169] both advocated for a gradual transition (albeit over different time periods), on the basis that an immediate transition would capture the high interest rate period between 2008 and 2010, and this would be avoided under a gradual transition. With interest rates currently at historic lows, SACOSS quantified the revenue impact at $80 million during the first year of the RD16 period alone.

This position was reiterated in the submission made by Business SA to the Draft RD16. Business SA expressed that it was *'yet to be convinced that [the Commission's] proposed immediate transition does not unnecessarily expose consumers to paying for GFC interest rate increases over the upcoming regulatory period.'*[170]

Considerable research on this issue has recently been undertaken as part of the AER's electricity market final decisions. The AER adopted a 10 year gradual transition from the on-the-day approach to the 10 year trailing average cost of debt approach. The primary basis for doing so was to avoid the prospect of the regulated entity making any windfall gains or losses as a result of changing the methodology during the life of the regulated assets. It was demonstrated that, provided the cost of debt estimation methodology did not change mid-life for any tranche of debt, there was no prospect of such windfall gains or losses. The AER states that:

> *…a consistent application of either the on-the-day or trailing average approach would…promote revenue with an expected present value equal to the present value of the entity's efficient costs. This outcome is consistent with the NPV principle. However, when the method to estimate the return on debt changes during the life of the regulated assets; the NPV principle is unlikely to hold automatically. Any existing accumulated differences between the allowed and actual return on debt of a benchmark efficient entity would remain.*[171]

Using RBA data relating to observed yields on 10 year BBB rated corporate bonds over the period since 2005, the Commission analysed the following question:

> Had SA Water been regulated over the past 10 years using the on-the-day approach to estimating the cost of debt, would it have earned a materially different rate of return than if a 10 year gradual transition to the 10 year trailing average cost of debt commenced in 2006 (such that full implementation of the new regime would have occurred in July 2016)?

168 Business SA submission, pp. 5-6.
169 SACOSS submission, p. 22.
170 Business SA submission to Draft RD16, p. 1.
171 AER, Final Decision SA Power Networks determination 2015-16 to 2019-20 Attachment 3 – Rate of Return, pp. 3-562, October 2015

The Commission has concluded that, if a simple trailing average regime had been gradually implemented over this period, the rate of return afforded to SA Water would have been lower (by an average of 0.2 basis points or 0.002 percent per annum) than if the on the day approach had been used. Conversely, had a gradual implementation of a weighted 10 year trailing average cost of debt begun in 2006, the returns to SA Water would have been higher (by an average of 22.7 basis points or 0.227 percent per annum) than those generated using the on the day approach. The Commission recognises that there are a variety of methods and data sources that could be used to perform this analysis.

Given the immaterial differences, and that one method applied by the Commission produces a slightly higher result while the other method applied by the Commission yields a slightly lower result, the Commission's position is that SA Water's historic returns were materially the same as those it would have generated through a 10 year gradual transition to the new regime. On this basis, SA Water will effectively complete a full, 10 year gradual transition period by the beginning of the RD16 period, such that full implementation of the new regime can occur at that time. Customers would not receive a material gain or loss as a result of the transition, as SA Water's revenues would have been consistent under the gradual transition approach.

Immediate implementation has several benefits, including that the basis for the cost of debt calculation is consistently applied throughout the entire RD16 – and subsequent regulatory periods – without being skewed to make good the impact of past decisions. It is also easier to apply, and avoids any requirement to select from other transition methodologies.

On this basis, the Commission's final decision is that the 10 year trailing average cost of debt approach should apply immediately upon commencement of the RD16 period, in July 2016.

Current bond rate is the best estimate for future bond rates

As outlined above, one of the corollaries of the 10 year trailing average cost of debt approach is that the effective cost of debt must be calculated on an annual basis. The input required to update that calculation is the then prevailing corporate bond yield.

In RBP16, SA Water proposed using forward interest rates based on the Bloomberg Australian dollar sovereign forward 10 year swap curve, as close to the commencement of the RD16 period as possible, and not undertaking annual adjustments to the WACC during the regulatory period.

The Commission agrees with the proposal to estimate the cost of debt for each year in advance of the regulatory period, rather than to annually update the rate of return.

The Commission does not, however, agree with SA Water's proposal for using forward interest rates for the purpose of updating the annual trailing-average cost of debt calculations. The Commission believes that forward curves reflect term risks and liquidity preferences, rather than providing any better estimate of future interest rates than current rates.

Instead, the Commission's view is that the latest available corporate bond yield information should form the estimate for future corporate bond yields.

SACES agreed with the Commission's approach in its advice attached to the SACOSS submission to the Draft RD16.

The benchmark efficient entity has a Standard and Poors credit rating of BBB

The Commission has based the estimated cost of debt on the observed yields of 10 year corporate bonds, issued by entities with a Standard and Poors credit rating of BBB.

This is consistent with the approach proposed in the Rate of Return Report, and the basis adopted by SA Water in RBP16. It differs from that used in RD13 only in that, at the time of making that determination, data on 10 year corporate bond yields was not available so, as a proxy, the Commission extrapolated yield data from seven year corporate bonds.

In its submission to RBP16, Uniting Communities stated that it did not consider a BBB corporate bond yield was suitable for a Government owned business with guaranteed (regulated) revenue.[172] It also stated that the bond yield should be much nearer to actual borrowing capacity, AAA, or at the very least AA+.[173] Uniting Communities' argument is prefaced on an explicit assessment of SA Water as the owner of the regulated assets, rather than that of a benchmark efficient entity. The rationale behind adopting a credit rating of BBB for the benchmark efficient entity was explained in the Rate of Return Paper, and the Commission continues to support a regulatory approach based on a benchmark efficient entity rather than passing through actual costs.

In its submission to the Draft RD16, SACOSS supported the recommendation it received from SACES, which was that the calculation of the cost of debt should incorporate the Standard and Poors A- credit rating series as well as the BBB rated bond series the Commission has used. In support of this recommendation, SACES referred to a summary of regulatory decisions for Australian gas and electricity utilities prepared by the AER, showing that the median credit rating for these utilities between 2002 and 2012 was BBB+.

The same report also states that 'credit ratings can be sensitive to the time period used for estimation purposes' and that the median credit rating for 2013 is BBB.[174]

SACES also included a summary of 10 historical regulatory decisions on water utilities, which suggested that in five of these decisions, a higher credit rating than BBB was adopted. The Commission reviewed this summary, and found:

- The ACCC decision (attributed in the SACES advice as being based on a BBB+ credit rating) was, in fact, based upon a BBB rating
- The A- credit rating adopted by the ERA was made assuming actual gearing of 34 percent - significantly lower than the 60 percent benchmark disclosed
- The remaining decisions in which a BBB+ credit rating was adopted, were made several years ago (in April and June 2013). More recent evidence includes the draft decisions by IPART for Sydney Water and by ESC Victoria for Melbourne Water, both of which were dated March 2016. These draft decisions both adopted benchmark efficient entity credit ratings of BBB.

While these comparisons to historical decisions are useful in terms of assessing the reasonableness of regulatory decisions, they do not negate the requirement to form a view based on first principles. By cross checking against the Standard and Poors credit rating matrix, the Commission remains of the view is that a benchmark efficient entity in the water utilities industry, with 60 percent debt leverage, would attract an investment grade credit rating of BBB.

172 Uniting Communities submission, p. 6.
173 Uniting Communities submission, p. 6.
174 Australian Energy Regulator, Better Regulation, Explanatory Statement, Rate of Return Guideline, December 2013, Table 8.3, p. 156.

Debt raising costs to be added to cost of debt

Consistent with the Rate of Return Report, the Commission's final decision is to adopt an estimate of 12.5 basis points per annum to allow for the direct and indirect costs associated with raising and refinancing debt.

There is considerable divergence in the estimates of debt raising costs in recent regulatory decisions. While no specific allowance was made for these costs in RD13, most (if not all) recent regulatory decisions have made an allowance for them, either as a part of operating expenditure or as an addition to the cost of debt.

Due to the upfront nature of some of the costs associated with raising debt, the longer the term of the debt, the longer the amortisation period and, therefore, the lower the annual costs. If a shorter benchmark debt tenor had been adopted, such as that proposed by SACOSS and Business SA, the annual debt raising costs would have been higher.

After taking the assumed 10 year term of debt into account, the proposed estimate of 12.5 basis points per annum is within the bounds of the range of recent regulatory decisions.

However, new research argues that there are considerable indirect debt-raising costs (including costs to maintain liquidity ratios are required for an entity to meet a BBB credit rating).[175] These costs are in addition to the direct cost estimates used to underpin recent regulatory decisions.

SA Water supported the 12.5 basis point per annum allowance in RBP16. In its submission to RBP16, Uniting Communities expressed the view that customers should not bear any debt transaction costs. The Commission does not consider that these costs are different, in a regulatory context, to operating expenditure. It believes they should be allowed, provided they are incurred on a prudent and efficient basis. In its submission to the Draft RD16, SACOSS supported the debt raising costs proposal of 12.5 basis points per annum.

On balance, the Commission therefore concludes that the original proposal of 12.5 basis points per annum (contained in the Rate of Return Report) remains appropriate.

Final decision – costs of debt

The 10 year trailing average cost of debt data and calculations for this final determination are summarised in Table 10.3.

[175] PricewaterhouseCoopers, 'Energy Networks Association: Debt Financing Costs', June 2013.

Table 10.3: Calculation of 10 year trailing average corporate BBB rated bond yields

Corp BBB rated yield (%)	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
July	7.61	9.28	9.07	7.78	7.64	6.94	7.03	5.52	5.11	5.11
August	7.55	8.85	8.87	7.26	7.67	6.88	7.28	5.33	5.18	5.11
September	7.92	9.08	8.80	7.56	7.66	6.60	7.30	5.60	5.41	5.11
October	7.96	10.96	8.95	7.73	8.19	6.42	7.25	5.51	5.39	5.11
November	8.01	12.97	8.63	7.81	7.82	6.62	7.44	5.36	5.53	5.11
December	8.56	13.41	8.22	7.90	7.77	6.59	7.38	4.94	5.51	5.11
January	8.36	11.54	8.23	7.82	7.86	6.62	7.04	4.50	5.72	5.11
February	8.98	10.42	8.10	7.74	7.90	6.62	6.85	4.48	5.71	5.11
March	9.22	11.42	8.07	7.71	7.67	6.64	6.77	4.57	5.37	5.11
April	9.32	10.97	7.97	8.03	7.38	6.35	6.42	4.93	5.11	5.11
May	9.18	10.09	8.37	7.78	6.77	6.35	5.99	4.94	5.11	5.11
June	9.71	9.83	7.98	7.94	7.11	7.23	5.75	5.26	5.11	5.11
Annual average	**8.53**	**10.74**	**8.44**	**7.76**	**7.62**	**6.66**	**6.88**	**5.08**	**5.36**	**5.11**
10 year trailing average yield – 2016-17 (2007-08 to 2016-17)										7.22
10 year trailing average yield – 2017-18 (2008-09 to 2017-18)										6.87
10 year trailing average yield – 2018-19 (2009-10 to 2018-19)										6.31
10 year trailing average yield – 2019-20 (2010-11 to 2019-20)										5.98

Source: Reserve Bank of Australia, Statistical Table F3, column 'Non-financial corporate BBB-rated bonds – Yield – 10 year', updated 4 May 2016.

