ESSENTIAL SERVICES COMMISSION

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METROPOLITAN MELBOURNE WATER PRICE REVIEW 2009

DRAFT DECISION—VOLUME I

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PREFACE

The Essential Services Commission is the independent economic regulator of the Victorian water industry. Under a process specified by the Victorian Government, the Commission periodically assesses the prices and service standards proposed by water businesses for their water and sewerage services. In November 2008, the Commission commenced its review of the metropolitan Melbourne businesses' proposals for the four year regulatory period commencing on 1 July 2009.

The Commission has undertaken an extensive analysis of the proposals included in the Water Plans submitted by Melbourne Water and the three metropolitan retail water businesses (City West Water, South East Water and Yarra Valley Water). The Plans set out: the expected costs involved in delivering water and sewerage services; planned capital works programs; the forecast volumes of water that will be delivered; and the levels of service promised to customers. Each business proposed prices that would raise sufficient revenue to recover its expected costs over the regulatory period.

Consultation with stakeholders is an important part of the Commission's decision making process. In December 2008, the Commission released an issues paper summarising the businesses' proposals and highlighting issues. The Commission called for submissions and held a public hearing to obtain feedback from customers and other interested parties. Affordability and the structure of tariffs were raised as key concerns.

In reaching its draft decision on the businesses' proposals, the Commission's main focus has been to ensure that prices are as low as possible but still sufficient to recover the businesses' efficient costs of providing services. To assist it in this task, the Commission has worked with its consultants to assess whether the businesses' proposed expenditures are reasonable and deliverable as claimed. The results of this investigation are outlined in two volumes comprising this draft decision. All supporting documentation, including the consultants' reports, are available on the Commission's website.

The Commission's draft decision results in a net $433 million reduction in the revenue requirement proposed by the retail businesses. Consequently, price increases are significantly lower than initially proposed, saving a typical household up to $100 on its average annual water bill.

The Commission considers that the prices implied by this draft decision are fair and reasonable when compared with the benefits customers will receive in terms of improved reliability and security of supply, and an easing of water restrictions, when the major augmentation projects financed by these prices are completed.

Recognising that the bill increases resulting from this draft decision may cause problems for low income and vulnerable customers, the Commission will require businesses to ensure that customers experiencing hardship are treated fairly. The Commission is extending the Guaranteed Service Level scheme to increase the businesses' incentives to adequately address payment difficulties experienced by their customers. It will also draw to the Government's attention the affordability and hardship issues potentially arising from higher water and sewerage prices.

Customers and other interested parties are encouraged to comment on the Commission's draft decision, either by written submission or by attending a public hearing to be held in May. Submissions are due by 19 May. The Commission will make its final decision in June.

Dr Ron Ben-David
Chairperson

HOW TO RESPOND TO THIS DRAFT DECISION

We encourage stakeholders to comment on the Commission's draft decision. The responses received and information generated through the public consultation process will assist the Commission in making its final decision.

Interested parties can provide feedback on the draft decision in one of two ways:

Come to a public meeting

We plan to hold a public meeting in May to provide an opportunity for interested parties to understand the key features of the draft decision and to make comments and ask questions. Details of the meeting will be advertised in the major metropolitan newspapers and placed on our website www.esc.vic.gov.au.

Provide written comments or submissions

You can send a written submission or comments in response to the draft decision. Written comments are due by 19 May 2009.

We would prefer to receive them by email at water@esc.vic.gov.au.

You can also send comments by fax (03) 9651 3688 or by mail to:
Essential Services Commission
Level 2, 35 Spring St
Melbourne VIC 3000

The Commission's normal practice is to make all submissions publicly available on its website. If there is information that you do not wish to be disclosed publicly on the basis that it is confidential or commercially sensitive, you should discuss the matter first with Commission staff.

If you do not have access to the Internet, you can contact Commission staff by telephone on (03) 9651 0206 to make alternative arrangements to view copies of the submissions.

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DRAFT DECISION SUMMARY

Background – the price review process

In November 2008, the Commission commenced its review of the metropolitan Melbourne businesses' proposals for the four year regulatory period commencing on 1 July 2009.

Under the price review process specified by the Victorian Government, Melbourne Water and the three metropolitan retail water businesses (City West Water, South East Water and Yarra Valley Water) submitted Water Plans setting out the expected costs involved in delivering water and sewerage services, their planned capital works programs, the forecast volumes of water that will be delivered and the levels of service promised to customers. Each business also proposed prices that would raise sufficient revenue to recover its expected costs over the regulatory period.

Consultation with stakeholders is an important part of the price review process. As the first stage in the consultation process, the Commission released an issues paper in December 2008, summarising the businesses' proposals and highlighting issues on which it was seeking stakeholder comments. Twenty-one written submissions were received. The Commission also organised a public meeting on 5 March 2009, at which the water businesses and a number of community and business groups presented their proposals and comments, and feedback was received from customers.

The draft decision is the next stage in the Commission's consultation process. It sets out the Commission's views on whether the prices proposed by the businesses satisfy the pricing principles set by the Government, including taking into account the interests of customers, providing incentives for sustainable water use, ensuring prices reflect reasonable costs, and ensuring the businesses remain financially viable.

Interested parties can comment on the Commission's approach and proposed decisions before it makes its final decision in June, either by making a written submission or by attending a public meeting in May.

Context and key issues

Over the past few years, the Victorian water businesses and their customers have had to deal with many challenges associated with prolonged drought conditions and on-going water restrictions. With water restrictions having been in place since September 2006, Melbourne is now in its third year of restrictions.

In 2007, as part of *Our Water, Our Future: The Next Stage of the Plan*, the Government announced a number of major supply augmentation projects for metropolitan Melbourne. These projects include the desalination plant, the Sugarloaf pipeline (in conjunction with the Foodbowl Modernisation Project), construction of a water treatment plant at the Tarago Reservoir, and upgrading the Eastern Treatment Plant to increase water recycling. These augmentation projects will directly benefit Melburnians through improved reliability and security of water supply and an easing of water restrictions.

The augmentation projects require substantial increases in expenditure by the Melbourne water businesses. In addition, the businesses have proposed expenditure to improve or replace ageing assets (such as the Melbourne main sewer) and to meet environmental, drinking water quality and recycling regulatory obligations. These additional investments are necessary to meet the Government's requirements and to ensure that the services received by customers do not deteriorate. At the same time as these major investments are being undertaken, water use is significantly lower than historical levels due to restrictions and conservation measures.

The combination of large expenditure increases and reduced water use resulted in a substantial increase in water and sewerage prices proposed by the businesses in their respective Water Plans. All the businesses noted that their pricing proposals were consistent with the Government's expectation that water bills will no more than double over the five year period from 2008-09.

The major concerns raised by customers and community and business groups relate to:

- the structure of prices, particularly high fixed charges, and consequent limited capacity for customers to reduce their bills by cutting their water usage
- the affordability of much higher water and sewerage bills, particularly for pensioners, tenants, other low income earners and large families
- the adequacy of existing hardship programs
- the failure of concessions to keep pace with the expected increases in water prices
- the 'price shock' resulting from the businesses' proposal for large first year price increases followed by smaller increases over the rest of the period
- the appropriate pricing of recycled water.

The Commission's approach

The Commission is required to assess the prices and revenues proposed in the businesses' Water Plans against the principles set out in the Water Industry Regulatory Order (WIRO). The WIRO principles require that prices are set to:

- generate the business' revenue requirement and allow it to meet the costs of delivering services to customers
- ensure the businesses' financial viability, including a reasonable return on capital
- reflect costs and provide incentives for sustainable water use
- take into account the interests of customers.

In applying these principles, the Commission's main focus has been to ensure that prices are as low as possible but still sufficient to recover the businesses' efficient costs of providing services.

Revenue requirements

The businesses' revenue requirements comprise their forecast operating expenditure, a return on assets (existing and new assets) and regulatory depreciation (return of assets). The Commission's draft decision results in a revenue requirement for the retail businesses of $6.1 billion, which is $433 million lower than that proposed by the businesses. This results in a downward adjustment to proposed price increases over the regulatory period. Table 1 compares the businesses' proposed revenue requirements and total price increases with those proposed by the Commission.

Table 1 **Total revenue and real price increase: 2009-10 to 2012-13**
Draft decision compared to the businesses' proposals

	Businesses' proposals		*Draft decision*	
	Revenue requirement	*Total real price increase*	*Revenue requirement*	*Total real price increase*
	$ million	per cent	$ million	per cent
City West Water	1 571.4	63	1 464.3	48
South East Water	2 442.1	70	2 267.2	53
Yarra Valley Water	2 529.0	71	2 378.3	60
All retailers	**6 542.4**		**6 109.8**	

Note: Prices increased by 14.8 per cent in 2008-09.

For Melbourne Water, the Commission's draft decision results in a revenue requirement of $3.1 billion over four years, which is $123 million lower than it proposed in its Water Plan.

In reaching its draft decision, the Commission assessed whether each business' proposed expenditures are efficient and prudent, its capital works program is deliverable over the period, and its business strategy reflects a long term planning horizon. The Commission also considered whether the proposed profile of capital expenditure should be smoothed to occur more evenly over the period, instead of being concentrated at the beginning of the period. In addition, it assessed whether some expenditure should be deferred into the following regulatory period.

The main features of the Commission's draft decision on expenditure are:

Operating expenditure

- The Commission proposes to approve total operating expenditure of $5.8 billion over four years, compared to the businesses' proposed total of $6.1 billion in their Water Plans.

- The businesses can achieve savings of $8 to $10 million dollars a year from sharing services, as recommended by the Victorian Competition and Efficiency Commission.
- Given the economic downturn, the costs of inputs (such as oil, fuel, and chemicals) are assumed to remain constant in real terms, reducing the businesses' forecast costs.

Capital expenditure

- The Commission proposes to approve total capital expenditure of $3.8 billion.
- Some capital expenditure has been delayed because the businesses are not expected to be able to deliver the large, front loaded capital expenditure programs as proposed.
- Businesses have identified delays and deferrals of a number of projects from 2008-09 into the regulatory period.
- Given the slowdown in construction activity, material and other construction costs are not expected to increase in real terms, reducing the businesses' forecast costs.

Financing costs

- Based on current market conditions, the Commission proposes to approve a real post-tax weighted average cost of capital of 4.8 per cent. This is significantly lower than the 5.8 per cent assumed in the businesses' Water Plans in November 2008.
- A 'transfer' of regulatory asset values from Melbourne Water to South East Water and City West Water will not be necessary.

Demand forecasts

Changes in customer numbers and consumption levels are important determinants of the capacity of the water and sewerage infrastructure to provide services and the need for expenditure on renewal and augmentation. Maintaining or improving the reliability, security and quality of services to customers often requires large, one-off investments in infrastructure. Typically, these expenditures represent fixed costs for the service providers; that is, costs do not vary greatly with the level of service provided via the new infrastructure.

Consequently, forecast changes in demand (that is, customer numbers and consumption levels) have a direct bearing on the prices faced by customers. This can lead to the somewhat unusual situation that as customers act to conserve water, the price of that water increases (though not necessarily household bills). But the opposite also holds when water again becomes plentiful and restrictions are eased.

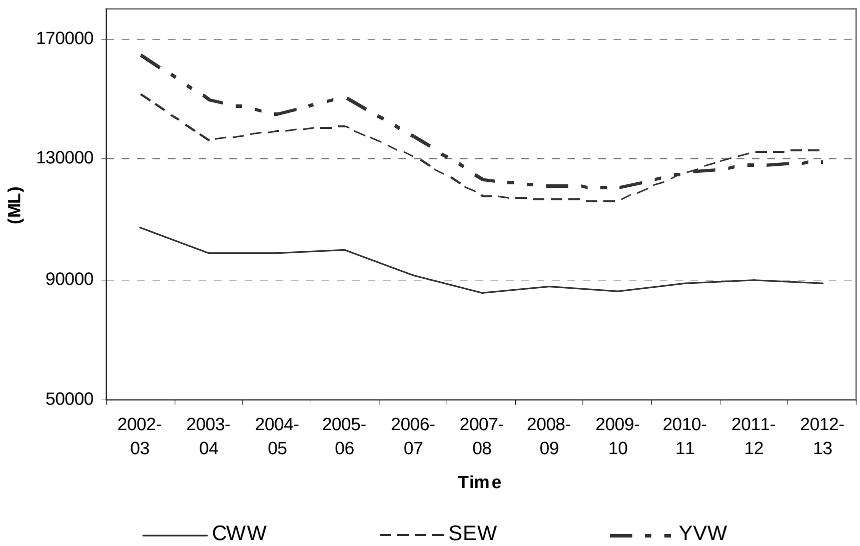
In the period covered by this pricing decision, large investments combine with constrained demand to place upward pressure on the price of delivering services to customers.

The Commission has generally accepted the recommendations made by its demand-forecasting consultant, which take into account customer growth, water restriction assumptions, the ‘Target 155’ campaign, and savings made from conservation measures. The Commission notes that the businesses’ volume and restriction assumptions appear conservative (that is, low), considering the augmentations that will begin operation during the regulatory period. However, given the uncertainty around inflows and the on-going impact of conservation programs, the Commission has accepted the demand assumptions (as adjusted by its consultant) as reasonable.

The Commission expects that, with the return of conditions more akin to business-as-usual in the next pricing period, 2013-2018, there will be a marked reduction in the upward pressure on prices for water and related services.

Figure 1 shows actual and forecast total water consumption from 2002-03 to 2012-13 for each retail business. It indicates that the businesses are not forecasting volumes to return to levels consumed in 2002-03.

Figure 1 **Historical and forecast sales volumes (ML) as proposed by the water retailers**



Prices

As a result of this draft decision, household water and sewerage bills will not increase as much as sought by the businesses in their Water Plans. Table 2 compares illustrative bills in 2009-10 and 2012-13, based on the prices proposed in the businesses’ Water Plans and prices resulting from the Commission’s draft decision.