By adopting the latest available market data (effective 4 May 2016), the application of the above approaches results in the estimated costs of debt for the RD16 period set out in Table 10.4.

Table 10.4: Estimated costs of debt (nominal, pre-tax, %)

Estimated costs of debt (nominal, pre-tax, %)	2016-17	2017-18	2018-19	2019-20
SA Water (RBP16)	6.94	6.94	6.94	6.94
Simple 10 year trailing average BBB rated corporate bond	7.22	6.87	6.31	5.98
Debt raising costs	0.13	0.13	0.13	0.13
Final decision	7.34	7.00	6.44	6.10

Note: numbers may not add exactly due to rounding

10.4.3 Cost of equity

The cost of equity is the return required by investors for investing in a business. This return consists of both a risk free rate (the return an investor would expect to generate from an asset with zero risk of default) and a risk premium that reflects the non-diversifiable (systematic) risk associated with a specific asset or firm.

The third Pricing Order and Principle 1 of the NWI Pricing Principles require the Commission to use the Capital Asset Pricing Model (CAPM) to estimate the cost of equity.

In the CAPM, the nominal cost of equity (k_e) is defined as the sum of the returns available on a risk free asset and the premium required to accept the risks associated with equity, in the following manner:

$$k_e = r_f + \beta_L \times MRP$$

where:

r_f	=	the nominal risk free rate
β_L	=	the levered (or equity) beta which reflects the systematic risk of an equity compared to that of the market
MRP	=	the expected market risk premium

The estimation of each of these parameters is discussed below.

Risk free rate

The Commission proposes adopting a risk free rate calculated as the simple average of 10 year Commonwealth Government Bond yields over 20 business days, as close to the commencement of the RD16 period as practicable. For this RD16, the Commission has adopted the simple average of 10 year Commonwealth Government Bond yields over the 20 business days up to and including 30 April 2016. That is 2.53 percent.

This position is consistent with the proposal outlined in the Rate of Return Paper and the approach the Commission adopted for RD13.

Despite expressing a preference for the adoption of a longer term historical (and perhaps trailing) average of 10 year Commonwealth Government Bond yields, SA Water also adopted this approach in RBP16. Its estimate of 2.41 percent for the risk free rate in RBP16 was based on data available at, or before, it released RBP16 in September 2015.

No submissions raised concerns in relation to this issue.

Market risk premium

The Commission has adopted a market risk premium of six percent for the cost-of-equity calculation for RD16.

The Rate of Return Paper stated that the Commission would use an historical approach to determining the market risk premium. That approach supports a market risk premium of six percent.

Recent regulatory decisions that have implemented higher estimates have relied on the implied approach to estimating the market risk premium. This uses the dividend growth model to estimate the premium on an 'on the day' basis. As outlined in the Rate of Return Paper, the Commission considers that approach to be potentially volatile and unreliable.

The adoption of a market risk premium of six percent is consistent with SA Water's approach in RBP16 and was also the estimate used for RD13.

Uniting Communities submitted that adopting a market risk premium of six percent dramatically overstates the rate of risk for SA Water, with the cost of international capital very low and likely to stay low for much of the regulatory period.[176] This statement is prefaced by comparisons with official interest rates of around two percent (in Australia) and zero percent in Japan. No comparisons were made with equity markets, for which the market risk premium assumption is used.

The Commission notes, however, that the historically low rates of international capital are reflected in the risk free rate assumption (insofar as they impact the cost of equity) and are also increasingly implicit in the trailing average used for the cost of debt calculation.

Equity beta

The Commission will adopt an equity beta of 0.7 for the cost of equity for RD16. This position is consistent with the proposal outlined in the Rate of Return paper. SA Water also adopted this equity beta in RBP16.

In its submission to RBP16, Uniting Communities stated that an equity beta of 0.7 was too high (in the context of SA Water being Government owned with guaranteed revenues) and that, based on a report commissioned by the AER, the equity beta should be 0.5. A similar argument was presented by SACOSS, in its submission to Draft RD16. SACES (on behalf of SACOSS) also stated that the analysis contained in that report 'related to the previous regulatory approach in which most electricity distribution utilities bore some of the volume risk. However as SA Water is being regulated on the basis of maximum allowable revenue it is not subject to that risk, and therefore it would be reasonable to expect the value of beta to be in the lower range modelled [in the report].'[177] On that basis, SACOSS expressed that the equity beta should be 0.5 or 0.6.

The Commission notes that the report referred to by Uniting Communities and SACES is one of many it considered prior to the release of the Rate of Return Report. Due to the nature of equity beta, there is an inherent uncertainty in estimating it for an unlisted business. Further, the Commission sets an equity beta for the benchmark efficient entity, rather than for SA Water directly. Finally, the Commission notes that SA Water is indeed, subject to volume risk, due to the application of the demand adjustment mechanism (which shares this risk equally between SA Water and consumers).

The Commission has taken into account the latest research and evidence and has concluded that the equity beta assumption of 0.7, as adopted in the Rate of Return Paper, remains appropriate.

10.4.4 Gearing

The Commission proposes that a gearing ratio of 60 percent debt and 40 percent equity be maintained throughout the RD16 period.

This is consistent with the proposal outlined in the Rate of Return Paper, the assumption used for RD13, and SA Water's assumed gearing in RBP16.

No submissions raised concerns in relation to the assumed gearing ratio of 60 percent.

176 Uniting Communities submission, pp. 6-7.
177 SACES attachment to SACOSS submission to Draft RD16, p. 3.

10.4.5 Expected inflation

Consistent with the Rate of Return Report, and Draft RD16, the Commission has used a forward looking methodology, based on the geometric mean of the RBA inflation forecast for the first year, and the midpoint of the RBA's target band (2.5 percent) for the following nine years, for the purposes of converting the cost of capital from nominal to real terms.

The latest available inflation forecasts from the RBA are contained in its May 2016 Statement on Monetary Policy, as summarised in Table 10.5.

Table 10.5: Inflation forecasts[178]

RBA inflation forecasts (as at May 2016)	Year ending Dec-2016	Year ending Jun-2017	Year ending Dec-2017	Year ending June-2018
CPI inflation (%)	1.0 – 2.0	1.5 – 2.5	1.5 – 2.5	1.5 – 2.5
Midpoint of inflation forecast	1.5	2.0	2.0	2.0

The geometric average of the RBA inflation forecast for the first year, and the midpoint of the RBA's target band (2.5 percent) for the following nine years is 2.45 percent. This is 5 basis points below the inflation estimate proposed by SA Water in RBP16 and the draft position set out in the Draft RD16. The difference is solely attributable to the reduction in the RBA's near-term inflation forecast rather than any underlying change in the estimation methodology set out in the Draft RD16 and the Rate of Return Report.

10.5 Final decision

The application of the above parameters result in the post-tax, real weighted average costs of capital summarised in Table 10.5.

Table 10.5: Weighted average cost of capital

Weighted average cost of capital (post-tax, real)	2016-17	2017-18	2018-19	2019-20
Nominal risk free rate	2.53%	2.53%	2.53%	2.53%
Market risk premium	6.0%	6.0%	6.0%	6.0%
Equity beta	0.7	0.7	0.7	0.7
Post-tax, nominal cost of equity	**6.73%**	**6.73%**	**6.73%**	**6.73%**
Nominal cost of debt	7.34%	7.00%	6.44%	6.10%
Gearing (D/V)	60%	60%	60%	60%
Post-tax, nominal WACC	**7.10%**	**6.89%**	**6.55%**	**6.35%**
Expected inflation	2.45%	2.45%	2.45%	2.45%
Post-tax, real WACC	**4.53%**	**4.33%**	**4.01%**	**3.81%**

[178] Available at: http://www.rba.gov.au/publications/smp/2015/nov/tables.html.

The Commission notes and agrees with the comment made by SACES (in its attachment to the SACOSS submission to the Draft RD16), that it is important to consider the overall impact of decisions made in relation to the components that feed into the calculation of the weighted average cost of capital. The Commission has not considered these decisions independently of each other, or in fact, independently of the nature of the regulatory framework itself. Each component of the weighted average cost of capital has been assessed for reasonableness in the context of every other component, resulting in a rate of return decision that the Commission considers to fairly reflect the cost of capital for the benchmark efficient entity.

The Commission has also assessed the reasonableness of the rate of return decision against other recent regulatory decisions. Because the market based components of the rate of return calculation move with time, it can be difficult to compare the combined impact of these decisions to those made by other regulators. However, in this instance, two economic regulators have recently released draft determinations in relation to water utilities in Victoria and New South Wales. Once converted to an equivalent (post-tax, real) basis, the draft WACC decisions were:

- 4.2 percent for Melbourne Water
- 4.8 percent for Sydney Water

11 Determination of total revenue caps

Final decision – Determination of total revenue caps

The Commission's final decision is that the present value of the revenue caps for RD16 should be:

- for drinking water, $2,841.3 million (as at 1 July 2016, in December 2014 dollars), and
- for sewerage, $1,188.1 million (as at 1 July 2016, in December 2014 dollars).

11.1 Introduction

Previous chapters have discussed the Commission's final decision in relation to the cost components, which represent the building block inputs. This chapter sets out the combination of the building block components required to determine the total revenue caps for the drinking water and sewerage businesses for RD16.

11.1.1 Building block methodology

As discussed in Part A, the sum of: the returns on assets; the returns of assets; operating expenditure; the working capital allowances; and the tax allowances represent the annual regulatory revenues, in total, for each of the drinking water and sewerage businesses.

The Commission has reviewed and accepted SA Water's cost allocation model and has allocated costs to drinking water and sewerage services under it. From these totals, the regulatory revenues that are not tariff-related (such as community service obligation revenues for the drinking water business and recycled water sales for the sewerage business) are deducted, to derive annual regulatory revenue amounts.

A final adjustment is made, in relation to the first year of revenues only, to add/subtract any unrecovered/over recovered revenues generated during the RD13 period, as a result of the application of the demand adjustment mechanism set out in RD13.

For the reasons set out in Chapter 5, this revenue determination is in the form of a revenue cap to apply across the entire four year RD16 period in total, rather than in annual amounts. On that basis, for each of the drinking water and sewerage businesses, the annual revenue amounts are discounted to present value (PV) terms as at 1 July 2016 (the commencement of RD16) and expressed in dollars of 31 December 2014.

SA Water has stated that its objective is to achieve as smooth a price path as possible during RD16. It has proposed a revenue smoothing approach that delivers annual price increases from 1 July 2017 limited to CPI. Provided the total revenue caps for each of the drinking water and sewerage businesses are not breached, there is no regulatory impediment that prevents SA Water from implementing such a revenue smoothing mechanism.

11.2 SA Water's proposal

The annual allowable revenue amounts (unsmoothed) proposed in RBP16, together with the revised amounts arising from the November 2015 SA Water update, as summarised in Table 11.1.

Table 11.1: SA Water proposed revenue allowances (Dec14$m)

SA Water proposed annual revenue allowances (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total
RBP16					
Drinking water	781.3	787.9	791.6	794.0	3,154.8
Sewerage	331.9	335.7	340.4	344.8	1,352.8
Total - RBP16	1,113.2	1,123.6	1,132.0	1,138.8	4,507.6
November 2015 update					
Drinking water	775.8	781.4	787.4	789.5	3,134.1
Sewerage	324.0	327.2	331.5	335.1	1,317.8
Total - November 2015 update	1,099.8	1,108.6	1,118.9	1,124.6	4,451.9

In $PV_{1\ July\ 2016}$ terms, the total revenue allowances proposed by SA Water in its November 2015 update were:

- for drinking water, $2,863.9 million, and
- for sewerage, $1,203.9 million.

11.3 Submissions

No submissions commented directly on the application of the building block methodology for SA Water's revenue allowance calculations for RD16.

11.4 Discussion

The Commission has re-calculated the RD16 revenue allowance (in $PV_{1\ July\ 2016}$ terms) using the building block, RAB and WACC draft determination results (as contained throughout this report) as inputs. The results of this analysis are set out below.

11.4.1 Summary of revised building block inputs

The building blocks, as proposed by SA Water, and as adjusted by the Commission in this final determination, are summarised in Table 11.2.

Table 11.2: Summary of building block final decision (Dec14$m)

Building block inputs (total RD16, Dec14$m)	SA Water RBP16	SA Water Nov 2015 update	Final determination	Reference
Drinking water - building blocks				
Opex	1,307.0	1,302.9	1,300.1	Chapter 7
Return on working capital	5.9	5.9	5.8	11.4.3
Return on RAB	1,382.4	1,365.8	1,334.5	11.4.4
Return of RAB	717.5	715.3	728.6	11.4.4
Tax allowance	23.7	25.1	29.9	11.4.5
Less: non-tariff revenues	-281.7	-280.8	-286.3	11.4.6
Add/(deduct) RD13 adjustment	-	-	-	11.4.7
Revenue amount	**3,154.8**	**3,134.2**	**3,112.6**	
Sewerage - building blocks				
Opex	523.2	500.9	495.2	Chapter 7
Return on working capital	2.4	2.3	2.2	11.4.3
Return on RAB	649.5	639.7	623.7	11.4.4
Return of RAB	394.0	392.0	399.7	11.4.4
Tax allowance	-	-	-2.1	11.4.5
Less: non-tariff revenues	-216.2	-217.0	-217.2	11.4.6
Add/(deduct) RD13 adjustment	-	-	-	
Revenue amount	**1,352.9**	**1,317.9**	**1,301.5**	

11.4.2 Operating expenditure

The Commission's discussion in relation to prudent and efficient operating expenditure is set out in Chapter 7 and summarised in Table 11.3.

Table 11.3: Summary of operating expenditure (Dec14$m)

Operating expenditure (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total
RBP16					
Drinking water	327.6	328.5	326.6	324.3	1,307.0
Sewerage	131.1	131.3	131.1	129.8	523.3
Total - RBP16	458.7	459.8	457.7	454.1	1,830.3
November 2015 update					
Drinking water	326.6	326.1	326.3	323.9	1,302.9
Sewerage	125.4	125.6	125.7	124.2	500.9
Total - November 2015 update	452.0	451.7	452.0	448.1	1,803.8
Final decision					
Drinking water	327.5	326.5	324.9	321.2	1,300.1
Sewerage	125.0	124.9	123.8	121.5	495.2
Total - Final decision	452.5	451.4	448.7	442.7	1,795.3

11.4.3 Return on working capital

The return on working capital is the product of the estimated post-tax WACC and the assumed investment in working capital.

Consistent with RD13, the investment in working capital for RD16 was calculated by SA Water using the following formula:

$$Working\ Capital = \left(\frac{Lag(Days) - Lead(Days)}{365} \right) x\ Operating\ Expenditure$$

where:

- 'lag' is the delay by which revenue is received relative to when it is generated (assumed to be evenly throughout the year). SA Water has estimated the revenue lag to be 70 days (this incorporates half of the three month billing cycle, plus the estimated average period between meter reading and customer payment)
- 'lead' is the delay by which operating expenditures are paid relative to when they are incurred (which is assumed to be evenly throughout the year). SA Water has estimated the operating expenditure lead to be 30 days, and
- 'operating expenditure' reflects the annual operating expenditure, as allowed by the Commission.

The Commission's preliminary view is to accept the proposed working capital formula, and the lag and lead period assumptions adopted by SA Water.

Although it has no material impact on the results of the calculation, the Commission has made an adjustment to the working capital mechanism proposed by SA Water, to reflect the average working capital balance throughout each year of the RD16 period, rather than the end of year balance.

The Commission's final decision with respect to the post-tax WACC is set out in section 10.4.

Table 11.4 sets out the Commission's final decision with respect to the return on working capital.

Table 11.4: Return on working capital (Dec14$m)

Return on working capital (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total
RBP16					
Drinking water	1.5	1.5	1.5	1.5	6.0
Sewerage	0.6	0.6	0.6	0.6	2.4
Total - RBP16	2.1	2.1	2.1	2.1	8.4
November 2015 update					
Drinking water	1.5	1.5	1.5	1.5	6.0
Sewerage	0.6	0.6	0.6	0.6	2.4
Total - November 2015 update	2.1	2.1	2.1	2.1	8.4
Final decision					
WACC	4.53%	4.33%	4.01%	3.81%	
Lag days - lead days	40	40	40	40	
Drinking water					
Opex	327.5	326.5	324.9	321.2	
Working capital - end of year	35.9	35.8	35.6	35.2	
Working capital - average[179]	34.0	35.8	35.7	35.4	
Return on working capital	1.5	1.5	1.4	1.4	5.8
Sewerage					
Opex	125.0	124.9	123.8	121.5	
Working capital - end of year	13.7	13.7	13.6	13.3	
Working capital - average[180]	13.7	13.7	13.6	13.4	
Return on working capital	0.6	0.6	0.5	0.5	2.2
Total - Final decision	2.1	2.1	1.9	1.8	8.0

179 The 2016-17 average working capital balance is based on an opening working capital balance of $33.2m ($Dec14).
180 The 2016-17 average working capital balance is based on an opening working capital balance of $13.7m ($Dec14).

11.4.4 Returns on and of the regulatory asset bases

The annual return on the RAB is calculated as:

- the product of the estimated post-tax WACC and the average value of the RAB for that year, to derive a year end equivalent return on assets, which is then
- discounted by six months, to recognise that revenue is generated consistently throughout each year, rather than at year end.

The value of the RAB is determined at any point by rolling forward the historical RAB, using the principles set out in RD13. They state that:

- new capital expenditure is recognised as an asset immediately it is incurred, rather than on an as commissioned basis
- capital expenditure is net of customer contributions and gifted assets
- the timing of capital expenditure (and asset disposals) is considered to occur evenly throughout the year (this is equivalent to assuming that all capital expenditure and asset disposals in a year are incurred at the midpoint of that year)
- as a consequence of this mid-year timing assumption for capital expenditure (and asset disposals), only half of these items are included in the calculation for depreciation for that year, and
- all values are expressed in December 2014 prices and all roll forward calculations apply real values.

The RAB roll forward model calculates the annual return of capital using a straight line method of depreciation, which is based on the standard asset lives provided by SA Water for new assets, and rolled forward remaining useful lives for existing assets.

With the exception of a new asset class that was created for short lived desalination plant assets (such as membranes), the standard asset lives used for new assets for RD16 are consistent with those applied for RD13. All useful life assumptions are summarised in Table 11.5.

Table 11.5: Useful lives of assets (years)

Regulatory asset lives (weighted averages in years)	Remaining life (existing assets 1 July 2016)	Standard life (new assets)
Drinking water		
Pipes	59.2	103.0
Non-pipes	32.6	64.0
ADP	52.6	57.0
ADP - short lived assets	3.9	7.0
Corporate	8.5	15.0
Sewerage		
Pipes	63.1	107.0
Non-pipes	28.3	47.0
Corporate	8.2	15.0

The regulatory depreciation calculations proposed by SA Water implicitly assume that depreciation only occurs at the end of each financial year. As a consequence, the average RAB values (upon which the return on RABs are calculated) are not reduced by current year depreciation. Offsetting this, the depreciation calculations are reduced to reflect the assumption that the revenues are generated consistently throughout each year, meaning that the returns on assets are recovered ahead of the assumed depreciation timing.

The Commission has modified this treatment in this RD16 to reflect the fact that depreciation occurs consistently throughout an asset's life, rather than in periodic lumps. This has an immaterial impact on the revenue caps because the resultant increase in depreciation is broadly offset by the corresponding decrease in the return on assets.

Table 11.6 sets out the Commission's final decision with respect to the return of the regulatory asset bases.

Table 11.6: Return of regulatory asset bases (Dec14$m)

Return of RAB (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total
RBP16					
Drinking water	174.7	177.7	180.8	184.3	717.5
Sewerage	93.6	96.7	100.2	103.5	394.0
Total - RBP16	268.3	274.4	281.0	287.8	1,111.5
November 2015 update					
Drinking water	174.1	177.2	180.3	183.8	715.4
Sewerage	93.4	96.2	99.6	102.8	392.0
Total - November 2015 update	267.5	273.4	279.9	286.6	1,107.4
Final decision					
Drinking water	177.4	180.6	183.7	187.0	728.7
Sewerage	95.3	98.3	101.5	104.5	399.6
Total - Final decision	272.7	278.9	285.2	291.5	1,128.3

The Commission's final decision with respect to the post-tax WACC is set out in section 10.4.

Table 11.7 sets out the Commission's final decision with respect to the return on the regulatory assets bases.

Table 11.7: Return on regulatory asset bases (Dec14$m)

Return on RAB (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total
RBP16					
Drinking water	344.8	345.7	346.4	345.6	1,382.5
Sewerage	160.2	161.2	163.1	165.0	649.5
Total - RBP16	505.0	506.9	509.5	510.6	2,032.0
November 2015 update					
Drinking water	340.4	341.6	342.4	341.5	1,365.9
Sewerage	158.5	159.0	160.4	161.8	639.7
Total - November 2015 update	498.9	500.6	502.8	503.3	2,005.6
Final decision					
WACC	*4.53%*	*4.33%*	*4.01%*	*3.81%*	
Drinking water					
Opening RAB	8,137.4	8,151.8	8,198.3	8,182.0	
Capital expenditure	192.8	235.0	168.4	140.5	
Disposals	-1.1	-7.9	-1.1	-1.1	
Depreciation	-177.4	-180.6	-183.7	-187.0	
Closing RAB	8,151.8	8,198.3	8,182.0	8,134.5	
Average RAB	8,144.6	8,175.0	8,190.1	8,158.2	
Year-end return on RAB	369.0	354.0	328.4	310.8	
Return on RAB	360.9	346.6	322.0	305.1	1,334.5
Sewerage					
Opening RAB	3,783.9	3,795.4	3,814.3	3,845.5	
Capital expenditure	107.2	117.7	133.2	112.0	
Disposals	-0.5	-0.5	-0.5	-0.5	
Depreciation	-95.3	-98.3	-101.5	-104.5	
Closing RAB	3,795.4	3,814.3	3,845.5	3,852.5	
Average RAB	3,789.6	3,804.8	3,829.9	3,849.0	
Year-end return on RAB	171.7	164.7	153.6	146.6	
Return on RAB	167.9	161.3	150.6	143.9	623.7
Total - Final decision	528.8	507.8	472.6	449.0	1,958.2

11.4.5 Tax allowance

The regulatory building block model adopted by the Commission incorporates an allowance for tax as one of the cost building blocks. It uses a post-tax (that is, reduced) rate of return to reflect the fact that an allowance for tax has already been made within the revenue cap determination.

The methodology used to calculate the tax allowances for RD16 is based on the Australian corporate taxation regime, adjusted to reflect the estimated value to equity holders of associated imputation credits.