Table 2 **Illustrative annual residential bills based on the businesses' proposed prices and draft decision prices**
Metropolitan retail businesses ($ in January 2009 prices)

	Current bill	*Bills based on businesses' proposals*		*Bills based on draft decision*	
	2008-09	*2009-10*	*2012-13*	*2009-10*	*2012-13*
City West Water	568	671	925	636	840
South East Water	566	667	963	656	865
Yarra Valley Water	585	725	1 004	679	936

Note: Estimated average annual household bills are based on an historical consumption level of 165 kL each year for an illustrative household and prices resulting from this draft decision. Figures do not include Melbourne Water drainage and waterways charges or Parks Victoria charges.

The Commission's draft decision to limit price increases will go some way to addressing concerns about affordability. However, for particular customer groups such as low income and vulnerable groups, affordability will remain an issue. The Commission has noted several issues associated with the current range of water grants, rebates and concessions and it will draw these to the Government's attention.

In addition, the Commission is requiring the retailers to make a penalty payment to customers if they fail to comply with the Customer Service Code obligations regarding the treatment of customers experiencing hardship.

The main features of this decision bearing on the structure of bills are:

Bulk water and sewerage tariffs

- The Commission proposes to approve Melbourne Water's proposal to restructure its bulk water and sewerage tariffs in 2009-10. Subsequent price increases will be set to raise sufficient revenue to recover costs each year.
- There will be a step increase in Melbourne Water's bulk water costs in 2011-12 and 2012-13 with the commencement of toll payments associated with the desalination plant.
- Melbourne Water and the retailers will be required to develop a consistent approach to pricing the salt load discharged by business into the sewer system.

Retail water and sewerage tariffs

- The three retail businesses are required to resubmit retail water and sewerage tariffs that are cost reflective. Specifically, the water usage charge should increase by more than fixed charges and the sewerage usage charge.
- First year price increases should not exceed 16 per cent in real terms. For the remaining years of the regulatory period, the retail businesses should aim to set a price path that results in 2012-13 prices being close to, and no more than, their revenue requirements for that year.

Recycled water

- The Commission proposes to approve the recycled water tariffs proposed by the businesses for third pipe customers but will require the businesses to develop a strategy that retains pricing incentives to use recycled water after water restrictions are eased.

Adjusting prices during the period

The Commission proposes to approve a hybrid form of price control that combines individual price caps with scope for businesses to apply during the period to adjust their tariff strategies or prices where they have consulted with customers and met other requirements set out by the Commission.

It also proposes to approve a mechanism that sets out a process for applying for a price adjustment to take account of events that were uncertain or unforeseen at the time of the final decision. In applying this mechanism, the Commission will only take into account factors that do not fall within the businesses' control. The Commission will strongly encourage the water businesses to seek to manage such circumstances within their existing budgets to ensure customers do not face unnecessary price changes and price volatility is avoided.

1 INTRODUCTION

On 5 November 2008, the three metropolitan retail water businesses (City West Water, South East Water and Yarra Valley Water) and Melbourne Water, in respect of its bulk water and sewerage charges, submitted final Water Plans to the Commission. These plans set out: the revenue that each business argued it requires to deliver its water, sewerage and other related services; the prices each business proposed to charge to raise that revenue; and supporting information on proposed strategies and initiatives for the four year period commencing 1 July 2009. In developing their Water Plans, the businesses were guided by the Government's water policies, including the Central Region Sustainable Water Strategy, its *Our Water, Our Future* statements,[1] and the Governments' stated pricing expectations.

This is the Commission's fourth independent review of water prices. The Commission completed price reviews in June 2005 for 17 metropolitan and regional businesses providing urban services and in June 2006 for five businesses providing rural services. In its 2008 price review, the Commission determined prices for the then 16 regional businesses servicing rural and urban customers and for Melbourne Water's drainage and waterways services.[2]

The three metropolitan retailers and Melbourne Water, in the case of its bulk water and sewerage services, were not required to submit final Water Plans to the Commission as part of the 2008 price review process. The review of their prices was delayed while the Victorian Competition and Efficiency Commission (VCEC) conducted an inquiry into the structure of Melbourne's retail water industry. Interim water and sewerage price increases for the metropolitan businesses were determined by the Minister for Water for 2008-09.[3]

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1 The Victorian Government publications *Our Water Our Future* (2004) and *Next Stage of the Plan* (2007) are available at http://www.ourwater.vic.gov.au/programs.

2 Essential Services Commission 2008, *2008 Water Price Review: Regional and Rural Businesses' Water Plans 2008-2013, Melbourne Water's Drainage and Waterways Water Plan 2008-2013 — Final Decision*, June. The Commission's Determination in respect of Melbourne Water's drainage and waterways charges for the five year period commencing 1 July 2008 is available on its website www.esc.vic.gov.au.

3 The Commission has released Determinations for these businesses setting out approved prices for 2008-09 that are consistent with the interim price increases set out in the Water Industry Regulatory Order (WIRO) and the businesses' Statements of Obligations. The Determinations are available on the Commission's website www.esc.vic.gov.au.

1.1 Legislative framework and role of the Commission

In carrying out its role, the Commission is guided by the regulatory framework set out in the *Essential Services Commission Act 2001* and the *Water Industry Act 1994* (box 1.1). The more detailed framework is set out in the Water Industry Regulatory Order (WIRO) made by the Governor in Council in 2003 under the *Water Industry Act*.[4]

> Box 1.1 **The Commission's regulatory objectives**
>
> The *Essential Services Commission Act 2001* outlines objectives to which the Commission must have regard in undertaking its functions across all industries. The Commission's primary objective is to promote the long-term interests of Victorian consumers with regard to the price, quality and reliability of essential services. In seeking to achieve this primary objective, the Commission must have regard to:
>
> - facilitating the efficiency, incentives for long term investment and the financial viability of regulated industries
> - preventing the misuse of monopoly or transitory market power
> - facilitating effective competition and promoting competitive market conduct
> - ensuring regulatory decision making has regard to the relevant health, safety, environmental and social legislation applying to the regulated industry
> - ensuring users and consumers (including low income or vulnerable customers) benefit from the gains from competition and efficiency, and
> - promoting consistency in regulation across States and on a national basis.
>
> The *Water Industry Act 1994* contains the following additional objectives that the Commission must meet in regulating the water sector:
>
> - wherever possible, ensure that the costs of regulation do not exceed the benefits
> - regulatory decision making and regulatory processes have regard to any differences in the operating environments of regulated entities, and
> - regulatory decision making has regard to the health, safety, environmental sustainability (including water conservation), and social obligations of regulated entities.

The WIRO requires the Commission to approve or specify the price arrangements to apply to each of the water businesses for each regulatory period. The Commission must approve the price arrangements if it is satisfied that the prices or the manner in which prices are to be calculated or otherwise determined have been developed in accordance with the procedural requirements and comply with the regulatory principles outlined in the WIRO. Alternatively, the Commission may

4 The WIRO is available on the Commission's website.

specify the prices that a business may charge or the manner in which those prices are to be calculated or otherwise determined if it is not satisfied that the arrangements proposed in the Water Plan were developed in accordance with the procedural requirements and comply with the regulatory principles.

The procedural requirements include the need for businesses to consult with customers and relevant regulatory agencies before submitting the Water Plan to the Commission for assessment. The WIRO sets out a number of regulatory principles with which the businesses must comply in proposing prices and the Commission must comply in approving prices (box 1.2).

In addition to regulating the prices charged for water, sewerage and other related services, the Commission's role encompasses regulation of service standards, performance monitoring, oversight of market conduct, and inquiries into issues referred to it by the Minister for Finance (such as its current inquiry into developing a third party access regime for water and sewerage infrastructure services).

1.2 Commission's approach to assessing Water Plans

The Commission is required to assess the Water Plans against the regulatory principles outlined in the WIRO. In deciding whether to approve a business' proposed prices, the Commission must be satisfied that they provide the business with only enough revenue over the regulatory period to meet its obligations and deliver the level of service required by customers. Revenue must be sufficient to allow the business to recover operating and capital expenditure and receive a reasonable return on assets, but not allow monopoly profits. The Commission must also ensure that:

- the expenditure forecasts reflect the efficient delivery of the proposed outcomes outlined in the Water Plan and take into account a long term planning horizon
- the businesses have incentives to pursue efficiency improvements in delivering services to customers and to promote sustainable water use
- prices signal to customers the costs of using water and give them incentives to use water sustainably
- the interests of customers have been taken into account, and
- customers or potential customers are readily able to understand the prices charged or how they have been calculated.[5]

[5] For some services, such as those involving unique or non-standard circumstances, the Commission does not set scheduled prices. Instead, it sets pricing principles with which the businesses must comply in setting prices for individual customers or services covered by the principles. These principles set out the method for how prices must be calculated.

Box 1.2 **WIRO pricing principles**

Clause 14(1) of the WIRO requires the Commission to be satisfied that prices are set so as to:

(i) provide for a sustainable revenue stream to the regulated entity that nonetheless does not reflect monopoly rents and/or inefficient expenditure by the regulated entity;

(ii) allow the regulated entity to recover its operational, maintenance and administrative costs;

(iii) allow the regulated entity to recover its expenditure on renewing and rehabilitating existing assets;

(iv) allow the regulated entity to recover:

(A) a rate of return on assets as at 1 July 2004 that are valued in a manner determined by, or at an amount otherwise specified by, the Minister at any time before 1 July 2004;

(B) all costs associated with existing debt incurred to finance expenditure prior to 1 July 2006, in a manner determined by the Minister at any time before 1 July 2006;

(v) allow the regulated entity to recover a rate of return on investments made after 1 July 2004 to augment existing assets or construct new assets;

(vi) provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to water users about:

(A) the costs of providing services, including costs associated with future supplies and periods of peak demands and or restricted supply; and

(B) choices regarding alternative supplies for different purposes;

(vii) take into account the interests of customers of the regulated entity, including low income and vulnerable customers;

(viii) provide the regulated entity with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria’s water resources; and

(ix) enable customers or potential customers of the regulated entity to readily understand the prices charged by the regulated entity for prescribed services, or the manner in which such prices are to be calculated or otherwise determined.

Source: Water Industry Regulatory Order, clause 14(1).

The Commission’s approach to assessing proposed prices (often described as a ‘building block’ approach) is characterised by three steps (see figure 1.1). The first step involves identifying the service standards and other outcomes that a business proposes to deliver over the regulatory period. These standards and outcomes reflect obligations imposed by the Minister for Water through the Statement of Obligations, the Environment Protection Authority (EPA), the Department of Human Services (DHS), the Department of Sustainability and Environment (DSE), and customer preferences for service improvements. Customer service standards proposed by each business must be clear, appropriate and reflect the needs and interests of customers.

Figure 1.1 **Steps in assessing and approving prices**

Step 1 confirm outputs/outcomes

Outputs/outcomes
- service standards
- regulatory obligations (eg. water quality, dam safety)
- demand and supply

Step 2 determine revenue requirements

Expenditure requirements
- service improvement
- compliance
- augmentation/extension
- renewal

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Other financial inputs
- cost of capital
- regulatory depreciation
- value of past investments

Step 3 translate into prices

Prices
- structure of prices
- annual price control/approvals
- adjustments during period

In the second step, the Commission determines the revenue the business requires to meet the service obligations and expected outcomes identified in step one. The Commission is required to assess whether the business' expenditure forecasts reflect efficient costs of supply, its capital works program is deliverable over the period, and its business strategy reflects a long term planning horizon. The Commission must also ensure that the businesses receive a return on their capital investments that reflects an efficient cost of capital.

The Commission makes assumptions about efficient expenditure to assess whether prices will result in the business earning sufficient revenue to deliver services. However, the assumed expenditure levels do not represent amounts businesses are required to spend or direct to particular activities or projects. In consultation with customers, businesses are free to determine their own expenditure priorities in light of changing circumstances and to pursue innovation and efficiencies that enable them to outperform the cost assumptions.

Sometimes, because of changing circumstances, a business may not proceed with a project or activity that it had proposed in its Water Plan and that was included in the Commission's calculation of assumed expenditure. Generally, this would occur when the business, in consultation with its customers, identified a higher priority project or activity that should be undertaken instead. Or costs may have increased by more than forecast at the time of the price review and business decided to defer or cancel a lower priority project or activity to ensure that projects and activities that are more highly valued by customers can still go ahead without leading to a revenue shortfall that has to be recouped from customers at a later date.

The third step in the process involves determining the prices that will apply during the regulatory period. The Commission must ensure, for each business, that prices will generate the business' revenue requirement, taking into account forecasts of demand (which determine quantities expected to be used). The Commission assesses whether the businesses' demand forecasts are reasonable and reflect the best available information. The Commission also considers whether prices and proposed tariff structures provide appropriate signals about the costs of providing services, provide incentives for sustainable water use and take into account the interests of customers.

1.3 Consultation process for this price review

The businesses released draft Water Plans for public consultation in August 2007. With the announcement of the VCEC inquiry and the one-year deferral of the price review process for the metropolitan businesses, the consultation process on these Plans was suspended.[6] In September 2008, the Commission provided supplementary guidance to the metropolitan businesses to assist them in finalising their Water Plans. The Commission also met with each business to discuss issues related to the price review process.

The businesses' final Water Plans were released for public consultation in November 2008.[7] These plans were also provided to the Minister for Water, the Commission and other regulators.

On 12 December 2008, the Commission commenced its consultation process for this price review with the release of an issues paper. The paper summarised the businesses' proposals and highlighted issues on which the Commission sought stakeholder comments. Twenty-one written submissions were received.

The Commission has also met with stakeholders to receive comments and feedback. In January and February 2009, the Commission met with the businesses' customer committee representatives and other stakeholder groups. On 5 March, the water businesses and a number of community and business groups presented their proposals and comments at a public meeting organised by the Commission. Feedback was also received from customers present at the meeting. Concerns focussed on affordability and measures to address hardship, price paths, tariff structures and incentives for recycling. The Commission has given careful consideration to stakeholder feedback in reaching its draft decision.