The following methodology was used by SA Water to arrive at its estimation of the benchmark regulatory tax allowances.

- The nominal taxable income for each of the drinking water and sewerage businesses was estimated based on inflating real forecasts by estimated annual inflation rates (of 2.5 percent for each year of the RD16 period). All revenues were treated as taxable, including CSO and contributed assets. Tax depreciation deductions were estimated by applying tax useful life estimates to the opening tax written down values of existing assets, and the costs of new assets acquired during the RD16 period.
- The tax allowance was calculated by applying the corporate tax rate of 30 percent, reduced by the estimated value ascribed to imputation credits (using the 0.50 gamma set out in the Commission's Regulatory Rate of Return final report[181]) to the estimated annual taxable incomes of the drinking water and sewerage businesses.

The regulatory building block model is based on real (that is, uninflated) forecasts for capital and operating expenditure, and returns revenue caps that are also in real terms. To reflect the underlying tax regime, these forecasts must be converted to nominal (that is, inflated) terms to calculate tax allowances. Under this model, benchmark corporate tax is deferred, because:

- it is only the real return on assets that is captured within the (taxable) revenue cap. The inflationary component is capitalised into the value of the RAB, and is not taxable until it is returned to equity holders via the depreciation allowance in future years, and
- conversely, the benchmark interest expense deduction is nominal, and reflects the product of the nominal cost of debt to the assumed nominal value of debt.

As a consequence of the above, the allowances made for tax within SA Water's RBP16 are small in the case of drinking water, and zero, leading to an accumulation of tax losses, in the case of sewerage.

The Commission has reviewed, and with one exception, is satisfied that the methodology and assumptions used by SA Water to determine the tax allowances are appropriate. The exception (for which the Commission has made an adjustment in this final decision) relates to the accumulation of tax losses in the sewerage business.

Under its proposal, SA Water treats the tax status of the drinking water and sewerage businesses separately, as if they were owned by different (benchmark efficient) entities. This is not consistent with other aspects of its proposal, under which some costs (for example, head office functions) are shared and therefore allocated between the businesses.

As a single entity, the owner of the drinking water and sewerage businesses would manage its tax affairs by offsetting any tax losses made by the sewerage business against taxable income generated by the drinking water business. The entity would benefit because the value of accumulated tax losses does not inflate over the period until they are utilised.

[181] The Commission's SA Water Regulatory Rate of Return 2016-2020 Final Report to Treasurer, March 2015.

The Commission does not consider it appropriate to reduce the tax allowances in the drinking water business to reflect the tax losses generated in the sewerage business, because to do so would create a cross-subsidy between SA Water's water and sewerage customers. To reflect the value to equity holders of the tax losses, the Commission has formed the view that, rather than accumulate tax losses with zero tax allowances in the meantime, the tax allowances should be calculated as if the tax losses led to refunds from the Government (that is, they should be reflected as negative amounts). This means the total tax allowance across both drinking water and sewerage will more accurately reflect the total tax expense of a benchmark-efficient entity owner, and there is no cross-subsidisation between customers of the two business units.

The Commission's final decision on tax allowances is summarised in Table 11.8.

Table 11.8: Tax allowances (Dec14$m)

Tax allowances (Dec$14m)	2016-17	2017-18	2018-19	2019-20	Total
RBP16					
Drinking water	5.4	5.6	6.1	6.5	23.6
Sewerage	0.0	0.0	0.0	0.0	0.0
Total - RBP16	5.4	5.6	6.1	6.5	23.6
November 2015 update					
Drinking water	5.8	6.0	6.4	6.9	25.1
Sewerage	0.0	0.0	0.0	0.0	0.0
Total - November 2015 update	5.8	6.0	6.4	6.9	25.1
Final decision					
Drinking water	6.6	7.0	7.9	8.4	29.9
Sewerage	-0.3	-0.6	-0.5	-0.8	-2.2
Total - Final decision	6.3	6.4	7.4	7.6	27.7

11.4.6 Non-tariff regulatory revenues

The sum of the regulatory building blocks is used to determine the total regulatory revenue caps for SA Water. From these caps, the regulated revenue streams that SA Water generates outside of its retail tariffs must be deducted. These revenue streams include reimbursements for CSOs made by the State Government (in relation to both drinking water and sewerage) and revenues from the sale of recycled water (sewerage only).

The majority of the CSO revenue is set in advance (in nominal terms) and is published in the South Australian Government Gazette. The remaining CSO revenue represents reimbursements made in relation to the provision of drinking water and sewerage retail services to bodies that have been exempted by the State Government from being required to pay for those services. SA Water estimated these adjustments.

In this final decision, the CSO revenues are marginally different to those that were used in the Draft RD16. The reasons for these differences are twofold:

- The majority of the CSO revenues are fixed, in nominal terms. The March 2015 to March 2016 CPI, which is used in part to deflate these nominal amounts to real, December 2014 dollars, was 1.3 percent as opposed to the estimate of 2.5 percent used in the Draft RD16. As a consequence, the nominal CSO revenues, expressed in real, December 2014 dollars, are higher.
- The variable portion of the CSO revenues is driven by SA Water's best estimates, which in turn, are based on the prices it will set following this final decision. SA Water updated its estimates of the exempt and concessional CSO revenues following the release of the Draft RD16.

Recycled water sales are a small but growing component of retail sewerage services, and reflect the sales proceeds associated with the increasing number of water recycling facilities owned and operated by SA Water.

11.4.7 RD13 period adjustments

Two forms of potential adjustments to the RD16 revenue caps relate to the RD13 period:

- the demand variation adjustment mechanism, and
- pass throughs.

The basis and rationale for each of these adjustments is explained in Chapter 2 and the adjustment calculations are set out below.

Demand variation adjustment calculation

Under RD13, the Commission is required to assess whether or not the actual regulated revenues earned by SA Water during the RD13 period exceed or fall short of those that were allowed in the final determination. Should the variance exceed one percent of the allowed revenues (in total over the three year period) then an adjustment, calculated as 30 percent of the variance, should be made to the RD16 revenue caps.

The information used to make this assessment is set out in RD13. It comprises

- actual revenues attributable to the sale and supply of drinking water retail services and sewerage retail services between 1 July 2013 and 31 December 2015, and
- estimated revenues attributable to the sale and supply of drinking water retail services and sewerage retail services between 1 January 2016 and 30 June 2016.

On the basis of the above information, provided by SA Water since Draft RD16 was released, the estimated total regulated revenues over the RD13 period are less than the amounts allowed in RD13. However the threshold of one percent is not triggered for either drinking water or sewerage services.

On this basis, no adjustments are required in relation to the RD13 demand variation adjustment mechanism.

Pass throughs

Under RD13, SA Water can apply to the Commission at the end of the period (as part of RBP16) for the recovery of any material incremental costs incurred as a result of a predetermined pass through event occurring during that period. The regime also allows the Commission to determine whether or not any events that occurred during that period justify allowed revenues to be reduced. These are called negative pass through events.

The current scope of pass through events are defined in RD13 as:

- a change in legal obligation – that is, a new and legally binding obligation is placed on SA Water and has a material impact on the costs of provision of retail services, or
- the occurrence of an extraordinary event – that is, an event which was unforeseen, or if foreseen, the occurrence and impacts of it: could not be quantified or determined at the time of the determination; is beyond the control of SA Water and has a material impact on the costs of provision of retail services.

In considering whether or not an event constitutes a pass through event, the Commission must also determine if it:

- leads to material cost impacts
- could not otherwise have been controlled by SA Water (acting prudently and efficiently), and
- leads to cost impacts that could not have been substantially mitigated through prudent management.

In RBP16, SA Water did not seek any revenue adjustments to recover the costs of any pass through events (negative or positive) during the RD13 period. While it identified the repeal of the Carbon Tax (which reduced SA Water's costs by $4.6 million ($Dec14) or 0.13 percent of total forecast revenue and equates to $1.50 per annum for each SA Water customer) as a potential pass through event, it concluded that it did not consider that it passed the materiality test.

The Commission agrees that the only potential pass through event that has occurred so far in the RD13 period is the repeal of the Carbon Tax. As its impact does not meet the materiality threshold, no adjustment is required for the RD16 revenue caps.

11.4.8 Calculation of present value of revenue allowances (RD16 revenue cap) at 1 July 2016

The calculation of the RD16 revenue caps is summarised in Table 11.9.

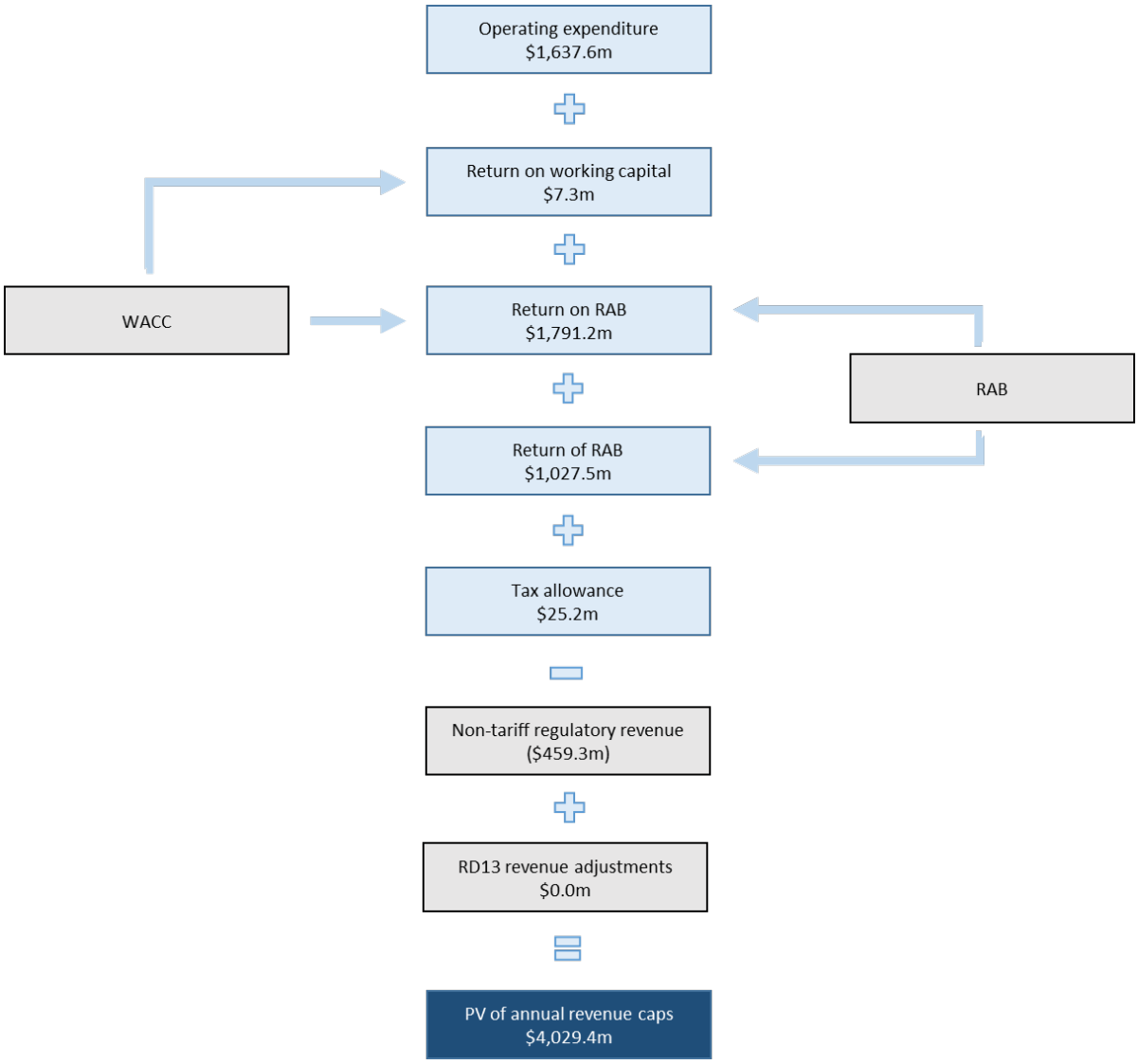
Table 11.9: Calculation of RD16 revenue caps (Dec14$m)

RD16 revenue caps (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Revenue cap
Pre-tax WACC	5.00%	4.80%	4.47%	4.27%	
Discount factor*	0.97590	0.93032	0.88911	0.85188	
Drinking water					
Annual revenue amounts	800.0	789.8	769.0	753.7	
PV of annual revenue amounts	780.7	734.8	683.8	642.1	**2,841.3**
Sewerage					
Annual revenue amounts	334.7	330.3	321.2	315.4	
PV of annual revenue amounts	326.6	307.2	285.6	268.7	**1,188.1**

***** calculated assuming mid-year discounting

The Commission's proposed revenue caps, broken down by the cost building blocks, are summarised in Figure 11.1.

Figure 11.1: Proposed revenue caps broken down by cost building blocks ($PV_{1\ July\ 2016}$, Dec14$m)



11.4.9 Application of SA Water's proposed revenue smoothing mechanism

As outlined above, to promote its goal of price stability during RD16, SA Water (in RBP16) proposed applying a smoothing mechanism to the drinking water and sewerage annual revenue amounts calculated using the building block methodology. Its revenue smoothing mechanism applies assumed customer and/or demand annual growth estimates to back solve for real average drinking water and sewerage revenues that can be maintained (in real terms) over the course of the four year regulatory period, such that the present value of the total drinking water and sewerage revenues over that period, remains consistent with the revenue caps, as calculated above.

The Commission's role in this determination is to set the revenue caps for drinking water and for sewerage, in present value terms, in respect of the entire four year RD16 period. While the Commission sees merit in applying SA Water's proposed revenue smoothing mechanism, in practice, provided that the present value of revenues does not exceed the revenue caps for drinking water and for sewerage, it is not the role of the Commission to determine the annual profile of these revenue streams.

For information purposes only, the Commission notes that the application of SA Water's revenue smoothing mechanism to the revenue caps, as set out in this final determination, would result in the revenue profiles summarised in Table 11.10.

Table 11.10: Application of SA Water's smoothing mechanism to draft revenue caps (Dec14$m)

(Non-binding) 'smoothed' annual revenue allowances (Dec14$m)	2016-17	2017-18	2018-19	2019-20	Total
Drinking water					
Arising from final decision	769.2	775.7	782.7	790.1	3,117.7
RBP16	778.5	785.1	792.2	799.7	3,155.5
Variance	–9.3	-9.4	-9.5	-9.6	-37.8
Sewerage					
Arising from final decision	320.2	324.0	327.9	331.8	1,303.9
RBP16	332.2	336.1	340.2	344.3	1,352.8
Variance	-12.0	-12.1	-12.3	-12.5	-48.9

11.5 Final decision

The Commission's final decision is that the present value (PV) of revenue allowances for RD16 are:

- for drinking water, $2,841.3 million, and
- for sewerage, $1,188.1 million.

The drinking water revenue cap is, in real terms, 2.5 percent lower than applied the RD13 period, on an annual average basis. This is driven mainly by a decline in the regulatory rate of return relative to that applying in the current regulatory period, together with a smaller tax allowance.

The sewerage revenue cap is, in real terms, 10.9 percent lower than that applying in the RD13 period, on an annual average basis. A decline in forecast operating expenditure is the major driver of that change.

The reductions in the drinking water and sewerage caps are illustrated in Figure 11.2 and Figure 11.3.

Figure 11.2: Average annual RD16 drinking water revenue cap

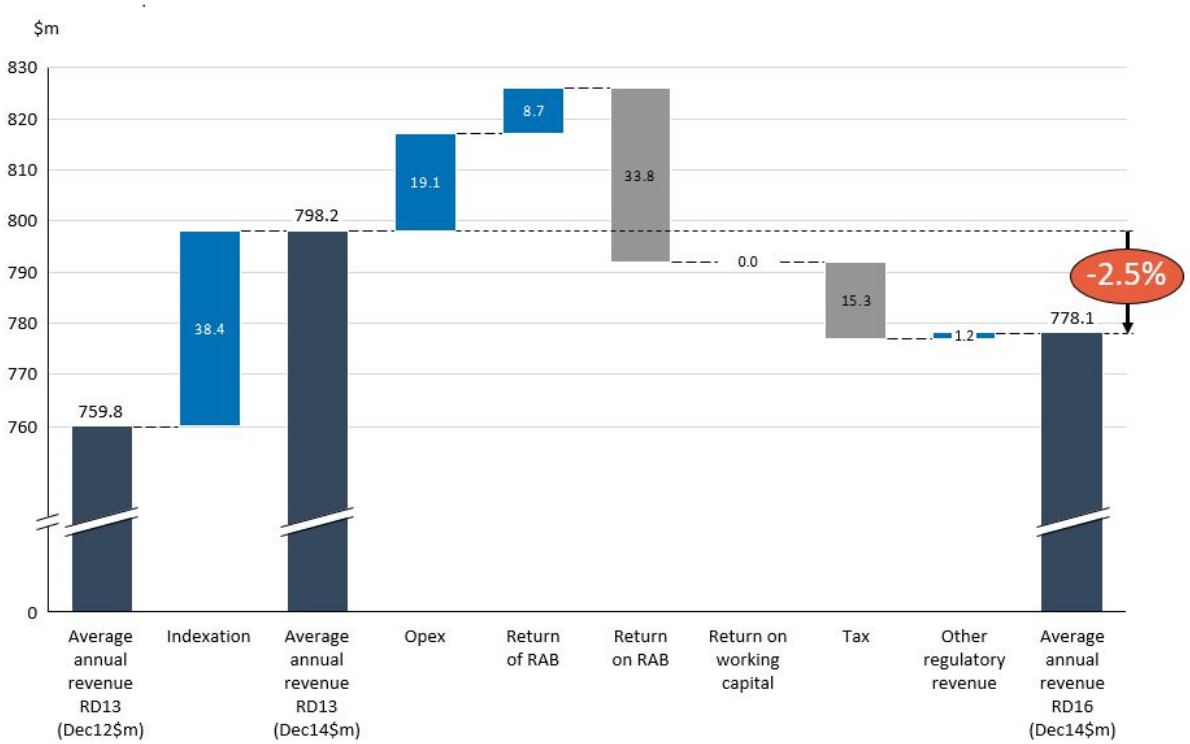
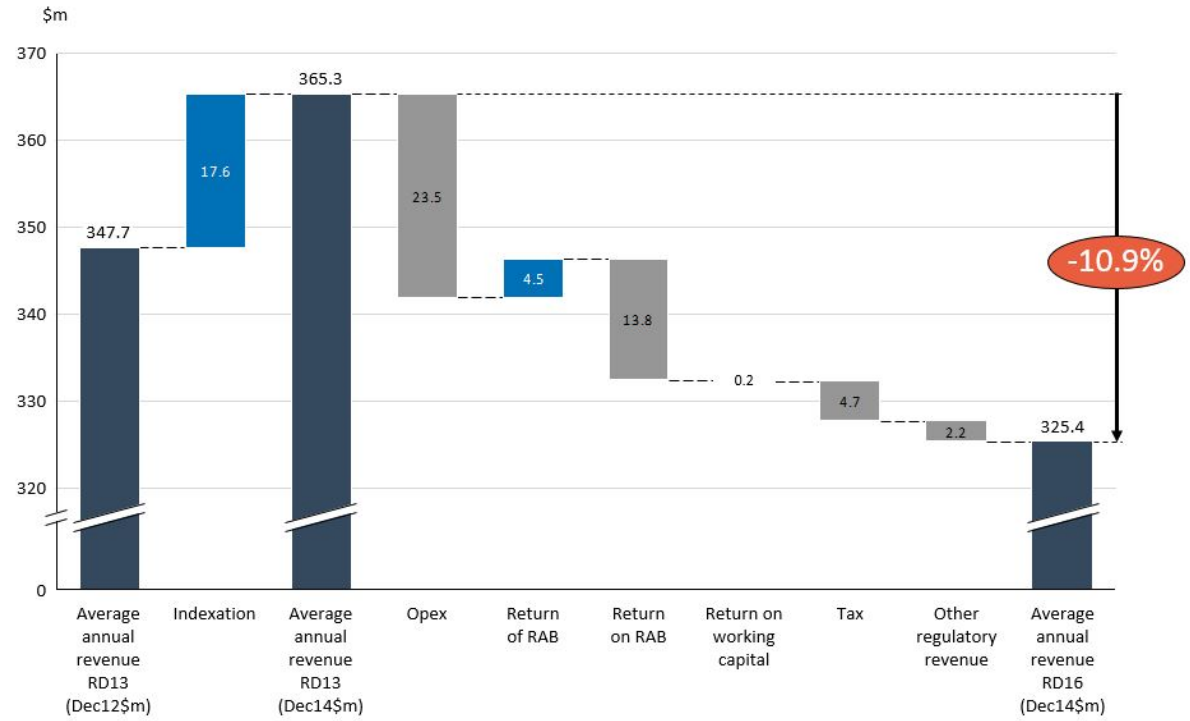


Figure 11.3: Average annual RD16 sewerage revenue cap



11.6 Impact of final decision on SA Water's assessment of its financial viability

The Commission has considered the material provided by SA Water in RBP16 regarding the assessment of its financial viability over the RD16 period.

The building block approach to determining revenues is designed to ensure that a regulated benchmark- efficient firm will remain viable over the long term. In the short term, the purpose of the assessment of financial viability is to obtain reasonable assurance that, based on current knowledge of the financial markets, SA Water would be able to raise funds, given its forecast financial position, in a manner consistent with an investment-grade firm.

In RBP16, SA Water has presented its assessment of its financial viability. In undertaking this assessment, it weighted various financial ratios, metrics and benchmarks and arrived at a self-assessed credit rating. It is not the Commission's role to allocate a particular credit rating, as SA Water has. A credit rating is an opinion of the general creditworthiness of a firm. It should be noted that credit rating agencies normally consider a wide range of both quantitative and qualitative factors and make judgments about these factors (including comparisons with other rated firms) in arriving at a final credit rating for a client firm.

The Commission considers that the financial benchmarks and metrics proposed by SA Water are reasonable, as they are consistent with those generally used by credit rating agencies and regulators. The ratios proposed by SA Water include:

- a ratio to measure its ability to service its debt: funds from operations (FFO) interest coverage ratio – calculated as FFO plus interest expense, divided by interest expense
- a ratio to measure its ability to repay its debt: net debt gearing ratio – calculated as debt (less cash) divided by the regulatory value of fixed assets
- a ratio to measure its ability to generate cash flows: FFO over net debt ratio – calculated as FFO divided by net debt
- a ratio to measure the level of remaining cash to fund capital expenditure after dividends are paid: internal financing ratio – calculated as FFO, less dividends, divided by net capital expenditure.