In addition, the Commission has continued to communicate with the water businesses to seek further information and clarification of their proposals. It engaged independent consultants to assist it in critically assessing the businesses' expenditure and demand forecasts.

The Commission has received a number of comments about the consultation process for this price review. The Ethnic Communities' Council of Victoria highlighted that non-English speaking customers and older customers without internet access can experience difficulty obtaining information about the

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6 Melbourne Water submitted a final Water Plan on its drainage and waterways services in December 2007.

7 Copies of the Water Plans submitted by the businesses are available on the Commission's website www.esc.vic.gov.au.

businesses' proposals and the price review process.[8] The Consumer Utilities Advocacy Centre and Consumer Action Law Centre advocated strengthening customer engagement, including by improving customer understanding of the Commission's regulatory decision-making process.[9] The Commission is following up these issues to identify ways to improve its consultation processes.

Before the Commission makes its final decision in mid-June on the prices to apply from 1 July 2009, there are further opportunities for interested parties to raise issues and express their views about the businesses' proposals. This draft decision sets out the Commission's initial views on whether the prices proposed by the businesses satisfy the pricing principles set by the Government. Businesses, customers and other interested parties are encouraged to comment on the draft decision. The process for making submissions is set out in the section 'How to Respond to this Draft Decision' found at the front of this report.

In addition, a public meeting will be held in May to explain the Commission's draft decision and provide another opportunity for stakeholders to make comments. Details of the meeting will be advertised in the major metropolitan newspapers and placed on our website www.esc.vic.gov.au.

1.4 Purpose and structure of this paper

The draft decision is set out in two volumes. This volume (Volume I) summarises the businesses' proposals, the Commission's assessment of those proposals and the reasoning behind its decision. It also describes suggested actions or amendments that businesses should consider in respect of proposals that the Commission has indicated it does not intend to approve.

The structure of Volume I reflects the three steps in the Commission's assessment process for approving prices (see figure 1.1).

The first step requires the Commission to clearly identify the service standards and other outcomes that each business will deliver over the regulatory period. Chapter 2 describes the key outcomes proposed by the businesses, including their major projects and service standard targets, and the Commission's assessment and draft decision on the businesses' service standards.

In the second step, the Commission determines the revenue each business requires to recover the costs of providing the services and expected outcomes identified in the first step. Chapter 3 sets out the Commission's assessment of the total revenue required by each business, based on its operating expenditure (chapter 4), capital expenditure (chapter 5) and the costs of financing its capital expenditure program (chapter 6).

In the third step, the level of prices is calculated from the revenue requirement and forecast demand. Chapter 7 sets out the Commission's assessment of the businesses' proposed demand forecasts. Chapter 8 summarises the overall level of prices and average price changes over the period resulting from the

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8 Ethnic Communities' Council of Victoria 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 3 February.

9 Consumer Utilities Advocacy Centre and Consumer Action Law Centre 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 12 February.

Commission's assessment of the businesses' revenue requirements and demand forecasts. Chapters 9-13 discuss the businesses' proposed tariff structures for bulk water (chapter 9), retail water and sewerage services (chapter 10), recycled water (chapter 11), trade waste (chapter 12), and new customer contributions and miscellaneous charges (chapter 13). Chapter 14 outlines how prices will be adjusted during the regulatory period, including the form of price control and mechanisms for dealing with uncertainty.

Volume II summarises, in more detail for each business, the Commission's draft decision in respect of its proposals and suggested amendments by the businesses.

2 KEY OUTCOMES AND SERVICE LEVELS

Over the last few years, the Victorian water businesses and their customers have had to deal with many challenges associated with prolonged drought conditions. Metropolitan Melbourne customers, like most customers around the state, have been on water restrictions. Water restrictions have been in place since September 2006, progressively increasing from stage 1 to stage 3A in April 2007. Melbourne is therefore in its third year of water restrictions. Such restrictions result in social and economic costs to both residential and non-residential water customers.[10]

In 2007, the Government announced a number of major supply augmentation projects for metropolitan Melbourne. Customers will benefit from these augmentation projects through improved reliability and security of water supply and an easing of water restrictions. Obtaining these benefits requires substantial increases in expenditure by the Melbourne water businesses on the augmentation projects. Consequently, prices must increase significantly to recover the businesses' higher expenditures. To avoid further increases in prices, the businesses have decided not to incur additional expenditure on improving existing service standards.

This chapter will outline the major projects proposed to be undertaken by the metropolitan water businesses during the forthcoming regulatory period (section 2.2), the businesses' targets for their core service standards (section 2.3), additional service standards (section 2.4), and the businesses' Guaranteed Service Levels (GSL) schemes (section 2.5)

2.1 Major projects

Major augmentation projects include the desalination plant, the Sugarloaf pipeline (in conjunction with the Foodbowl Modernisation Project), construction of a water treatment plant at the Tarago Reservoir, and upgrading the Eastern Treatment Plant to increase water recycling. These augmentation projects are designed to provide greater security of water supply so that water restrictions can be eased.

The businesses have also proposed additional expenditure to improve or replace assets (such as the Melbourne main sewer) and to meet environmental, drinking water quality and recycling regulatory obligations. These expenditures relate to requirements imposed by regulators for a range of technical, environmental and social obligations. For example, water quality standards are set principally by the Department of Human Services (DHS); environment related sewerage standards are a matter for the Environment Protection Authority (EPA); and resource

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[10] See, for example, Productivity Commission 2008, *Towards Urban Water Reform: A Discussion Paper*, Productivity Commission Research Paper, Melbourne, March.

allocations, water conservation and dam safety are the responsibility of the Department of Sustainability and Environment (DSE).

The Commission is assessing these projects as part of the process for determining the level of expenditure approved for capital projects over the regulatory period (see chapter 5). It will monitor progress on these projects during the regulatory period and seek explanations from the businesses where progress differs significantly from assumptions made at the time of this price review.[11]

2.2 Core service standards

The Commission is responsible for regulating standards and conditions of supply for retail water, sewerage and other prescribed services. The Water Industry Regulatory Order (WIRO) provides scope for the Commission to approve standards set out in a water business' Water Plan or to specify those standards in a Code, or to do both.

The Commission has approved Customer Service Codes to apply to all Victorian water businesses. The businesses are required to propose targets for a core set of service standards in their Water Plans. The core service standards reflect the key issues of concern to customers and key cost drivers for businesses. Approved service standards and targets must be included in Customer Charters which are distributed to all customers.

The Commission's approach to regulating the standards and conditions of supply has two aspects:

- Businesses have the flexibility to propose their own service level targets, taking into account their operating environment and customer needs and preferences.
- When the service standards have been approved by the Commission, each business must reflect these standards in its Customer Charter.

The Commission recognises that performance can vary from year to year, for example due to changes in climate conditions. In assessing the businesses' performance during price reviews, the Commission's primary focus is whether each business' proposed targets on each measure are at least as good as its average performance over the previous three years.

2.2.1 Overview of proposed service standards

The metropolitan retailers were required to propose targets for each of the core service standards for the forthcoming regulatory period in their Water Plans. Generally, the Commission would expect targets to reflect the average of the previous three years' performance. The Commission considers that a three year period reflects recent operating conditions and existing service standards. This approach was adopted during the 2008 price review for regional businesses.

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11 The businesses' progress in delivering major projects and their explanations for any divergences from planned progress are reported in the Commission's annual performance reports.

Table 2.1 **Core urban service standards**

	City West Water		*South East Water*		*Yarra Valley Water*	
	Actual 3 yr avg	Proposed target	Actual 3 yr avg	Proposed target	Actual 3 yr avg	Proposed target
Retail water						
Number of unplanned water supply interruptions (per 100 kilometres)	60.3	60.3	29.6	35	63.1	63.1
Average time taken to attend bursts and leaks Priority 1 (minutes)	24.3	24.3	37.2	40	26	26
Average time taken to attend bursts and leaks Priority 2 (minutes)	34.2	34.2	110.5	120	38	38
Average time taken to attend bursts and leaks Priority 3 (minutes) [a]	233.8	233.8	945.8	550	357.5	357.5
Unplanned water supply interruptions restored within 5 hours (per cent)	86.1 [c]	86.1	99.7	99.6	99.5	99.5
Planned water supply interruptions restored within 5 hours (per cent)	93.3	93.3	78.5	75	99.6	99.6
Average unplanned customer minutes off water supply (minutes)	47.6c	47.6	17.2	25	24.9	25
Average planned customer minutes off water supply (minutes)	7.8	7.8	7.7	15	12.2	12
Average frequency of unplanned water supply interruptions (number)	0.31	0.31	0.20	0.23	0.28	0.28
Average frequency of planned water supply interruptions (number)	0.06	0.06	0.04	0.06	0.09	0.09
Average duration of unplanned water supply interruptions (minutes)	175.5[c]	175.5	87.8	95	88.8	89
Average duration of planned water supply interruptions (minutes)	137.2	137.2	205.6	220	140.6	141
Customers experiencing more than 5 unplanned water supply interruptions in the year (number)	64	64	139	250	416	416
Unaccounted for water (per cent)	9.2	9.2	9.5	[b]	13.6	13.6
Minimum flow rates at 20 millimetres		20		20		20

		City West Water		South East Water		Yarra Valley Water	
		Actual 3 yr avg	Proposed target	Actual 3 yr avg	Proposed target	Actual 3 yr avg	Proposed target
	25 mm		35		35		35
	32 mm		60		60		60
Minimum flow rates at	40 mm		90		90		90
	50 mm		160		160		160
Retail sewerage							
Number of sewerage blockages (per 100 kilometres)		27.6	27.6	19.5	21.5	45.3	45.3
Average time to attend sewer spills and blockages (minutes)		23.4	23.4	45.9	56	50.6	51
Average time to rectify a sewer blockage (minutes)		115.9	115.9	161	180	246.9	249
Spills contained within 5 hours (per cent)		100	100	100	100	99.99	100
Customers receiving more than 3 sewer blockages in the year (number)		0	0	2.7	8	15	15
Retail customer service							
Complaints to EWOV (per 1000 customers)		0.55	0.55	0.15	0.15	0.07	0.07
Telephone calls answered within 30 seconds (per cent)		78.6	80	97.2	b	87.9	87.9

Notes: Actual three year performance averages for most of the businesses' core service standards are better than their approved targets for 2005-2008. **a** This was an additional standard in first period. **b** South East Water has chosen to redefine these measures. The alternatives are included as additional standards in table 2.3. **c** City West Water has re-calculated past performance based on new field practice introduced in 2007-08.

Table 2.1 shows the average performance of the three water businesses for the three years ending 30 June 2008, and proposed targets for the regulatory period for the businesses' core service standards.

City West Water and Yarra Valley Water have proposed service standard targets that are consistent with the Commission's approach. They have proposed to maintain existing service standards based on a three year performance average. This accords with the Commission's guidance provided to the businesses in September 2008, which suggested that customers may not be willing to pay more to improve service standards in the coming regulatory period. The large increases in proposed prices resulting from substantial expenditures on augmentation projects have already raised affordability issues for customers.

South East Water's proposed targets are inconsistent with the Commission's approach. It has based its targets on long term 'minimum' performance levels which produce targets below the performance achieved in the most recent three year period. South East Water has cited weather conditions and customer research as reasons for using lower targets. It stated that its research showed that customers were unwilling to pay for higher service standards.[12]

Melbourne Water has a small set of core service standards for its bulk water and sewerage supply services. It has proposed targets for the period that are consistent with the Commission's preferred approach. Details of these standards are included in Volume II.

2.2.2 Responses to the issues paper

In the issues paper, the Commission queried the results from South East Water's customer research, given that it was conducted before the announcement of its proposed price increases. The Commission also questioned the significance of weather conditions as a reason for South East Water downgrading its service standard targets since the other businesses have been able to maintain their targets.

The Consumer Action Law Centre and Consumer Utilities Advocacy Centre submitted that:

> *We also support the Commission in setting service standard targets based on the average range. While we understand that customers may pay for increased service levels, we agree with the Commission that SEW's proposed service levels are inappropriate in proposing decreased service levels than in the past. If SEW's customer research indicates that customers consider existing standards to be sufficient, we do not understand how this would justify worse than existing standards.* [13]

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12 South East Water 2008, *2009-10 to 2012-13 Water Plan*, November, p. 29.

13 Consumer Utilities Advocacy Centre and Consumer Action Law Centre 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 12 February.

In response to the issues paper, South East Water noted that its Water Plan had been developed in the context of uncertainty surrounding weather conditions and expressed concern that, if it was required to put forward service standard targets equal to current performance, additional expenditure would be required to ensure targets can be met regardless of weather conditions.[14]

2.2.3 Draft decision

The Commission considers that, unless adequate justification is provided, targets for core service standards should be at least equivalent to the most recent three year average performance. All the businesses' actual average performance for the three year period 2005-2008 exceeded their targets for most of their core service standards.

As City West Water, Yarra Valley Water and Melbourne Water have proposed service standard targets that are consistent with the Commission's approach, the Commission intends to approve their proposed targets.

In South East Water's case, it has not adequately explained or justified its proposal to use a longer period than the preferred three year period. It is unclear what period South East Water used to calculate its targets. Table 2.2 shows the Commission's calculation of performance averages over varying timeframes against South East Water's proposed service standard targets. The targets proposed by South East Water imply that customers may experience significantly lower levels of service than they currently receive. The Commission intends to approve the three year average performance as the most appropriate target for the coming period.

South East Water is required to report *unaccounted for water* (measured as a percentage) and *telephone calls answered within 30 seconds* (measured as a percentage) in its core service standards, as required for all metropolitan businesses. As noted in section 2.3.3, South East Water may also report *unaccounted for water* (measured on a different basis) and particular types of calls answered within 30 seconds as additional service standards if it chooses to do so. The Commission proposes to adopt South East Water's three year performance average as its target for these two core service standards in the coming regulatory period.