Table 11.11 summarises the outcomes of SA Water's analysis (based on the regulatory outcomes contained in RBP16) against its proposed financial ratios.

Table 11.11: SA Water assessment of financial ratios

Financial metric	2016-17	2017-18	2018-19	2019-20
FFO interest coverage	2.3 times	2.4 times	2.4 times	2.5 times
Net debt/RAB	52%	53%	53%	52%
FFO/net debt	6.9%	7.0%	7.2%	7.7%
Internal financing ratio	0.9 times	0.8 times	0.8 times	1.0 times

The financial assessment performed by SA Water on the basis of forecast financial information, including the regulatory outcomes in RBP16, support its ability to raise funds and service its debt over the RD16 period. The revenue caps arising from this final decision are not sufficiently different to those calculated in RBP16 and therefore do not warrant any amendment to this view.

Part D - Implementation of RD16

To give legal effect to the decisions made by the Commission for the purposes of RD16, several supplementary regulatory documents have been drafted or reviewed by the Commission. A summary of the requirements that will be specified in each of the relevant regulatory documents is discussed in this Part.

12 How RD16 is given legal effect

12.1 Regulatory documents

The following regulatory documents set out the specific requirements relevant to the overall regulation of drinking water and sewerage retail services, recycled water retail services and excluded retail services provided by SA Water for the RD16 period:

- Price Determination
- Water Retail Code for Major Retailers including the Service Standards Schedule
- Water Industry Guideline No. 1 – Compliance Systems and Reporting
- Water Industry Guideline No. 2 – Water Regulatory Information Requirements for Major Retailers, and
- Water Industry Rule No.1 - Excluded Retail Services.

By making a new Price Determination and reviewing the code, guidelines and Industry Rule that establish the consumer protection, service standard and regulatory reporting frameworks that apply to SA Water, the decisions made by the Commission for the purposes of RD16 will be implemented. During the RD16 period, the Commission will monitor and report on SA Water's performance and compliance with the relevant requirements contained within the regulatory documents, on an ongoing basis.

12.1.1 Price Determination

The Price Determination specifies the requirements relevant to the revenue regulation of SA Water in respect of the drinking water and sewerage retail services, recycled water retail services and excluded retail services it will provide during the RD16 period. In summary, the price determination specifies:

- the form (and quantum) of the revenue control to apply, being a maximum revenue control in respect of the provision of drinking water and sewerage retail services
- the process by which SA Water's compliance with the maximum revenue controls will be assessed at the end of the RD16 period
- the revenue adjustment mechanisms to determine any amount (positive or negative) of revenue to be incorporated into a subsequent price determination as a result of:
  - a material variation between forecast and actual rates of water consumption or sewerage connections for the RD16 period
  - a pass through event, and
  - any revenue earned by SA Water associated with its River Murray water licences.
- the form of regulation to apply to recycled water retail services and excluded retail services provided by SA Water, being a pricing principles and price monitoring approach, and
- administrative matters such as the application, term, revocation or modification, review and interpretation of the Price Determination.

12.1.2 Water Retail Code – Major Retailers

The Water Retail Code is discussed in detail in Part B. In summary, this regulatory document specifies the minimum requirements on SA Water in relation to:

- customer information obligations
- connection obligations (including requirements around standard form customer sale contracts)
- retail supply obligations
- customer service obligations, and
- service standards with performance targets.

Part B outlines the Commission's approach to reviewing the requirements of the Water Retail Code and establishing the service standards for the RD16 period.

12.1.3 Water Industry Guidelines

Water Industry Guideline No. 1 – Compliance Systems and Reporting specifies the minimum requirements on SA Water in relation to:

- the establishment and maintenance of appropriate and robust compliance systems and processes (which are to be based on the Australian Standard on Compliance Programs), and
- the reporting of information to demonstrate compliance (or otherwise) with applicable regulatory requirements imposed by the Commission.

Water Industry Guideline No. 2 - Water Regulatory Information Requirements for Major Retailers, is used by the Commission to monitor and report on the financial and operational performance of SA Water.

12.1.4 Water Industry Rule No.1 - Excluded Retail Services

The Commission recognises that there is potential for disputes over fees and charges associated with excluded retail services (including developer charges) to arise from time to time. If such disputes cannot be resolved between the parties, the Commission must act as the independent dispute resolution body.

This Industry Rule sets out how disputes will be determined by the Commission and the requirements on SA Water as a party to that process. The Commission will review the Industry Rule to make minor administrative amendments to ensure consistency with the price determination. It will also consider whether there is a need to refine the current dispute resolution process for the RD16 period. That review will occur in 2016-17.

Water

Price Determination

SA Water's water and sewerage retail services: 2016-2020

Price Determination

1 July 2016

Enquiries concerning this document should be addressed to:

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E-mail: escosa@escosa.sa.gov.au
Web: www.escosa.sa.gov.au

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1 General

1.1 Authority

1.1.1 This price determination is made by the Commission:

(a) pursuant to the price determination powers under the Essential Services Commission Act 2002, as authorised by section 35(1) of the Water Industry Act 2012, and

(b) in accordance with the requirements of the Pricing Orders issued under, section 35(4) of the Water Industry Act 2012.

1.2 Application

1.2.1 This price determination applies to SA Water and:

(a) regulates the total revenues which SA Water may recover from the sale and supply of drinking water retail services and sewerage retail services during the regulatory period

(b) establishes mechanisms for adjusting revenues under a subsequent price determination to account for:

(i) material variances in drinking water retail service demand during the regulatory period as compared with the forecasts assumed in this price determination

(ii) material variances in sewerage retail service connections during the regulatory period as compared with the forecasts assumed in this price determination

(iii) the occurrence of material changes in costs incurred by SA Water, in respect of the sale and supply of drinking water retail services or sewerage retail services, arising from pass through events (as the Commission determines appropriate) during the regulatory period, and

(iv) any revenue earned by SA Water in connection with the temporary leasing of a River Murray Water Licence, and

(c) regulates the manner in which SA Water must set prices for:

(i) recycled water retail services, and

(ii) excluded retail services.

1.3 Term and commencement

1.3.1 This price determination applies for the period 1 July 2016 to 30 June 2020.

1.3.2 Nothing in clause 1.3.1 affects the operation of any provision of this price determination that requires something to be done before 1 July 2016.

1.4 Revocation of previous determination

1.4.1 Pursuant to section 26(8) of the Essential Services Commission Act 2002, on and from 1 July 2016, this price determination revokes the previous determination made by the Commission under section 35(1) of the Water Industry Act 2012.

1.4.2 Nothing in this price determination affects anything done or omitted to be done or rights or obligations accrued under the previous determination made by the Commission under section 35(1) of the Water Industry Act 2012.

1.5 Definitions and interpretation

1.5.1 Where a term used in this price determination is defined in the Water Industry Act 2012, it has the meaning given in that Act.

1.5.2 Subject to clause 1.5.1, in this price determination, unless the contrary intention appears:

business day means any day apart from a Saturday, Sunday or public holiday in South Australia (within the meaning of the Acts Interpretation Act 1915).

change in legal obligation event means the occurrence of an event under which a new and legally binding obligation is placed on SA Water which has a material impact on the cost of provision of a drinking water retail service or a sewerage retail service during the regulatory period.

Commission means the Essential Services Commission established under the Essential Services Commission Act 2002.

drinking water retail service means a retail service constituted by the sale and supply of water of a quality fit for human consumption, but does not include an excluded retail service.

excluded retail services means:

(a) standard and non-standard connection services (including developer services)

(b) trade waste services

(c) non-domestic hauled waste services

(d) easement extinguishment and encumbrance services

(e) hydrant and fire plug services

(f) meter services, or

(g) network analysis and audit services.

extraordinary event means an event the occurrence of which:

(a) was unforeseen or, if foreseen, the timing and impacts of which could not be quantified at the time that this price determination was made

(b) was or is (as the case may be) beyond the control of SA Water (acting prudently and efficiently), and

(c) has or will have (as the case may be) a material impact on the cost of provision of a drinking water retail service or a sewerage retail service during the regulatory period.

Pricing Order means any pricing order issued by the Treasurer under section 35(4) of the Water Industry Act 2012.

NWI pricing principles means the pricing principles endorsed by the Natural Resource Management Ministerial Council on 23 April 2010.

pass through event means each of:

(a) a change in legal obligation event; and

(b) an extraordinary event.

recycled water retail services means the sale and supply of water which has been generated from sewage, greywater or stormwater and treated to a standard that is appropriate for its intended use.

regulatory period means the period 1 July 2016 to 30 June 2020.

regulatory year means each 12-month period commencing 1 July during the regulatory period.

River Murray Water Licence means a licence granted to SA Water under the Natural Resources Management Act 2004 for the purposes of extracting water from the River Murray.

SA Water means the South Australian Water Corporation established under the South Australian Water Corporation Act 1994.

sewerage retail service means the sale and supply of sewerage services for the removal of sewage, but does not include an excluded retail service.

subsequent price determination means any price determination made by the Commission pursuant to the Essential Services Commission Act 2002 for the purposes of section 35 of the Water Industry Act 2012 to apply for the subsequent regulatory period.

subsequent regulatory period means the operational period of any price determination made by Commission to take effect from 1 July 2020 for the purposes of section 35 of the Water Industry Act 2012.

1.5.3 This price determination must be interpreted according to the following principles:

(a) words denoting persons include corporations, unincorporated associations, firms, governments and governmental agencies

(b) a reference to a person includes that person's agents, successors and permitted assigns, persons who have control over any assets of a person and receivers, managers, trustees, administrators and liquidators and similar persons appointed over:

(i) a person, or

(ii) any assets of a person

(c) headings are only included for convenience and do not affect interpretation

(d) unless specified otherwise, a reference to a section, clause, Chapter, Part or Schedule is to a clause, Chapter or Part of or Schedule to this price determination

(e) a reference to an agreement, document, regulatory instrument or part thereof is a reference to that agreement, document, regulatory instrument or part thereof as varied, replaced or substituted from time to time and includes any Schedules or attachments to the agreement, document or regulatory instrument, and

(f) a reference to legislation or regulatory instrument, or to a provision of the legislation or regulatory instrument, includes a modification, re-enactment or re-making of it, a provision substituted for it and a regulation or other statutory instrument issued under it.

1.6 Revoking or altering decisions

1.6.1 If the Commission has made a decision under this price determination and it subsequently becomes aware that the decision was made on the basis of information provided to the Commission that was false or misleading in a material particular, then the Commission may:

(a) revoke that decision and substitute a new decision, or

(b) alter that decision.

1.6.2 If the Commission revokes and substitutes a new decision or alters a decision under clause 1.6.1 (as the case may be), that new or altered decision takes effect on the date specified by the Commission in a written notice.

1.6.3 A new or altered decision made under this clause will only differ from the original decision to the extent necessary to correct for:

(a) the false or misleading information on which the original decision was based, and

(b) the application of the original decision during the period in respect of which that decision was in effect.

1.7 Modification of time periods

1.7.1 The Commission may, by written notice, extend the time by or within which anything required to be done pursuant to this price determination must be done.

1.7.2 If the Commission makes a request for information for the purposes of making a decision or exercising any of its powers under this price determination, any time period within which the Commission is required to make a decision, notify any person or exercise any of its powers under this price determination:

(a) stops running on the date the request is made; and

(b) starts to run again on the date that the Commission notifies SA Water in writing that the Commission is satisfied that the requested information has been provided.

1.7.3 If the Commission makes a request for information under clause 1.7.2, it will notify SA Water:

(a) as soon as practicable after the request for information has been made, of the date the relevant time period stopped running; and

(b) as soon as practicable after the Commission has determined that any information received satisfies the request for information, of the date the relevant time period started to run again.

1.8 Reviews of decisions

1.8.1 SA Water may make an application to the Commission for a review of a decision made, or deemed to have been made, under this price determination.

1.8.2 The only grounds for a review under this clause 1.8 are that a decision made, or deemed to have been made, under this price determination:

(a) was not made in accordance with the requirements of this price determination

(b) is unreasonable having regard to all the relevant circumstances, or

(c) is based wholly or partly on an error of fact in a material respect.

1.8.3 An application for a review of a decision must:

(a) be in writing

(b) set out the decision made, or deemed to have been made, under this price determination to which the application relates

(c) set out in detail the grounds on which SA Water seeks review and the decision sought on the review

(d) be accompanied by any information that SA Water considers should be taken into account by the Commission in the review, and

(e) be lodged with the Commission within 10 business days after the decision made, or deemed to have been made, under this price determination, is published.

1.8.4 The Commission will not review a decision made, or deemed to have been made, under this price determination, where it determines that:

(a) the application for review is vexatious, or

(b) the subject matter of the application is trivial, misconceived or lacking in substance.

1.8.5 If an application is made for a review of a decision made, or deemed to have been made, under this price determination, the Commission:

(a) will publish a copy of the application on its website, and

(b) may invite submissions on the matter the subject of the review in a manner and within a period specified by the Commission.

1.8.6 A review will be determined within 6 weeks of the application being lodged with the Commission.

1.8.7 Subject to clause 1.7.1, if a review is not determined within that period, the Commission will be taken to have confirmed the decision made, or deemed to have been made, under this price determination on the same grounds on which the original decision was made.

1.8.8 After considering the application, the Commission may confirm, vary or substitute the decision.

1.8.9 The Commission will give SA Water and any other person who provides a submission to the review written notice of the Commission's decision under clause 1.8.8 and the reasons for that decision.

1.8.10 A decision of the Commission made under clause 1.8.8 may not be the subject of a subsequent application for review under this clause 1.8.

1.9 Collection of information

1.9.1 The Commission may request any information from SA Water to determine SA Water's compliance with the requirements of this price determination or in relation to the provision of drinking water retail services, sewerage retail services, recycled water services or excluded retail services provided by SA Water.

1.9.2 Any information required to be provided by SA Water under, or in accordance with, this price determination may be required (and utilised) by the Commission in accordance with Part 5 of the Essential Services Commission Act 2002.

1.10 Forecasts and estimates

1.10.1 For the purposes of statements provided by SA Water under this price determination, all:

(a) forecasts of demand and revenue for the regulatory period must be based on the best forecasts available at the time the statement is prepared, and

(b) estimates of demand and revenue for the regulatory period must be based on the actual results available for the regulatory period at the time the statement is prepared and the best forecasts available for the remainder of the regulatory period.

2 Revenue Regulation of Drinking Water Retail Services and Sewerage Retail Services

2.1 Drinking water and sewerage retail services revenue control

2.1.1 Clauses 2.2 to 2.11 (inclusive) establish:

(a) for the purposes of clause 3.3 of the Pricing Order issued on 2 September 2014, a separate total revenue control for drinking water retail services and sewerage retail services respectively

(b) for the purposes of clause 3.5 of the Pricing Order issued on 2 September 2014, a demand variation revenue adjustment mechanism

(c) for the purposes of clause 3.6 of the Pricing Order issued on 2 September 2014, a pass through revenue adjustment mechanism, and

(d) an adjustment mechanism to net off any revenue earned by SA Water associated with the temporary leasing of its River Murray Water Licences.

2.1.2 The outcomes of the schemes referred to in clauses 2.1.1(a) to (d) will, in combination, be used in determining any revenue adjustment amount to be incorporated into a subsequent price determination for drinking water retail services and sewerage retail services provided by SA Water (as the case may be).

2.2 Maximum drinking water retail services revenues

2.2.1 In setting drinking water retail services prices to apply during the regulatory period, SA Water must ensure that drinking water retail services revenues during the regulatory period do not, subject to clause 2.2.2, exceed $2,841.3 million (present value at 1 July 2016, in dollars of December 2014).

2.2.2 Where actual drinking water retail services demand exceeds forecast drinking water retail services demand, SA Water may recover drinking water retail services revenues in excess of the maximum drinking water retail services revenues specified in clause 2.2.1, in the amount calculated under clause 2.3.2 as the revenue adjustment amount (RA_D).

2.3 Drinking water retail services revenue adjustment mechanism

2.3.1 Prior to the commencement of the subsequent regulatory period, the Commission will calculate a drinking water retail services revenue adjustment amount (RA_D), which will be subtracted from the maximum drinking water retail services revenues determined as part of the subsequent price determination.

2.3.2 RA_D will be calculated as follows (and expressed as a present value at 1 July 2016, in dollars of December 2014):

$RA_D = V_D + R_D$, where

(a) V_D (expressed as a present value at 1 July 2016, in dollars of December 2014) is the drinking water demand variation revenue adjustment and equals:

(i) 0.5*(A_D – N_D), where A_D differs from N_D by one percent or more

(ii) zero, where A_D differs from N_D by less than one percent

(b) R_D (expressed as a present value at 1 July 2016, in dollars of December 2014) is the revenue adjustment that arises if actual drinking water retail services revenue during the regulatory period exceeds the maximum drinking water retail services revenue as specified in clause 2.2.1 other than as a result of a demand variation and equals the maximum of (N_D – M_D) and zero.

(c) A_D (expressed as a present value at 1 July 2016, in dollars of December 2014) is the actual drinking water retail services revenue received during the regulatory period.

(d) N_D (expressed as a present value at 1 July 2016, in dollars of December 2014) is the notional drinking water retail services revenue that would have been received during the regulatory period if actual drinking water retail services prices applied by SA Water during the regulatory period were applied to forecast drinking water retail services demand as specified in the Forecast Schedule in Part 5 of this determination.

(e) M_D is the maximum drinking water retail services revenues for the regulatory period, as specified in clause 2.2.1.

2.3.3 For the purposes of clause 2.2 and clause 2.3:

(a) actual drinking water retail services demand is drinking water retail services demand to be submitted by SA Water by 30 April 2020 based on actual drinking water retail services demand up to 31 December 2019 and SA Water's best estimate of drinking water retail services demand for the period 1 January 2020 to 30 June 2020.

(b) actual drinking water retail services revenue is drinking water retail services revenue to be submitted by SA Water by 30 April 2020 based on actual drinking water retail services revenue up to 31 December 2019 and SA Water's best estimate of drinking water retail services revenue for the period 1 January 2020 to 30 June 2020.

2.4 Calculation of present values of drinking water retail services revenues

2.4.1 In calculating the present value of revenues under clause 2.2 and clause 2.3, the Commission will apply the following discount factors in the following manner:

(a) for the 2016-17 regulatory year, actual drinking water retail services revenues (in dollars of December 2014) will be multiplied by 0.97590

(b) for the 2017-18 regulatory year, actual drinking water retail services revenues (in dollars of December 2014) will be multiplied by 0.93032

(c) for the 2018-19 regulatory year, actual drinking water retail services revenues (in dollars of December 2014) will be multiplied by 0.88911, and

(d) for the 2019-20 regulatory year, estimated drinking water retail services revenues (in dollars of December 2014) will be multiplied by 0.85188.

2.4.2 In calculating the present value of drinking water retail services revenues under clause 2.2 and clause 2.3, the Commission will deflate actual drinking water retail services revenues in each regulatory year to revenues in dollars of December 2014 using the change in March to March Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australia Bureau of Statistics for each relevant year, as a proxy for the December to December change in Consumer Price Index in that calendar year.

2.5 Drinking water retail services revenue adjustment statement

2.5.1 By a date and in a manner and form specified by the Commission in writing, SA Water must submit to the Commission a drinking water retail services revenue adjustment statement in relation to the regulatory period, which must include (without limitation):

(a) actual revenues attributable to the sale and supply of drinking water retail services for each regulatory year during the period 1 July 2016 to 30 June 2019

(b) estimated revenues attributable to the sale and supply of drinking water retail services for the period 1 July 2019 to 30 June 2020

(c) actual demand for drinking water retail services for each regulatory year during the period 1 July 2016 to 30 June 2019, and

(d) estimated demand for drinking water retail services for the period 1 July 2019 to 30 June 2020.

2.6 Maximum sewerage retail services revenues

2.6.1 In setting sewerage retail services prices to apply during the regulatory period, SA Water must ensure that sewerage retail services revenues during the regulatory period do not exceed $1,188.1 million (present value at 1 July 2016, in dollars of December 2014), subject to clause 2.6.2.

2.6.2 Where actual sewerage retail services connections exceed forecast sewerage retail services connections, SA Water may recover sewerage retail services revenues in excess of the maximum sewerage retail services revenues specified in clause 2.6.1, in the amount calculated under clause 2.7.2 as the revenue adjustment amount (RA_S).

2.7 Sewerage retail services revenue adjustment mechanism

2.7.1 Prior to the commencement of the subsequent regulatory period, the Commission will calculate a sewerage retail services revenue adjustment amount (RA_S), which will be subtracted from the maximum sewerage retail services revenues determined as part of the subsequent price determination.

2.7.2 RA_S will be calculated as follows (and expressed as a present value at 1 July 2016, in dollars of December 2014):

$RA_S = V_S + R_S$, where

(a) V_S (expressed as a present value at 1 July 2016, in dollars of December 2014) is the sewerage demand variation revenue adjustment and equals:

(i) $0.5*(A_S - N_S)$, where A_S differs from N_S by one percent or more

(ii) zero, where A_S differs from N_S by less than one percent

(b) R_S (expressed as a present value at 1 July 2016, in dollars of December 2014) is the revenue adjustment that arises if actual sewerage retail services revenue during the regulatory period exceeds the maximum sewerage retail services revenue as specified in clause 2.6.1, other than as a result of a demand variation and equals the maximum of $(N_S - M_S)$ and zero.

(c) A_S (expressed as a present value at 1 July 2016, in dollars of December 2014) is the actual sewerage retail services revenue received during the regulatory period.

(d) N_S (expressed as a present value at 1 July 2016, in dollars of December 2014) is the notional sewerage retail services revenue that would have been received during the regulatory period if actual sewerage retail services prices applied by SA Water during the regulatory period were applied to forecast sewerage retail services connections as specified in the Forecast Schedule in Part 5 of this determination.

(e) M_S is the maximum sewerage retail services revenues for the regulatory period, as specified in clause 2.6.1.

2.7.3 For the purposes of clause 2.6 and clause 2.7:

(a) actual sewerage retail services connections is the number of sewerage retail services connections to be submitted by SA Water by 30 April 2020 based on actual sewerage retail services connections up to 31 December 2019 and SA Water's best estimate of sewerage retail services connections for the period 1 January 2020 to 30 June 2020.