[14] South East Water 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 9 February, p. 14

Table 2.2 **South East Water – Core urban service standards**

Indicator	*3 yr avg*[a]	*5 yr avg*[a]	*8 yr avg*[a]	*Target 2005-2008*	*Proposed Target for 2009- 2010 to 2012-2013*
Retail Water					
Number of unplanned water supply interruptions (per 100kms)	29.6	30.8	33.0	35	35
Average time taken to attend bursts and leaks Priority 1 (minutes)	37.2	37.6	39.2	40.5	40
Average time taken to attend bursts and leaks Priority 2 (minutes)	110.5	183.1	367.8	119.6	120
Average time taken to attend bursts and leaks Priority 3 (minutes)	945.8				550
Unplanned water supply interruptions restored within 5 hours (per cent)	99.7	99.8	99.7	99.6	99.6
Planned water supply interruptions restored within 5 hours (per cent)	78.5	80.2	80.4	84.3	75
Average unplanned customer minutes off water supply (minutes)	17.2	17.9	22.1	21.9	22
Average planned customer minutes off water supply (minutes)	7.7	8.9	14.9	23.1	12
Average frequency of unplanned water supply interruptions (number)	0.195	0.200	0.224	0.2	0.23
Average frequency of planned water supply interruptions (number)	0.038	0.045	0.868	0.1	0.06
Average duration of unplanned water supply interruptions (minutes)	87.8	89.3	97.1	95	95
Average duration of planned water supply interruptions (minutes)	205.6	200.7	185.5	155	220
Customers experiencing more than 5 unplanned water supply interruptions in the year (number)	139	134.6	205.8	235	235

Indicator	*3 yr avg*[a]	*5 yr avg*[a]	*8 yr avg*[a]	*Target 2005-2008*	*Proposed Target for 2009- 2010 to 2012-2013*
Retail Sewerage					
Number of sewerage blockages (per 100 kilometres)	19.48	18.34	16.54		22.5
Average time taken to attend sewer spills and blockages (minutes)	45.87				56
Average time to rectify a sewer blockage (minutes)	160.7				180
Spills contained within 5 hours (per cent)	100	100	100		100
Customers receiving more than 3 sewer blockages in the year (number)	0.33	1.40	1.63		8

Notes: [a] Calculated by the Commission.

Draft decision

The Commission proposes to approve the core service standard targets proposed by City West Water, Yarra Valley Water and Melbourne Water.

The Commission proposes not to approve all but four of South East Water's service standard targets because they are inconsistent with the Commission's preferred approach to setting targets. The Commission proposes to approve the targets proposed by South East Water for the following service standard targets:

- Average response time to attend bursts and leaks Priority 1
- Average response time to attend bursts and leaks Priority 2
- Average response time to attend bursts and leaks Priority 3
- Unplanned water supply interruptions restored within 5 hours

The Commission proposes to approve the three year average performance as South East Water's target for all other core service standards.

2.3 Additional service standards

Businesses or the Commission can nominate service standards that are additional to the core service standards that each business is required to provide. These additional service standards generally reflect business-specific or local issues. All the metropolitan retailers proposed additional standards in the first regulatory period.

In its September 2008 guidance to businesses, the Commission suggested that the metropolitan businesses incorporate measures and targets in respect of the following six service areas into their service standards proposals for the coming regulatory period:

- greenhouse gas reductions/green energy (CO_2 equivalent emissions)
- recycled water (per cent)
- biosolids reused (per cent)
- sewer backlog connections (number)
- environmental discharge licence requirements
- drinking water quality compliance with standards.

These additional service standards reflect outcomes relating to obligations mandated by government policies. In its report on the metropolitan Melbourne water sector, the Victorian Competition and Efficiency Commission (VCEC) recommended that, since the businesses incur expenditure to meet these obligations, the outcomes from these programs should be clarified for customers. The Government indicated in its response to the VCEC report that it would amend the businesses' Statements of Obligations to specify outcomes for obligations related to these service standards. All businesses have proposed measures and targets for these areas in their current Water Plans.

The Commission approaches the assessment of additional service standards in the same manner as the core service standards. In addition, the Commission must assess whether the additional service standard is appropriate for the Commission to regulate and is not an internal business measure.

2.3.1 Overview of proposed additional service standards

Table 2.3 lists the additional service standards and targets proposed by the businesses. South East Water and City West Water have proposed further service measures in addition to the six standards listed above and the additional service targets in place since the first regulatory period. Yarra Valley Water has not proposed any new additional service standards that were not part of their first Water Plan.

2.3.2 Responses to the issues paper

In the issues paper, the Commission suggested that the new additional service standards proposed by the water businesses should be based on consistent definitions. The Commission received a number of submissions supporting consistent definitions for all service standards, including the joint submission from Consumer Utilities Advocacy Centre and Consumer Action Law Centre.[15]

[15] Consumer Utilities Advocacy Centre and Consumer Action Law Centre 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 12 February.

Table 2.3 **Additional service standards**

City West Water	*3 yr avg*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
CO_2 generated (tonnes)[a]		9 400	9 100	14 200	18 000	18 000
CO_2 green energy/offset purchases (tonnes)[a]		5 900	5 700	10 900	14 700	14 700
CO_2 generated (net tonnes) (calculated by ESC for consistency)[a]		3 500	3 400	3 300	3 300	3 300
CO_2 showerhead replacements (tonnes)[a]		9 200	10 300	10 000	10 000	10 000
Recycled water (ML)		320	370	1 710	3 250	3 440
Biosolids reused from Altona plant (per cent)		100	100	100	100	100
Sewer backlog connections (number of lots)		0	60	13	13	0
Compliance with EPA discharge licence at Altona plant (percent)	80.6	100	100	100	100	100
Compliance with drinking water quality standards (percent)	100	100	100	100	100	100
Water quality complaints (per 1000 customers)	1.1	1.1	1.1	1.1	1.1	1.1
Average time to rectify water faults (days)	1.0	1.0	1.0	1.0	1.0	1.0
Water main breaks (per 100 km)	71.5	71.5	71.5	71.5	71.5	71.5
Systems faults calls answered within 30 seconds (per cent)	93.3	93.3	93.3	93.3	93.3	93.3
Accounts enquiries answered within 30 seconds (per cent)	74.5	74.5	74.5	74.5	74.5	74.5
Interruptions to sewerage services restored within 5 hours (per cent)	97.6	97.6	97.6	97.6	97.6	97.6
Sewer spills within a house contained within 1 hour of notification (per cent)	100	100	100	100	100	100
Priority 1 bursts responded to within 1 hour (per cent)	99.8	99.8	99.8	99.8	99.8	99.8
Customer correspondence responded to within 10 working days (per cent)	100	100	100	100	100	100
Sewer spills per 1000 properties (number)	1.8	1.8	1.8	1.8	1.8	1.8

South East Water	*3 yr avg*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
CO_2 generated (net tonnes)[a]	29 899	24 500	22 000	19 000	16 500	13 750
Recycled water volumes (from TPs, SE Outfall and third pipe estates) (ML)	4 219	6 900	7 200	7 300	7 400	7 500
Biosolids recycled (per cent)		105	105	105	105	105
Sewer backlog properties services (number)	596	300	400	600	800	900
Compliance with drinking water regulations (per cent)	100	100	100	100	100	100
Demand by potable substitution schemes (ML)		200	300	900	1 000	1 100
Sewer odour complaints (per 1000 customers)	42	50	50	50	50	35
Sewer spills (per 100km)	5.7	7.0	7.5	7.5	7.5	7.5
Compliance with EPA licence effluent standards for STPs (per cent)	100	100	100	100	100	100
Planned water supply interruptions (per 100km)	4.9	6.0	6.0	6.0	6.0	6.0
Accounts enquiries answered within 30 seconds (per cent)[b]	97.4	93	93	93	93	93
Systems faults calls answered within 30 seconds (per cent)[b]	96.9	96	96	96	96	96
Unaccounted for water (ML/km)[c]	1.6	1.66	1.65	1.63	1.62	1.61

Yarra Valley Water	*3 yr avg*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
CO2 generated (net tonnes)[a]	8 389	0	0	0	0	0
Recycled water from Yarra Valley Water sewerage treatment plants (per cent)	15.7	27	27	27	27	27
Biosolids recycled (per cent)	0	0	0	0	0	0
Sewer backlog properties provided with a connection point (number)		147	147	147	147	147
Water conservation: per capita water consumption (litres/person/day)	277	242	242	242	242	242
Water quality complaints (per 1000 customers)	5.6	5.6	5.6	5.6	5.6	5.6
Non-revenue water (GL)	21.3	21.3	21.3	21.3	21.3	21.3

a The Commission will review these standards when a national emissions trading scheme is introduced. **b** South East Water has proposed this in place of the core measure *telephone calls answered within 30 seconds* (per cent). **c** South East Water has proposed this in place of the core measure *unaccounted for water* (per cent).

2.3.3 Draft decision

The Commission proposes to approve the additional service standards proposed by City West Water and South East Water. South East Water can include *unaccounted for water* (measured on the basis of ML/km) and *accounts enquiries answered within 30 seconds* and *systems faults calls answered within 30 seconds* as additional service standards if it chooses to do so. However, it must also report *unaccounted for water* (measured as a percentage) and *telephone calls answered within 30 seconds* (measured as a percentage) in its core service standards.

The Commission proposes to approve the additional service standards proposed by Yarra Valley Water, subject to the following changes being made in response to this draft decision. Yarra Valley Water is required to submit targets for the two additional service standards *compliance with environmental discharge licence requirement* (per cent) and *compliance with drinking water quality regulations and standards* (per cent). It should change its indicator of water conservation to per capita water consumption by residential customers only. The Commission does not consider it appropriate to include non-residential customers in the water conservation indicator.

Draft decision

The Commission proposes to approve the additional service standards proposed by City West Water and South East Water and, subject to the following changes being made, by Yarra Valley Water.

In its response to this draft decision, Yarra Valley Water is required to submit targets for the two *additional service standards compliance* with environmental discharge licence requirement (per cent) and *compliance with drinking water quality regulations and standards* (per cent). Yarra Valley Water should change its indicator of water conservation to per capita water consumption by residential customers only.

2.4 Guaranteed Service Levels (GSLs)

The service standard targets proposed by the businesses and approved by the Commission generally reflect the average performance expected across all customers. They do not indicate the extent to which some customers may experience worse than average performance. That is, a business could maintain average performance while still providing unacceptably low service standards to some customers.

Under the GSL scheme, businesses provide payments to customers who receive a level of service that is significantly worse than the average level of performance expected by most customers. The scheme aids businesses in identifying the worst served customers and specific areas in which businesses need to improve service. In addition, the scheme provides financial incentives for businesses to focus on providing good quality, reliable service to all customers.

The Commission's approach to assessing relevant targets is to highlight the service measures of most concern to stakeholders and to target the worst served customers in those areas.

2.4.1 Overview of proposed GSLs

All three metropolitan retailers have GSLs in place and have proposed to maintain these GSLs through the regulatory period. Payments are currently $25, with the exception of the two *sewer spills* measures where payments are $500.

Yarra Valley Water proposed a doubling of its GSL payments in line with the price increases outlined in its Water Plan. City West Water and South East Water cited cost constraints as grounds for not proposing any changes to their existing payment levels. None of the businesses have proposed any additional GSL measures.

2.4.2 Responses to the issues paper

The Commission asked whether GSL payments should be consistent across all metropolitan water businesses. It specifically asked for feedback on whether it is appropriate to increase all GSL payments in line with the proposed increases in customer bills.

South East Water advised that it has not received any customer feedback stating that existing levels of payments are too low. It also advised that any increases in GSL payments should be made on a case by case basis.[16] However, several submissions supported an increase in GSL payments in line with proposed price rises, including the joint submission from the Consumer Action Law Centre and Consumer Utilities Advocacy Centre.[17]

The Consumer Action Law Centre and Consumer Utilities Advocacy Centre suggested that customers should be entitled to a GSL payment if a water business failed to meet the standards set out in its hardship policies and programs.[18]

2.4.3 Draft decision

The Commission proposes to approve the businesses' existing GSL events and the doubling in the payment levels proposed by Yarra Valley Water. The Commission proposes to approve GSL payments that are double those proposed by City West Water and South East Water for all GSL events. This will ensure that GSL payments for these events are consistent across Melbourne.

The Commission notes that total GSL expenditures forecast by the businesses are low and will remain low even with a doubling of GSL payments. If all GSL payments were to remain at current levels, total GSL expenditure for the three

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16 South East Water 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 9 February, p. 14

17 Consumer Utilities Advocacy Centre and Consumer Action Law Centre 2009, *op. cit*.

18 *ibid*.

businesses over the four year regulatory period would be $1.3 million, comprising 0.02 per cent of their total revenue requirement for the period. Doubling all GSL payments for the three businesses would increase their total GSL expenditure to $2.5 million and 0.05 per cent of their total revenue requirement for the period. The Commission considers that doubling GSL payments with have a negligible impact on prices.

Hardship-related GSL event

The Commission considers that the suggestion for a new GSL event relating to compliance with the businesses' hardship policies has merit, particularly in the coming regulatory period when affordability may be a greater issue for low income and vulnerable customers (see chapter 8). Therefore, the Commission considers that the three retail businesses should formulate an appropriate GSL event related to compliance with their hardship policies.

The Customer Service Code for metropolitan retail and regional businesses requires these businesses to have a hardship policy that complies with a list of requirements set out in the Code (see box 2.1). The imposition of water supply restrictions (to limit the flow of water to a customer) and legal action for non-payment of bills are further governed by sections 7.1–7.3 of the Code, which set out the steps that businesses must take before imposing water supply restrictions or taking legal action, and certain limitations on their ability to take such actions.[19]

The Commission suggests a hardship-related GSL event along the following lines:

> *Restricting the water supply of, or taking legal action against, a customer in hardship who is complying with an agreed payment plan.*

To identify any such GSL events, and to ensure that businesses are complying with the Code's provisions in relation to water supply restrictions and legal action, a monitoring process would be required. In response to this draft decision, the Commission requires the three retail water businesses to propose monitoring and reporting measures for this GSL event.

Since the suggested GSL event relates to obligations that the businesses are already required to comply with, the Commission would expect that the GSL event could be put in place within the first billing cycle of the coming regulatory period. Therefore customers would receive the benefit from having such a GSL in place when they start to receive bills based on the higher water and sewerage prices approved for the period.

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[19] Essential Services Commission 2008, *Customer Service Code: Metropolitan retail and regional water businesses*, June, available on the Commission's website www.esc.vic.gov.au.

Box 2.1 **Hardship policy requirements**

A water business must have a hardship policy and apply it to residential customers who are identified either by themselves, the water business, or an independent accredited financial counsellor as having the intention but not the financial capacity to make the required payments in accordance with the water business' payment terms. The hardship policy must:

- provide internal assessment processes: to determine a customer's eligibility using objective criteria as indicators of hardship (such as eligibility for concessions, status as a tenant, or previous payment history); designed to make an early identification of a customer's hardship; and determine the internal responsibilities for the management, development, communication and monitoring of the policy;
- provide for staff training about the water business' policies and procedures and to ensure customers in hardship are treated with sensitivity and without making value judgments;
- exempt customers in hardship from supply restriction, legal action, and additional debt recovery costs while payments are made to the water business according to an agreed flexible payment plan or other payment schedule; …
- subject to water law, offer a range of payment options in accordance with the customer's capacity to pay;
- provide for written confirmation of any alternative payment method to be sent to customers within 10 business days of an agreement being reached;
- offer information and referral to government assistance programs (including the Utility Grant Relief Scheme) and no-cost independent financial counsellors;
- offer information about the water business' dispute resolution policy, and the customer's right to lodge a complaint with the Energy and Water Ombudsman (Victoria) (EWOV) and any other relevant external dispute resolution forum if their hardship claim is not resolved to their satisfaction by the water business;
- offer information on how to reduce water usage and improve water efficiency and referral to relevant government water efficiency programs (including the Smart Homes program);
- detail the circumstances in which the policy will cease to apply to customers; and
- provide for a review mechanism of the policy and its associated procedures.

A water business must publish its hardship policy on its website and must make a copy available to a customer upon request.

Source: Essential Services Commission 2008, *Customer Service Code: Metropolitan retail and regional water businesses*, June, clause 5.4.

The Commission requires the businesses to suggest, in response to this draft decision, an appropriate hardship-related GSL event and a proposed payment level. Businesses should also provide comments on processes for ensuring that any such event can be identified and the timing for introducing such an event.

In relation to setting an appropriate payment for this GSL event, the Commission considers that restricting the water supply of a customer in hardship who is already making payments under an agreed payment plan is a serious matter. Similarly, commencing legal action against such a customer would also be a very serious matter. The Commission notes that the electricity retailers are required to make payments of $250 a day (or part thereof) to customers who have been wrongfully disconnected.

Since the businesses are already obliged, under the Customer Service Code and their own hardship policies, not to impose water supply restrictions or take legal action against customers who are complying with agreed flexible payment plans, the Commission would not expect any customers to experience this GSL event. Therefore no additional costs will be included in the revenue requirement for the new GSL event and prices will be unaffected.

Draft decision

The Commission proposes to approve the GSL events proposed by the three retail water businesses and the payment levels proposed by Yarra Valley Water. The Commission proposes to approve the same payment levels for City West Water and South East Water as approved for Yarra Valley Water.

In response to this draft decision, the Commission requires the three retail businesses to develop an appropriate GSL event related to compliance with their hardship policies and programs, propose a payment amount for the event and propose monitoring and reporting measures for the event.

3 OVERVIEW OF REVENUE REQUIREMENT

Under the Commission's 'building block' approach (summarised in section 1.2), prices reflect the revenues required to recover the efficient cost of delivering services over the regulatory period, taking into account forecast levels of demand. The Commission must be satisfied that the prices it approves will provide each business with sufficient revenue over the regulatory period to meet its obligations and deliver the level of service required by customers. It must also ensure that prices do not reflect monopoly rents or inefficient expenditure.

The Commission has used the 'building block' approach to estimate the revenue that the businesses will require to deliver proposed service standards and outcomes over the regulatory period. Under this approach the revenue requirement reflects operating expenditure and a return on the regulatory asset value updated each year to reflect any additional capital expenditure, net of asset disposals and regulatory depreciation. Chapters 4-6 discuss operating expenditure, capital expenditure and the financing of capital investments in more detail.

The revenue requirements are used solely to assess whether prices will result in each business earning sufficient revenue to deliver services. They do not represent amounts businesses are required to spend or to direct to particular activities or projects. In consultation with customers, businesses are free to determine their own expenditure priorities, taking into account changing circumstances, and to pursue innovation and efficiencies that enable them to outperform the revenue benchmarks.

It is important to note that as part of this price review, the Commission has only assessed revenue requirements in relation to the metropolitan businesses' water and sewerage services. Melbourne Water's revenue requirement for its drainage and waterways services is not subject to the current price review because the Commission approved prices for Melbourne Water's drainage and waterways services in the 2008 water price review final decision. All figures presented in this draft decision exclude expenditure, revenue and prices in relation to Melbourne Water's drainage and waterways services.

3.1 Overview of the businesses' proposals

The businesses' revenue requirements comprise their forecast operating expenditure, a return on assets (existing and new assets) and regulatory depreciation (return of assets) (see table 3.1). They have forecast total expenditure of $9.8 billion over the regulatory period, comprising $6.1 billion in operating expenditure and $4.3 billion in capital expenditure (see table 3.2). Operating expenditure is discussed in detail in chapter 4 and capital expenditure in chapter 5.

It is important to recognise that the total amount of revenue to be recovered from customers is less than the sum of revenue requirements for all businesses. Of the total operating expenditure proposed by the businesses, $3.17 billion represents bulk charges paid by the retailers to Melbourne Water. The total amount of revenue to be recovered from customers is calculated by deducting total bulk charges from the sum of revenue requirements for all businesses. This amount is represented in the following tables as total revenue requirement net of bulk charges.

Table 3.1 **Breakdown of total revenue as proposed by water businesses (all businesses)**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
Operating expenditure	1 116.8	1 271.6	1 646.2	2 051.9	6 086.6
Return on existing assets	539.0	532.4	526.9	522.6	2 120.9
Return on new assets	118.3	184.3	231.1	260.0	793.6
Regulatory depreciation	159.2	170.9	157.6	157.6	645.3
Tax liability	33.4	34.8	33.9	33.3	135.4
Total revenue requirement (gross)	**1 966.7**	**2 194.1**	**2 595.7**	**3 025.4**	**9 781.8**
Less bulk charges	560.3	698.5	861.9	1 050.6	3 171.3
Total revenue requirement (net of bulk charges)	**1 406.4**	**1 495.5**	**1 733.8**	**1 974.8**	**6 610.5**

Table 3.2 **Forecast operating and capital expenditure as proposed by water businesses — total for 2009-10 to 2012-13**
$ million in January 2009 prices

	Operating expenditure	*Operating expenditure (net of bulk charges)*	*Gross capital expenditure*	*Total expenditure*
City West Water	1 146.8	381.0	469.9	1 616.7
South East Water	1 742.4	564.1	602.7	2 345.0
Yarra Valley Water	1 747.3	520.0	912.6	2 659.8
Melbourne Water	1 450.2	1 450.2	1 774.0	3 224.2
All businesses	**6 086.6**	**2 915.3**	**3 759.2**	**9 845.8**

3.2 Draft decision

The Commission has reviewed the businesses' assumptions about expenditure levels and the return on and of assets over the regulatory period, based on its own analysis, its consultants' reports and further information provided by the businesses (see chapters 4-6 for details).

The Commission's draft decision results in a revenue requirement of $9.2 billion, which is $556 million lower ($424 million lower net of bulk charges) than that proposed by the businesses. Table 3.3 sets out the proposed revenue requirements implied by the Commission's draft decision.

Table 3.3 **Draft decision - breakdown of total revenue (all businesses)**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
Operating expenditure	1 098.0	1 177.9	1 578.5	1 979.0	5 833.4
Return on existing assets	441.3	431.7	423.7	415.9	1 712.6
Return on new assets	95.1	150.6	189.1	213.0	647.8
Regulatory depreciation	204.2	218.7	227.4	244.3	894.6
Tax liability	31.2	32.6	35.8	37.7	137.3
Total revenue requirement (gross)	**1 869.8**	**2 011.5**	**2 454.5**	**2 889.9**	**9 225.7**
Less bulk charges	553.5	635.2	830.1	1 019.9	3 038.8
Total revenue requirement (net of bulk charges)	**1 316.3**	**1 376.3**	**1 624.4**	**1 870.0**	**6 186.9**

The lower revenue requirement proposed by the draft decision implies a downward adjustment to proposed prices. This is discussed further in chapter 8.

4 OPERATING EXPENDITURE

Under the WIRO, the Commission is required to be satisfied that prices:

- are based on expenditure forecasts that reflect the efficient delivery of the proposed outcomes and
- provide the business with incentives to pursue efficiency improvements.

The Commission therefore seeks to identify the extent to which businesses' proposals reflect a reasonable trend in operating expenditure consistent with an efficient business. This chapter sets out the Commission's approach to assessing expenditure and the elements of the draft decision for operating expenditure.

It is important to note that as part of this price review, the Commission has only assessed expenditure in relation to the metropolitan businesses' water and sewerage services. Melbourne Water's expenditure on drainage and waterways services is not subject to the current price review because the Commission approved prices for these services in the 2008 water price review final decision. All figures presented in this chapter exclude expenditure in relation to Melbourne Water's drainage and waterways services.

4.1 Commission's approach

As outlined in its guidance to the businesses and in the issues paper, the Commission's approach to assessing proposed operating expenditure over the regulatory period used 2007-08, the last year of actual audited data, as a baseline against which proposed expenditure was evaluated.

Where proposed operating expenditure was greater than the baseline, businesses were asked to distinguish where increases represented a reasonable increase in costs associated with business as usual expenditure or new expenditure associated with additional obligations, functions and service levels.

As a general principle, the Commission expected a robust justification by the relevant water business where a significant departure from its historical expenditure levels was proposed or where expenditure related to delivering outcomes that are above and beyond what customers have sought or regulators have mandated.

To facilitate the expenditure assessment, the Commission's guidance to businesses stated that Water Plans needed to outline forecast operating expenditure clearly for each year of the regulatory period, the key drivers of expenditure, justification for forecast expenditure levels and evidence of productivity improvements (including targets). Water Plans were required to outline the relationship between expenditure and the delivery of obligations and service outcomes over the period.

Operating expenditure proposed for the water businesses was assessed by a combined team from consultants Halcrow and Deloitte (the expenditure consultants). Halcrow led the assessment of the retail businesses while Deloitte led the assessment of Melbourne Water.

The expenditure consultants were required to provide advice to the Commission on whether:

- the proposed trend in operating expenditure over the regulatory period, consistent with existing obligations and service standards is reasonable – having regard to expected productivity improvements, trends in input prices, customer growth and any other relevant factors
- the operating expenditure forecasts associated with meeting new obligations and/or meeting higher service levels reflect their likely expenditure requirements – having regard to any benchmarking or other quantitative techniques considered appropriate.

The expenditure consultants undertook an extensive interview and information gathering process prior to providing businesses with a draft report for comment. Following the draft report, the expenditure consultants undertook further interviews and data analysis to inform their final report to the Commission.

The Commission has used the expenditure consultants' reports as the basis for adjustments to operating expenditure that underpin this draft decision.

4.2 Overview of business proposals

Melbourne Water's proposed operating expenditure of $1.45 billion over the four year regulatory period represents nearly 45 per cent of its total revenue requirement. Melbourne Water's proposed operating expenditure increases from $195 million in 2007-08 to $628 million dollars in 2012-13; this includes operating expenditure for the production of water from the desalination plant in 2011-12 and 2012-13.

Melbourne Water collects revenue from the retail businesses in the form of bulk water and sewerage charges, which are reflected in the retail businesses' operating expenditure. Bulk water and sewerage charges of $3.2 billion over the period represent around 70 per cent of the retail businesses' total operating expenditure.

The metropolitan retail businesses have proposed operating expenditure totalling $4.6 billion over the four year regulatory period. Operating expenditure is forecast to increase from $708 million in 2007-08 to $1.4 billion in 2012-13 (see table 4.1), inclusive of Melbourne Water's bulk charges.

Bulk charges, with licence fees and the environmental contribution, form components of the retailers' expenditure that are not directly controllable by the businesses. Excluding these components allows the Commission to consider if the operating expenditure that the businesses directly control is prudent and consistent with efficient resource allocation decisions.

Over the regulatory period, the retail businesses' controllable operating expenditure totals $1.3 billion. Controllable operating expenditure is proposed to be 15 per cent higher in 2012-13 than its 2007-08 level. The businesses' controllable expenditure represents between 26 and 29 per cent of total operating expenditure.

All three retailers have proposed a significant increase in controllable operating expenditure from 2007-08 to 2012-13. City West Water's operating expenditure is forecast to increase by 21 per cent (from $72 million to $88 million), South East Water's by 16 per cent (from $110 million to $128 million), and Yarra Valley Water's by 10 per cent (from $104 million to $114 million).

Table 4.1 **Total operating expenditure as proposed by water businesses**
$ million in January 2009 prices

	2005-06	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Melbourne Water	148.0	160.2	195.4	190.3	197.7	209.2	415.6	627.7
Retailers								
City West Water	181.7	178.6	177.3	207.0	228.3	263.5	304.9	350.1
South East Water	245.7	250.8	258.1	290.3	343.1	398.7	463.2	537.3
Yarra Valley Water	261.7	267.9	272.6	310.7	347.8	400.2	462.6	536.7
All retailers	**689.1**	**697.3**	**708.0**	**808.0**	**919.2**	**1 062.4**	**1 230.7**	**1 424.2**

Notes: Total operating expenditures in 2005-06 to 2007-08 are actual numbers while operating expenditure for 2008-09 and beyond are forecasts. South East Water's and Melbourne Water's forecasts include non-cash defined benefit superannuation write downs. Melbourne Water's forecast also includes an incorrect corporate expense in 2007-08. South East Water's forecasts include provisions for uncollected revenue during the period.