(b) actual sewerage retail services revenue is sewerage retail services revenue to be submitted by SA Water by 30 April 2020 based on actual sewerage retail services revenue up to 31 December 2019 and SA Water's best estimate of sewerage retail services revenue for the period 1 January 2020 to 30 June 2020.

2.8 Calculation of present values of sewerage retail service revenue

2.8.1 In calculating the present value of revenues under clause 2.6 and clause 2.7, the Commission will apply the following discount factors in the following manner:

(a) for the 2016-17 regulatory year, actual sewerage retail services revenues (in dollars of December 2014) will be multiplied by 0.97590

(b) for the 2017-18 regulatory year, actual sewerage retail services revenues (in dollars of December 2014) will be multiplied by 0.93032

(c) for the 2018-19 regulatory year, actual sewerage retail services revenues (in dollars of December 2014) will be multiplied by 0.88911, and

(d) for the 2019-20 regulatory year, estimated sewerage retail services revenues (in dollars of December 2014) will be multiplied by 0.85188.

2.8.2 In calculating the present value of sewerage retail services revenues under clause 2.6 and clause 2.7, the Commission will deflate actual sewerage retail services revenues in each regulatory year to revenues in dollars of December 2014 using the change in March to March Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australia Bureau of Statistics for each relevant year, as a proxy for the December to December change in Consumer Price Index in that calendar year.

2.9 Sewerage retail services revenue adjustment statement

2.9.1 By a date and in a manner and form specified by the Commission in writing, SA Water must submit to the Commission a sewerage retail services revenue adjustment statement in relation to the regulatory period, which must include (without limitation):

(a) actual revenues attributable to the sale and supply of sewerage retail services for each regulatory year during the period 1 July 2016 to 30 June 2019

(b) estimated revenues attributable to the sale and supply of sewerage retail services for the period 1 July 2019 to 30 June 2020

(c) actual demand for sewerage retail services for each regulatory year during the period 1 July 2016 to 30 June 2019, and

(d) estimated demand for sewerage retail services for the period 1 July 2019 to 30 June 2020.

2.10 Pass through revenue variation adjustment mechanism

2.10.1 By a date and in a manner and form specified by the Commission in writing, SA Water must submit to the Commission a pass through event revenue adjustment statement, setting out any revenue amounts which SA Water claims are attributable to the occurrence of a pass through event and for which SA Water seeks a revenue adjustment to a subsequent price determination.

2.10.2 A pass through event revenue adjustment statement submitted under clause 2.10.1 must include (without limitation):

(a) details of the claimed pass through event (including identification of the retail service or retail services affected by the event)

(b) the date on which SA Water claims the pass through event took place

(c) the best estimates of the financial impacts of the pass through event on the provision of the relevant retail services by SA Water

(d) the reasons why the financial impacts of the pass through event are considered material

(e) the reasons why the financial impacts of the pass through event could not otherwise have been controlled or substantially mitigated by SA Water (acting prudently and efficiently)

(f) the revenue amount that SA Water proposes is incorporated within a subsequent price determination, and

(g) the basis on and period over which SA Water proposes to apply the pass through revenue amount within the subsequent price determination.

2.10.3 In respect of a pass through event revenue adjustment statement submitted under clause 2.10.1 the Commission will determine whether or not:

(a) the proposed pass through event has occurred

(b) the financial impacts of the pass through event are material, and

(c) the pass through event could not otherwise have been controlled or substantially mitigated by SA Water (acting prudently and efficiently).

2.10.4 If the Commission determines:

(a) in respect of a pass through event revenue adjustment statement submitted under clause 2.10.1, that each of the criteria specified in clause 2.10.3 are satisfied, or

(b) where a pass through event revenue adjustment statement is not submitted by SA Water in respect of a pass through event, that:

(i) a pass through event has occurred, and

(ii) each of the criteria specified in clause 2.10.3 are satisfied,

then it will determine a pass through event revenue amount (including the time cost of money to be applied) to be incorporated into a subsequent price determination.

2.11 River Murray Water Licence adjustment mechanism

2.11.1 By a date and in a manner and form specified by the Commission in writing, SA Water must submit to the Commission a River Murray Water Licence revenue adjustment statement, setting out any revenue amounts it has earned which are attributable to the temporary leasing of a River Murray Water Licence during the regulatory period, to be incorporated into a subsequent price determination.

2.11.2 A River Murray Water Licence revenue adjustment statement submitted under clause 2.11.1 must include (without limitation):

(a) for any River Murray Water Licence leased by SA Water:

(i) the associated volume of water leased

(ii) the date of lease

(iii) the cost incurred by SA Water relating to the lease, and

(iv) the price obtained.

(b) information which demonstrates that the leasing of a River Murray Water Licence over the regulatory period was prudent and efficient, and

(c) information that demonstrates SA Water received an appropriate market price for any River Murray Water Licence it leased.

2.11.3 In respect of a River Murray Water Licence revenue adjustment statement submitted under clause 2.11.1, the Commission will determine:

(a) whether or not the decision by SA Water to lease a River Murray Water Licence was prudent and efficient,

(b) whether or not the costs incurred by SA Water as a result of the lease were prudent and efficient, and

(c) whether or not the price obtained represents an appropriate market price,

and, subject to those determinations, may determine a River Murray Water Licence revenue adjustment amount to be incorporated into a subsequent price determination to reflect revenue earned (or, if necessary, taken to be earned according to appropriate market prices) on account of the relevant lease or leases, less the prudent and efficient lease costs.

3 Price Regulation of Recycled Water Retail Services

3.1 Price control for recycled water retail services

3.1.1 In setting prices for recycled water retail services for each regulatory year, SA Water must comply with the following NWI pricing principles for recycled water and stormwater use:

(a) Principle 1: Flexible regulation

(b) Principle 2: Cost allocation

(c) Principle 3: Water usage charge

(d) Principle 4: Substitutes

(e) Principle 5: Differential pricing

(f) Principle 6: Integrated water resource planning

(g) Principle 7: Cost recovery

(h) Principle 8: Transparency, and

(i) Principle 9: Gradual approach.

3.1.2 In addition to the matters specified under clause 3.1.1, in setting prices for recycled water retail services for each regulatory year, SA Water must also comply with any principles, requirements or matters specified by the Commission in an industry code, industry rule or guideline (as in force from time to time) applicable to the provision of recycled water retail services.

3.2 Pricing justification for recycled water retail services

3.2.1 By a date and in a manner and form specified by the Commission in writing, SA Water must prepare a pricing statement in respect of each regulatory year, containing at least the following matters:

(a) a pricing schedule, setting out the prices which SA Water will charge customers for the sale and supply of recycled water retail services for that regulatory year, and

(b) a pricing policy statement which demonstrates the manner in which the prices that SA Water will charge customers for the sale and supply of recycled water retail services for that regulatory year meet the requirements of clause 3.1.

3.2.2 SA Water must prepare the pricing statement required under clause 3.2.1 in respect of the 2016-2017 regulatory year (and provide a copy of that pricing statement to the Commission) as soon as practicable after a copy of this price determination is sent to SA Water under section 26(3)(a) of the Water Industry Act 2002 (and in any event before 1 July 2016 and without the need for the Commission to specify a date under clause 3.2.1).

3.3 Publication obligations in respect of recycled water retail services

3.3.1 In respect of each pricing statement prepared under clause 3.2.1, SA Water must:

(a) provide a copy of that pricing statement to the Commission

(b) publish a copy of that pricing statement on its website, in a prominent and readily accessible position, and

(c) provide a copy (free of charge) to a customer on request (provided that SA Water may charge for the provision of a copy of the pricing statement upon a second or subsequent request by the same customer within the period of that regulatory year).

4 Price Regulation of Excluded Retail Services

4.1 Price control for excluded retail services

4.1.1 In setting prices for excluded retail services for each regulatory year, SA Water must comply with the following NWI pricing principles:

(a) Principle 1 for the Recovery of Capital Expenditure: Cost recovery for new capital expenditure

(b) Principle 7 for Urban Water Tariffs: Differential water charges

(c) Principle 8 for Urban Water Tariffs: Setting developer charges

(d) Principle 9 for Urban Water Tariffs: Capping developer charges, and

(e) Principle 10 for Urban Water Tariffs: Revenue from developer charges.

4.1.2 In addition to the requirements of clause 4.1.1:

(a) where an excluded retail service is provided for the sole benefit of one customer, that customer should pay the full efficient cost of the service and other customers should not be required to contribute to the cost of the service

(b) where an excluded retail service is provided to a distinct group of customers, the prices charged to those customers should reflect:

(i) the incremental cost of supply of that excluded retail service to those customers, and

(ii) a reasonable allocation of the fixed costs of providing that excluded retail service, and

(c) prices should reflect the efficient cost of provision of the relevant excluded retail service, provided that in circumstances where the cost of implementing differentiated prices to different customers is more likely than not to outweigh the benefits, undifferentiated prices may be implemented.

4.1.3 In addition to the matters specified under clause 4.1.1, 4.1.2 and clause 4.2.4, in setting prices for excluded retail services for each regulatory year, SA Water must also comply with any principles, requirements or matters specified by the Commission in an industry code, industry rule or guideline (as in force from time to time) applicable to the provision of excluded retail services.

4.2 Pricing justification for excluded retail services

4.2.1 By a date and in a manner and form specified by the Commission in writing, SA Water must prepare a pricing statement in respect of each regulatory year, containing at least the following matters:

(a) a pricing schedule, setting out the prices which SA Water will charge customers for the sale and supply of excluded retail services for that regulatory year, and

(b) a pricing policy statement which demonstrates the manner in which the prices that SA Water will charge customers for the sale and supply of

excluded retail services for that regulatory year meet the requirements of clause 4.1.

4.2.2 Clause 4.2.1(a) does not apply in respect of an excluded retail service that is of a nature which precludes SA Water (acting reasonably and in good faith) from publishing the relevant prices or unit prices in advance of a request from a customer for the provision of the particular excluded retail service.

4.2.3 SA Water must prepare the pricing statement required under clause 4.2.1 in respect of the 2016-2017 regulatory year (and provide a copy of that pricing statement to the Commission) as soon as practicable after a copy of this price determination is sent to SA Water under section 26(3)(a) of the Water Industry Act 2002 (and in any event before 1 July 2016 and without the need for the Commission to specify a date under clause 4.2.1).

4.2.4 SA Water must, at the request of a customer, provide credible, evidence-based and transparent information as to how the costs and prices for excluded retail services have been calculated, derived and applied.

4.3 Publication obligations in respect of excluded retail services

4.3.1 In respect of each pricing statement prepared under clause 4.2.1, SA Water must:

(a) provide a copy of that pricing statement to the Commission

(b) publish a copy of that pricing statement on its website, in a prominent and readily accessible position, and

(c) provide a copy (free of charge) to a customer on request (provided that SA Water may charge for the provision of a copy of the pricing statement following any second or subsequent request by the same customer within the period of that regulatory year).

5 Forecast Schedule

5.1 Forecast demand

5.1.1 For the purposes of clause 2.3 of this price determination, the forecast level of drinking water retail service demand in each regulatory year is as follows:

	2016-17	2017-18	2018-19	2019-20
Total (GL)	190.1	191.4	192.9	194.5

5.1.2 For the purposes of clause 2.7 of this price determination, the forecast level of sewerage retail service demand (expressed in number of connections) in each regulatory year is as follows:

	2016-17	2017-18	2018-19	2019-20
Total (connections as at 31 December each year)	597,345	604,513	611,767	619,109

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