Table 4.2 **Total controllable operating expenditure as proposed by water businesses**
$ million in January 2009 prices

	2005-06	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
City West Water	64.1	69.7	72.3	77.9	80.0	82.9	86.4	87.6
South East Water	93.9	101.9	110.2	111.7	122.4	123.8	125.0	128.3
Yarra Valley Water	90.5	98.8	103.7	107.3	110.8	112.7	113.9	114.3
All retailers	**248.4**	**270.5**	**286.3**	**296.8**	**313.2**	**319.3**	**325.2**	**330.2**

Notes: Total operating expenditures in 2005-06 to 2007-08 are actual numbers while operating expenditure for 2008-09 and beyond are forecasts. South East Water's forecasts include non-cash defined benefit superannuation write downs and provisions for uncollected revenue in operating expenditure during the period.

4.3 Water supply and demand balance and conservation programs

A significant component of the businesses' proposed operating expenditure related to programs to restore the long-term balance between supply and demand. Key program areas proposed by the businesses included:

- water conservation measures involving expenditure of $129 million dollars over four years[20] and
- major supply augmentations costing $693 million over the period.

In 2004 the Victorian Government released its *Our Water, Our Future* statement, detailing its long-term plan for water. Part of this plan was the development of regional water strategies, with the Central Region Sustainable Water Strategy (CRSWS) released in October 2006.[21] The CRSWS detailed actions to secure water for industry, cities and towns and the environment in the Central Highlands, Barwon, Port Phillip (including Melbourne) and Westernport regions.

From the CRSWS businesses developed the WaterSupply-Demand Strategy for Melbourne, the Joint Water Conservation Plan 2007-2015 and the Metropolitan Reuse and Recycling Plan 2008-2013.

In 2007 the Victorian Government announced $4.9 billion on water infrastructure to increase the supply of water for Victoria in the *Next Stage of the Plan.*[22] The infrastructure projects included the desalination plant, Foodbowl Modernisation Project, expansion of Victoria's Water Grid, upgrading the Eastern Treatment Plant and supporting new and existing water conservation programs. These projects aimed to boost the total supply for Melbourne by 240 GL by 2011.

The water businesses used the Government's plans to identify obligations for expenditure on water conservation, supply augmentation and water recycling.

The expenditure consultants identified $114 million of proposed expenditure by retail businesses on water conservation and demand management programs over the regulatory period, representing 9 per cent of their controllable operating expenditure. A further $15.1 million dollars was proposed by Melbourne Water for its share of water conservation programs.

Water conservation measures

The businesses' proposed water conservation programs include around $30 million for showerhead replacement programs and around $20 million for non-residential programs.

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[20] Reflects changes to expenditure put forward by businesses following the expenditure consultants draft expenditure report and includes Melbourne Water.

[21] The Victorian Government publications *Our Water Our Future* (2004) and *Next Stage of the Plan* (2007) are available at www.ourwater.vic.gov.au/programs.

[22] *ibid*.

In reviewing operating expenditure on water conservation, the expenditure consultants identified the key issues as:

- ensuring conservation programs are consistent with the policy framework for conservation measures in metropolitan Melbourne and
- ensuring conservation programs are consistent with forecast restrictions and capital programs.

The expenditure consultants took the view that the programs proposed by the water businesses were reasonable in order to achieve the water saving targets set out in *Our Water, Our Future* and the CRSWS. However, they considered it important to:

- review individual programs since the long term water conservation and recycling targets for 2015 have already been achieved
- consider both the merits of individual programs and the magnitude of all programs in total and
- consider issues such as the timing of proposed expenditure and the diminishing returns of additional water conservation expenditure in terms of water saved and economic benefits.

The expenditure consultants also acknowledged that the continuing low level of water in storages has led to increased short term water conservation efforts and expenditure due to the Target 155 program.[23] To be consistent with the restriction forecasts detailed in chapter 7, the expenditure consultants allowed for expenditure related to Target 155 in 2009-10 but removed it from 2010-11 if businesses had proposed such expenditure.

The expenditure consultants recommended adjustments to water conservation expenditures, including significant reductions in proposed expenditure on showerhead replacement programs. Businesses had forecast increasing expenditure on these programs for additional marketing and introducing retrofit programs. The expenditure consultants were not satisfied that the higher cost of showerhead replacement represented an efficient economic outcome. They also noted that the Victorian Energy Efficiency Target scheme (VEET) may reduce the numbers of showerheads that are replaced by the water businesses.[24]

The expenditure consultants made further adjustments to reduce expenditure on managing water conservation programs and implementing restrictions following the completion of the supply augmentation projects and the easing of water restrictions. The consultants' total adjustments to water conservation expenditures are set out in table 4.3.

Yarra Valley Water's and Melbourne Water's water conservation expenditures for 2009-10 were increased by the expenditure consultants. The increases represent

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[23] In December 2008, the Victorian State Government launched the 'Target 155' campaign as a program to encourage residential customers to use no more than 155 litres per day. The campaign has been targeted at both indoor and outdoor usage.

[24] Since showerhead replacement forms a prescribed activity under the VEET scheme, 'relevant entities' under the scheme, such as electricity retailers, are likely to undertake showerhead replacement programs to assist in meeting their VEET obligations.

an allowance for Target 155 expenditure. An allowance for Target 155 expenditure was also included for City West Water and South East Water, however decreases on other water conservation programs resulted in net downward adjustments for 2009-10.

On balance, the Commission believes the expenditure consultants' approach provides a reasonable balance between the need for demand management, particularly in the first two years of the regulatory period, and the impact of significant augmentations to supply in later years. Therefore the Commission has accepted the expenditure consultants' recommendations.

Table 4.3 **Adjustments to water conservation expenditure accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
City West Water	-0.50	-1.50	-1.58	-1.73	-5.31
South East Water	-0.85	-2.26	-2.23	-2.73	-8.07
Yarra Valley Water	2.09	0	-0.23	-0.46	1.40
Melbourne Water	1.00	0	-0.23	-0.45	0.32
Total	1.74	-3.76	-4.27	-5.37	-11.66

Water supply/demand balance assumptions

The Commission remains concerned that businesses have not undertaken a review of the CRSWS targets and actions following the announcement of the supply augmentations. Both the Victorian Auditor-General and a review conducted for the Department of Sustainability and Environment identified the need to review the CRSWS.[25] The Victorian Competition and Efficiency Commission's (VCEC) report on the structure of the metropolitan water sector recommended that:

> *The current data and assumptions regarding the supply and demand outlook for water inform both the over-arching strategy documents, including the Central Region Sustainable Water Strategy, and the retailers' draft water plans.*[26]

The Government's response to the VCEC report gave in principle support for the recommendation that planning and strategy documents should adopt consistent supply and demand assumptions and be based on the best information at a

[25] Victorian Auditor General's Office 2008, *Planning for Water Infrastructure in Victoria*, April, p. 35; PricewaterhouseCoopers 2007, *Central Region Sustainable Water Strategy – Annual Review 2006-07*, December.

[26] Victorian Competition and Efficiency Commission 2008, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector*, final report, February, p. 82, recommendation 7.6.

particular point in time.[27] The response also indicated that, due to the shorter timeframes covered by Water Plans and the potential impacts on prices and on the businesses' financial viability, businesses should be responsible for developing Water Plan forecasts based on the latest available information, subject to independent scrutiny by the Commission.

The CRSWS states that it has an adaptive management approach embedded in the strategy, allowing for the most appropriate selection and timing of water conservation and supply options.[28]

It is the Commission's view that businesses' Water Plans may have been better informed by undertaking a review of the actions required to meet the short and longer term supply/demand balance. This may have included further consideration of water conservation programs in light of significant supply augmentations and large increases in household bills.

4.4 Input costs

The expenditure consultants' reports identified a number of instances where businesses proposed real escalations in input costs. The most significant of these related to general operating costs, electricity and greenhouse gas abatement, increased labour expenditure and billing and collection costs.

4.4.1 Operating cost escalation

Businesses developed their Water Plans during a period of significant economic change and uncertainty. The economic factors influencing input costs have changed markedly since the Water Plans were submitted. All businesses apart from Yarra Valley Water included some form of general operating cost escalation in their expenditure forecasts.

The expenditure consultants have adopted an approach that forecast operating costs should, in general, remain constant in real terms throughout the regulatory period. A detailed discussion of the expenditure consultants' assessment of the economic drivers of cost escalations is included in chapter 5.

This approach specifically impacts on the businesses' assumptions about cost escalations for civil, mechanical and electrical contract rates, chemical costs and oil and fuel costs.

Table 4.4 details the expenditure consultants' adjustments to the businesses' forecast operating expenditure where businesses have included general real cost escalations above CPI. The adjustments identified in the table do not include areas of operating expenditure for which the expenditure consultants have undertaken a

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27 Victorian Government 2008, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector – Victorian Government Response*, July, p. 7.

28 Victorian Government 2006, *Central Region Sustainable Water Strategy*, Melbourne, p. 12.

separate review, such as expenditure on chemicals, vehicles, labour and electrical costs. The Commission accepts the expenditure consultants' approach.

Table 4.4 **Adjustments for cost escalation accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
City West Water	-1.19	-1.80	-2.44	-3.09	-8.52
South East Water	-0.61	-1.06	-1.52	-2.00	-5.19
Melbourne Water	-0.32	-0.48	-0.66	-0.85	-2.31
Total	-2.12	-3.34	-4.62	-5.94	-16.02

4.4.2 Electricity and greenhouse expenditure

Electricity

The expenditure consultants' analysis of future electricity prices assumed that the impacts of the Australian Government's Carbon Pollution Reduction Scheme (CPRS) and the introduction of smart meters in Victoria will include a pass through mechanism.

The CPRS is planned to commence from 1 July 2010, with auctioning of permits to begin in the first or second quarter of 2010.[29] The Advanced Metering Infrastructure (smart meters) will be rolled out over the regulatory period. The Commission considers that uncertainty around the impacts on electricity prices of these two schemes is sufficient to exclude any estimate of additional expenditure by the water businesses from their revenue requirements. Once the expenditure impacts of the schemes are more certain, businesses may apply for an adjustment to their revenue requirements through the uncertain and unforeseen mechanism discussed in chapter 14.

With these factors excluded, the expenditure consultants concluded that following a step change in prices from 2007-08 to 2008-09 to reflect new electricity contracts, no further real increase in electricity prices should be assumed.

On balance, the Commission considers the expenditure consultants' assumption of no real increase in electricity prices is appropriate given that:

- businesses' current electricity contracts expiring between July 2010 and July 2012 do not include real increases
- regulated network and metering tariff price paths are expected to result in changes of CPI or less
- it appears broadly consistent with wholesale electricity futures contracts.

29 Department of Climate Change 2009, *Carbon Pollution Reduction Scheme – Exposure Draft legislation – Permit Auction – Fact Sheet*, Australian Government, Canberra.

Greenhouse gas emissions

Businesses have varying targets for reducing CO_2 equivalent (CO_2-e) emissions, ranging from being 'carbon neutral' to a 10 per cent annual reduction from 2007-08 levels. Businesses have also identified specific capital projects that are to be powered through renewable energy sources or include expenditure to purchase emission offsets. Melbourne Water is expecting to meet the thresholds required to participate in the CPRS.

In its final decision for the 2008 water price review, the Commission considered that a 10 to 20 per cent reduction in a business' net CO_2-e emissions by purchasing of green energy or equivalent offsets was consistent with the Statement of Obligations.[30]

While the draft legislation for the CPRS raises some concerns about businesses' forecast expenditure, the Commission considers on balance that an allowance for expenditure for a 10 to 20 per cent reduction in net CO_2-e emissions remains consistent with the Statement of Obligations. The Commission will continue to monitor developments around the CPRS between the draft and final decisions.

Yarra Valley Water and City West Water have set goals of achieving 'carbon neutrality' during the regulatory period. A key component of their plans to achieve this goal is their showerhead replacement programs, for which the businesses propose to receive offsets for the showerheads they replace. Yarra Valley Water proposed in its Water Plan to participate in the VEET scheme to receive accredited certificates, which it would then voluntarily surrender.

For its draft decision, the Commission proposes to accept forecast offsets to be achieved by businesses participating in the VEET scheme, as they allow businesses to meet or exceed a 10 to 20 per cent reduction in their carbon emissions while not having an expenditure impact.

Melbourne Water's forecast expenditure of $2.3 million in 2010-11 and 2011-12 and $2.2 million in 2012-13 to purchase permits under the CPRS has been removed for pricing purposes. The Commission's uncertain and unforeseen events mechanism (detailed in chapter 14) would allow Melbourne Water to apply for a variation to its revenue requirement during the regulatory period once expenditure is known.

Following passage of the CPRS legislation, the Commission will work with the government to clarify expectations on water businesses in relation to managing greenhouse gas emissions and liabilities.

The Commission has, for the draft decision, accepted the consultants' recommendations on electricity and CO2-e expenditure as shown in table 4.5.

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[30] Essential Services Commission 2008, ***2008 Water Price Review, Regional and Rural Businesses Water Plans 2008-2013 — Draft Decision***, March, p. 54.

Table 4.5 **Adjustments to electricity and greenhouse gas related expenditure accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
City West Water	0	-0.57	-1.11	-1.36	-3.04
South East Water	-0.93	-0.87	-0.80	-0.80	-3.40
Yarra Valley Water	0	0	-1.00	-1.12	-2.12
Melbourne Water[a]	-0.50	-1.98	-3.90	-5.02	-11.40
Total	-1.43	-3.42	-6.81	-8.30	-19.96

Note: [a]This does not include the $6.8 million adjustment for Melbourne Water's purchase of permits for obligations under the CPRS, which is shown separately in Volume II.

4.4.3 Labour cost increases

The expenditure consultants assessed the businesses' forecasts by considering the baseline cost for a full time equivalent employee, a reasonable real wages growth, changes to employee numbers and direct contributions to superannuation funds.

Real wages growth proposed by businesses in their Water Plans ranged from 1 per cent to 2.5 per cent per annum. In February, the Department of Treasury and Finance provided advice in relation to the wage price index and CPI, which led to businesses proposing a consistent approach of a 1.5 per cent per annum real increase.

While the expenditure consultants noted that an assumption of 1.5 per cent real growth in wages may be on the high side, they concluded that this was a reasonable basis for business forecasts over the period.

The Commission has accepted the expenditure consultants' recommendation on real wages growth for this draft decision. The Commission proposes to further investigate labour costs between the draft and final decisions, with consideration being given to:

- the impact of any updates to Government forecasts and other economic indicators on wages growth and CPI
- the Victorian Treasurer's announcement on 27 March 2009 that it would adjust its policy on expected nominal wages growth from 3.25 per cent to 2.5 per cent, with further increases linked to productivity improvements
- concerns around significant increases in staffing levels for some businesses.

It is possible that total wage assumptions will be reviewed downwards in the final decision.

During the review process, the retail businesses requested that their revenue requirements be increased above that submitted in their Water Plans to reflect additional contributions to their defined benefit superannuation schemes (as required by their fund managers). These reflect actual cash payments to the funds and as such the expenditure consultants have recommended that the additional expenditure be allowed as shown in table 4.6.

Table 4.6 **Additional defined benefit fund contributions accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
City West Water	1.52	1.58	0	0	3.10
South East Water	0.90	0.90	0.90	0.90	3.60
Yarra Valley Water	2.11	2.14	2.17	0.92	7.34
Total	**4.53**	**4.62**	**3.07**	**1.82**	**14.04**

The Commission has accepted the expenditure consultants' recommended adjustments to labour costs in table 4.7. Details of adjustments for each business are contained in Volume II of the draft decision.

Table 4.7 **Adjustments to labour expenditure accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
City West Water	2.87	1.23	-0.25	-0.33	3.52
South East Water	-2.10	-2.13	-2.21	-2.44	-8.88
Yarra Valley Water	2.55	2.81	3.06	2.03	10.45
Melbourne Water	-0.15	-0.28	0.03	0.19	-0.21
Total	**3.17**	**1.64**	**0.63**	**-0.55**	**4.88**

4.4.4 Billing and collection costs

The retailers proposed increases in expenditure associated with customer service and billing. While growth in customer numbers contributes to the higher expenditure, other factors identified by businesses include higher transaction costs, debt management and management of hardship customers.

The Commission's consultants have recommended adjustments to South East Water's and Yarra Valley Water's proposed billing and collection expenditure. South East Water adjustments were reductions to agency collection costs and printing costs. The expenditure consultants considered that Yarra Valley Water's per customer billing and collection expenditure should not vary significantly from those of South East Water due to their similar sizes and customer composition. South East Water's expenditure was used as a benchmark to provide an appropriate increase in Yarra Valley Water's expenditure.

No adjustment was recommended to City West Water's expenditure as proposed increases in expenditure above the expected customer growth rates was considered reasonable.

The Commission has accepted the consultants' recommendation for the draft decision and has made adjustments to expenditure as detailed in Volume II and table 4.8.

Table 4.8 **Adjustments to billing and collection expenditure accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*
South East Water	-0.31	-0.30	-0.40	-0.50	-1.49
Yarra Valley Water	-0.91	-1.39	-1.64	-1.79	-5.73

4.5 Productivity and efficiency

The Commission considers reasonable productivity improvements should be included in businesses' expenditure forecasts. In addition to general productivity improvements, the Commission has also considered the recommendations from the VCEC's report into reform of the metropolitan retail water sector.

4.5.1 Productivity improvements

The Commission considers it reasonable to expect businesses to improve the efficiency of delivery for their business as usual expenditure over the regulatory period.

In reviewing operating expenditure, the expenditure consultants requested information from businesses on productivity assumptions included in their Water Plans. The expenditure consultants undertook to either reconcile the productivity forecasts with the Water Plans or to satisfy themselves that expenditure trends indicated productivity gains that satisfied the Commission's expectations.

The Commission accepts the expenditure consultants' conclusion that businesses have included productivity improvements in forecast operating expenditure consistent with its expectations of productivity gains of one per cent per annum.

4.5.2 Shared services

The VCEC inquiry into reform of the metropolitan retail water sector assessed a number of proposed changes to the structure of the sector. The options for retail structural reform assessed were:

- consolidating the retail sector into a single entity
- establishing two retailers
- maintaining three retailers but with sharing of some services and
- separating the retail and distribution functions to facilitate competition in the supply and retail functions.

VCEC recommended to the Victorian Government that the three existing metropolitan retailers be retained but with a target of future annual savings of at least $8 to $10 million per annum through shared services and bulk procurement of materials.[31] The Victorian Government supported VCEC's recommendation.

The expenditure consultants used an assumption that businesses would be able to achieve $9 million of annual savings, being the mid point of VCEC's recommended range. It was assumed that the full savings would be achieved by 2011-12, with 50 per cent of savings being achieved in 2009-10.

Of the $9 million in annual savings, the expenditure consultants recommended that 60 per cent, or $5.4 million be allocated to the retailers, with the remaining 40 per cent, or $3.6 million, being allocated to Melbourne Water.

The Commission has accepted the expenditure consultants' approach and recommended adjustments to operating expenditure for shared services and bulk procurement as shown in table 4.9 and Volume II.

Table 4.9 **Allocation of shared service and bulk procurement savings accepted by the Commission**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*	*Change from proposed*
City West	0.70	1.40	1.40	1.40	4.90	-1.10
South East	1.00	2.00	2.00	2.00	7.00	2.00
Yarra Valley	1.00	2.00	2.00	2.00	7.00	3.00
Melbourne	1.80	3.60	3.60	3.60	12.60	7.10
Total	**4.50**	**9.00**	**9.00**	**9.00**	**31.50**	**11.00**

4.6 Bulk water expenditure

The Commission has adjusted the retailers' expenditure on bulk water purchases to ensure consistency with the Commission's draft decision for Melbourne Water. Table 4.10 details the draft decision on bulk expenditure, with the assumptions underpinning the expenditure detailed in chapter 9.

31 Victorian Competition and Efficiency Commission 2008, *op. cit.*, February, p. 82.

Table 4.10 **Bulk water expenditure – draft decision**
$ million in January 2009 prices

	2009-10	*20010-11*	*2011-12*	*2012-13*	*Total*
City West Water	136.2	154.1	202.6	244.8	737.7
South East Water	201.3	236.3	308.0	383.8	1 129.4
Yarra Valley Water	216.0	244.8	319.5	391.3	1 171.7

4.7 Licence fees and environmental contribution

The Commission has adjusted the proposed operating expenditure to ensure that licence fees and environmental contributions are consistent with the advice provided by the relevant regulatory agencies.

The water businesses are required to pay licence fees as a contribution to the costs incurred by agencies that regulate aspects of their activities. Licence fees shown in table 4.11 are set by:

- the Minister for Health under s. 51 of the *Safe Drinking Water Act 2003* for costs incurred by the Department of Human Services in administering the Safe Drinking Water Regulations
- the Minister for the Environment under s. 24 of the *Environment Protection Act 1970* for costs incurred by the Environment Protection Authority (EPA) in administering discharge licences and works approvals
- the Minister for Finance in consultation with the Minister for Water under s. 4H(2) of the *Water Industry Act 1994* for costs incurred by the Essential Services Commission in administering the economic regulatory framework.

The environmental contribution in table 4.12 has been calculated from the Environmental Contributions Order 2008 to 2012, made under section 193 of the *Water Industry Act 1994.* The Commission has assumed a continuation of the environmental contribution into 2012-13. Melbourne Water is not required to pay the environmental contribution in respect of its water and sewerage services.

Table 4.11 **Assumed licence fees[a]**
$ million in January 2009 prices

	Annual fees		*Essential Services Commission*			
	EPA	*DHS*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
City West Water	0.10	0.11	0.36	0.36	0.36	0.89
South East Water	0.13	0.21	0.37	0.37	0.37	0.52
Yarra Valley Water	0.13	0.22	0.40	0.40	0.40	0.56
Melbourne Water	0.89	0.18	0.35	0.35	0.35	0.53
All businesses	**1.24**	**0.73**	**1.48**	**1.48**	**1.48**	**2.50**

Note: Increases in ESC licence fees in 2012-13 represent increased expenditure in undertaking the next water price review. [a] For the purposes of the draft decision, the Commission has accepted the licence fees assumed by the businesses.

Table 4.12 **Environmental contribution**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*[a]
City West Water	10.52	10.27	10.02	9.77
South East Water	16.17	15.77	15.39	15.01
Yarra Valley Water	17.08	16.66	16.25	15.86
All retailers	**43.77**	**42.70**	**41.66**	**40.64**

Note: The environmental contribution is held constant in nominal terms. [a] Estimated assuming it is calculated on the same basis as in previous years.

4.8 Other adjustments

The expenditure consultants made a number of further recommendations for adjustments to proposed expenditure. While a number of adjustments are identified here, the consultants' final report provides further detail and additional adjustments.

In addition to the incorrect allocations and land tax expenditure discussed below, other adjustments include:

- adjustments to the timing of capital expenditure that have associated operating expenditure
- re-allocations of expenditure between prescribed and non-prescribed expenditure
- information technology expenditure adjustments
- training expenditure adjustments.

4.8.1 Land tax

The expenditure consultants recommended that land tax expenditure for Yarra Valley Water and Melbourne Water be adjusted. Changes to land tax expenditure represent revised forecasts of disposals and acquisitions and changes to land values. The Commission has accepted the recommendations for the draft decision.

In the final decision for the 2008 water price review, the Commission altered land tax expenditure by the regional businesses following the announcement of altered tax rates in the 2008 Victorian Budget. The Commission will again review the 2009 Victorian Budget to determine if further alterations to land tax are warranted and consider the latest assessments of land tax once they are received by the businesses.

4.9 Draft decision

In making its draft decision, the Commission has generally accepted the recommendations of the expenditure consultants regarding the required level of operating expenditure.

In relation to specific businesses, the Commission has not accepted the proposed expenditure forecasts for all four businesses. The Commission has reduced the expenditure forecast for Melbourne Water by $43 million dollars. Controllable operating expenditure for the retailers (shown in table 4.13) has been reduced by $79 million, representing a 6.1 per cent decrease, with adjustments to businesses of:

- $17.8 million for City West Water, representing a 5.3 per cent reduction
- $38.6 million for South East Water, representing a 7.7 per cent reduction and
- $22.5 million for Yarra Valley Water, representing a 5.0 per cent reduction.

Table 4.13 **Controllable operating expenditure – draft decision**
$ million in January 2009 prices

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total draft decision*	*Total proposed*	*% change*
City West Water	80.6	79.3	79.4	79.8	319.0	336.8	-5.3
South East Water	114.7	114.0	115.0	117.1	460.8	499.4	-7.7
Yarra Valley Water	108.2	106.5	107.5	106.9	429.2	451.7	-5.0
Total	**303.5**	**299.8**	**301.9**	**303.8**	**1209.0**	**1287.9**	**-6.1**

Relative to the Water Plans, forecast total operating expenditure has been reduced by $253 million, or 4.2 per cent across the regulatory period. For the purposes of this draft decision, the Commission has adopted the expenditure forecasts set out in table 4.14. The detailed adjustments for each business are set out in Volume II.

Table 4.14 **Operating expenditure – draft decision**
$ million in January 2009 prices

	Draft decision					*Business proposal*	*Change between proposed and draft decision*
	2009-10	*2010-11*	*2011-12*	*2012-13*	*Total*	*Total*	*(per cent)*
City West Water	227.9	244.4	292.9	336.0	1,101.2	1 146.8	-4.0
South East Water	332.9	366.9	439.1	516.7	1,655.5	1 742.4	-5.0
Yarra Valley Water	342.1	368.7	444.0	515.0	1,669.9	1 747.3	-4.4
Melbourne Water	195.1	198.0	402.4	611.3	1,406.8	1 450.2	-3.0
Total	**1 098.0**	**1 177.9**	**1 578.5**	**1 979.0**	**5 833.4**	**6 086.6**	**-4.2**

4.10 Other issues

The Commission has identified other issues relevant to the businesses' operating expenditures.

4.10.1 Uncollected revenue

South East Water included provisions for revenue not collected in its operating expenditure forecast. These provisions are treated separately as revenue not collected in the Commission's pricing models.

The expenditure consultants identified that Yarra Valley Water included increased costs for its hardship program and its 'Arrange and Save' program in operating expenditure. While not recommending that it be considered as uncollected revenue, the consultants noted the potential for a double count with the allowances for uncollected revenue.

In reviewing the provisions for uncollected revenue for businesses, the Commission identified significant disparities between the businesses. While South East Water expected a doubling in line with the proposed increases in bills, City West Water assumed little change from its existing provision and Yarra Valley Water proposed that it would increase from $1.5 million to $7 million in the final year of the regulatory period. The Commission has decided to adopt South East Water's approach and has made adjustments to uncollected revenue provisions for City West Water and Yarra Valley Water. While household bills will less than double, the doubling of the uncollected revenue will, to some degree, take into account the potential impact of the economic downturn.

With the consultants confirming that Yarra Valley Water had included its 'Arrange and Save' expenditure in its operating expenditure forecasts, the Commission does not consider that Yarra Valley Water has justified its significantly higher provisions.

4.10.2 Desalination plant

The desalination plant is planned to be delivered as a Public Private Partnership (PPP) under the Partnerships Victoria (PV) framework. Melbourne Water included operating expenditure for the payments to the PPP provider based on the costs identified for the preferred desalination plant in the feasibility study.[32]

Two consortia were short listed to bid for the plant, with an expected timeframe for award of a contract in mid-2009.

The Victorian Auditor General has reviewed the processes to determine that a PPP be the preferred form of procurement for a desalination plant. A key finding was that the process was consistent with the Partnerships Victoria framework.[33] The Victorian Auditor General also considered that the feasibility study provided an

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32 Melbourne Water 2007, *Melbourne Augmentation Program Seawater Desalination Feasibility Study*, Prepared by Melbourne Water and GHD, June.

33 Victorian Auditor General's Office 2008, *Planning for Water Infrastructure in Victoria*, April, p. 35.

adequate costing of the desalination plant in the preferred location and quantified the key risks.

While Victorian Auditor General could not audit the full procurement process, it being active, it identified that the PV guidelines require a final value for money analysis before the preferred procurement form is completed. The decision is made by comparing the whole of life costs while taking into account the allocation of risk between the public and private sectors.[34]

The Commission acknowledges that the feasibility study remains the best basis to estimate the toll payments. Following the announcement of the successful bidder, the uncertain and unforeseen events mechanism set out in chapter 14 will allow an adjustment to revenue requirements if the final toll payments differ substantially from those based on the feasibility study.

The Commission is satisfied that the procurement process will lead to an efficient level of expenditure. Therefore, it did not require the expenditure consultants to comment on the desalination plant.

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34 *ibid*., p. 36.

5 CAPITAL EXPENDITURE

Capital expenditure is a key component of the revenue requirement. Net capital expenditure is recovered by being added to the regulatory asset base (RAB). It is reflected in prices through a return on the RAB (that is the weighted average cost of capital (WACC) multiplied by the RAB) and a return of the RAB (through regulatory depreciation).

This chapter sets out the Commission's analysis of each water business' forecast capital expenditure proposals for the next regulatory period pursuant to the requirements of the WIRO. It sets out:

- the Commission's approach to assessing capital expenditure
- a summary of the water businesses' proposals
- the Commission's capital expenditure analysis of the businesses proposals.

It is important to note that as part of this price review, the Commission has only assessed expenditure in relation to the metropolitan businesses' water and sewerage services. Melbourne Water's expenditure on drainage and waterways services is not subject to the current price review because the Commission approved prices for Melbourne Water's drainage and waterways services in the 2008 water price review final decision. All figures presented in this chapter exclude expenditure in relation to Melbourne Water's drainage and waterways services.

5.1 Commission's approach

The WIRO requires the Commission to ensure the prices levied by the businesses provide them with a sustainable revenue stream that does not reflect monopoly rents or inefficient expenditure and allows the businesses to recover expenditure on renewing and rehabilitating existing assets. The Commission must also be satisfied that the proposed expenditure forecasts are efficient and account for a planning horizon that extends beyond the regulatory period.

The focus of the Commission's assessment of capital expenditure is not to approve a capital works or capital expenditure budget for the business that must be spent on specified individual capital projects. Instead, the assumed capital expenditure is a benchmark used by the Commission to assess whether prices will deliver sufficient revenue for the business to recover its costs over the regulatory period. In relation to capital expenditure, the Commission ensures that each business can recover an efficient level of capital expenditure that is needed to deliver the service expectations of customers and any obligations imposed by regulatory agencies. If businesses want to undertake capital expenditure additional to the approved amounts, they are able to do so but the costs cannot be recovered through prices charged to customers.

As noted in chapter 4, Halcrow and Deloitte (the expenditure consultants) provided an independent assessment of the businesses' proposed expenditure.[35] The consultants' assessment sought to identify and assess the major projects that comprise a significant proportion of the capital expenditure proposed by the businesses. It did not assess every capital project proposed to be undertaken by each business.

These major projects were reviewed to confirm that the following criteria would be met:

- appropriate in relation to key drivers and obligations — Evidence was required about the key drivers and obligations under the Statement of Obligations that sets out the responsibilities of each of the water businesses.
- robust (with adequate supporting analysis and systems) — Each business was required to provide reports clearly enunciating the service outcomes required of the business, setting out its analysis of options for achieving these outcomes and identifying the preferred solution. Evidence may also be sought to demonstrate that the preferred solution falls within the business' overall strategy.
- deliverable over the four year regulatory period — The businesses were required to demonstrate that all key activities comprising the delivery of the project from planning to construction have been identified and considered. Evidence was required that the proposed projects can be delivered within the proposed timeframes, including the elements of long-term capital projects (that are expected to continue into the following period) that will occur during the regulatory period.
- reasonable in terms of the cost estimate — The cost estimate should be well supported either by a schedule of quantities using typical rates currently applying in the industry, or it should compare favourably with other similar projects, or preferably both of the above.

In addition the Commission expected any proposals that significantly increase capital expenditure to be substantiated by supporting information on the following cost drivers:

- expenditure on new obligations — evidence of more stringent standards being set by regulatory agencies or of significant customer preferences and willingness to pay for enhanced service levels
- expenditure on existing infrastructure — evidence that water or sewerage networks need to be renewed to ensure businesses continue to deliver services that meet customer expectations
- growth-related capital expenditure — evidence of significant growth in the number of new connections or in the demand for water, sewerage or other prescribed services
- corporate and retail expenditure — evidence that existing assets are not adequately assisting the businesses to meet the needs of customers.

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[35] Copies of the consultants' final reports can be found on the Commission's website at www.esc.vic.gov.au.

For its review of capital expenditure the Commission has also considered whether the businesses' proposed capital expenditure clearly reflects obligations imposed by the Minister for Water (through the Statement of Obligations), other regulators (such as the Environment Protection Authority (EPA) for environmental issues, the Department of Human Services (DHS) for drinking water quality, the Department of Sustainability and Environment (DSE) for dam safety and the Commission for customer related service standards) or customers (via their preferences for improved service levels).

Where the consultants recommended excluding projects from the expenditure forecasts or delaying them within the regulatory period, the Commission has sought the regulatory agencies' input to confirm that these adjustments are not inconsistent with relevant regulatory obligations.

Additionally, where proposed increases in capital expenditure are driven by customer preferences rather than explicit regulatory obligations, the Commission expected businesses to demonstrate that they undertook appropriate consultation to establish that proposed programs are consistent with customer needs and preferences and there is also evidence of their willingness to pay.

Businesses were asked to identify in their Water Plans those projects that they considered to be uncertain in scope or timing, or where further studies were required, or where the receipt of government funding was uncertain, and to suggest potential mechanisms for dealing with that uncertainty. In its guidance to the water businesses, the Commission also recognised that there would be merit in introducing a mechanism to deal with uncertainty around capital projects. The uncertain and unforeseen events mechanism proposed by the Commission is discussed in chapter 14.

The Commission has also reviewed the proposed expenditure for 2008-09 where it requested the businesses to supply actual expenditure for the first half of the year and up-to-date expenditure forecasts for the second half of the 2008-09 year. This is discussed in the roll forward of the RAB section in chapter 6. The Commission will also require businesses to provide a further update of expenditure in response to the draft decision.

5.2 Overview of business proposals

For the period 2008-09 to 2012-13, capital expenditure proposed by the businesses on water and sewerage infrastructure totals $5.1 billion, with $3.7 billion of this occurring during the regulatory period. The businesses proposed significant increases in capital expenditure in 2008-09 and 2009-10, with expenditure levels then falling back to historic levels over the remainder of the regulatory period (see table 5.1). The increase in 2008-09 and 2009-10 reflects the impact of supply augmentations, with the Sugarloaf pipeline and reintroduction of the Tarago reservoir into the Melbourne supply system contributing to a large increase in Melbourne Water's expenditure.

Table 5.1 **Actual and forecast capital expenditure (2005-06 to 2012-13) proposed by businesses**
$ million in January 2009 prices

	2005-06	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total 2008-13*
City West Water	70.8	68.9	76.0	90.4	139.8	159.6	109.0	61.5	560.2
South East Water	65.1	93.1	103.1	123.5	157.2	156.2	147.7	141.5	726.2
Yarra Valley Water **a**	169.8	178.6	164.4	234.5	276.9	231.0	215.2	189.4	1 147.0
Melbourne Water **b**	154.1	201.9	368.5	1 016.1	805.3	564.4	277.3	127.0	2 790.2
All businesses	**459.8**	**542.6**	**712.1**	**1 464.4**	**1 379.3**	**1 111.1**	**749.3**	**519.5**	**5 223.6**

Notes: Gross capital expenditures for 2005-06 to 2007-2008 are actual numbers while capital expenditure for 2008-09 is a forecast. **a** In December 2008, Yarra Valley Water adjusted its capital expenditure forecast following discussions with the Commission to include costs that it had assumed would be paid by developers related to shared distribution assets. This increased its forecast capital expenditure by $18.9 million in 2008-09 and $47 million over the regulatory period. **b** Drainage and waterways expenditure excluded. In April 2009, Melbourne Water advised of an increase in 2008-09 expenditure related to a payment to DSE for the desalination project.

Key drivers of capital expenditure over the period are: supply augmentation; enhanced sewage treatment (with the Eastern Treatment Plant upgrade to tertiary treatment); asset upgrades and replacement; third pipe recycling schemes; catering for customer growth on the urban fringe of Melbourne; and sewer backlog programs. Table 5.2 lists some of the major capital expenditure projects and programs for each water business as detailed in their Water Plans. The ten largest capital expenditure projects for each business are set out in Volume II.

Table 5.2 **Key capital expenditure projects**
$million in January 2009 prices

Proposed capital expenditure project/program	*2008-09*	*Regulatory period*	*Total*
Melbourne Water			
Sugarloaf pipeline	479	522	1 011[a]
Northern sewer project	87	192	279
Eastern Treatment Plan tertiary treatment	9	294	303
Melbourne main sewer augmentation	40	135	175
City West Water			
West Werribee third pipe	1	73	74
Altona recycled water project	1	58	59
South East Water			
Third pipe recycled water	2	43	45
Pakenham–Narre Warren Sewer	15	28	43
Yarra Valley Water			
Northern Sewer project	47	113	160
Epping-Craigieburn Sewer Project Stage 1	2	64	66
Epping branch sewer – Section 1	2	43	45

[a] Includes $10 million of expenditure to occur in third regulatory period.

5.3 Capital expenditure assessment

The Commission considered a number of factors in assessing the businesses' proposed capital expenditure, including project timing and delivery, the businesses' forecasts of input costs, and the expenditure consultants' recommendations.

5.3.1 Project timing and delivery

In the issues paper, the Commission identified that the businesses' large proposed capital expenditures in the early years of the regulatory period will place increased pressure on the capacity of the businesses to deliver their proposed projects. Of the businesses, Melbourne Water and Yarra Valley Water show the greatest increase in capital expenditure, driven by a small number of large projects.

As already noted for the next regulatory period, the businesses are proposing significant increases in capital expenditure for 2008-09 and 2009-10 with expenditure levels falling back to historic levels by the end of the regulatory period. A small number of key projects underpin the capital expenditure programs of many businesses, with a large proportion of proposed capital expenditure for each of the businesses accounted for by around ten major projects.

A key issue is whether the businesses have the resources to deliver these programs within the proposed timeframes, noting that major projects often require detailed planning and approvals (which are beyond the control of the businesses) before they can proceed.

A major component of the consultants' expenditure review was to assess whether each business could deliver its proposed capital expenditure program over the four year regulatory period accounting for:

- businesses' performance in delivering previous capital expenditure programs and their demonstrated capacity to deliver against capital budgets the size of those proposed
- the current approval status of proposed projects
- the internal and external resources available to the business to deliver these projects
- the obligation of the businesses to deliver projects in the next regulatory period and
- the businesses' project management capability.

In considering the capacity of businesses to deliver their capital programs, the Commission suggested that consideration may be given to the priority of some projects and programs. Delaying some projects or programs could result in smoother capital expenditure over the period with minimal impact on customer service levels.

The Commission also noted that deliverability is an issue across the state and nationally, in terms of capacity to obtain resources since a large number of major projects in Victoria (such as the desalination plant, the Sugarloaf pipeline, the Wimmera Mallee pipeline and the Gippsland Water Factory) and interstate all being constructed over similar time periods. While the slowing of the Australian economy is likely to result in substantially lower private sector capital investment, particularly in resource industries, this is likely to be partly offset by higher levels of federal and state government investment in capital infrastructure. A reduction in total private and public investment spending may improve the ability of water businesses to deliver major infrastructure over the next few years.

The expenditure consultants recommended adjustments to the timing of a number of projects that, although considered prudent, are unlikely to be delivered against the timelines identified in Water Plans. Generally, the consultants recommended revising the timing of proposed capital expenditure within the regulatory period (for example, moving the project from the first year to the third year). During the review process, the consultants liaised with the businesses to clarify the timing of key projects, which resulted in a number of agreed timing adjustments. The businesses also identified projects that could be delayed.

In particular, Yarra Valley Water proposed to move some forecast expenditure on the Northern Sewer from 2008-09 and 2009-10. It also agreed with the consultants' suggestions that the Epping-Craigieburn Sewer be deferred until later in the regulatory period and that it should defer some forecast expenditure on growth assets from early in the regulatory period to later in the period and into the next period due to anticipated slower growth. Yarra Valley Water proposed to defer capital expenditure of over $100 million from 2008-09 and 2009-10 until later in the period and $55 million into the next regulatory period.

Melbourne Water also identified $46 million of deferrals across a range of projects from 2008-09 until 2009-10.

5.3.2 Major adjustments to capital expenditure

The consultants recommended a number of other adjustments to projects due to reasons such as insufficient justification for costs and/or consideration of other alternatives, or necessity for the project to occur in the next regulatory period. The Commission notes that on a number of occasions the businesses agreed to the consultants' recommended adjustments.

These recommendations have been accepted by the Commission in this draft decision. Some of the major projects for which adjustments were recommended include:

- Sugarloaf pipeline and related projects (Melbourne Water) –The Sugarloaf pipeline project comprises a number of components – the pipeline and pumping station, contribution to the Food Bowl project, upgrading the Winneke treatment plant and downstream transfer works. For analysis and modelling purposes, these components have been assessed separately. The consultants recommended a $32 million reduction in expenditure on the Sugarloaf pipeline and pump station and a $9 million reduction in expenditure at the Winneke Treatment Plant on water treatment and sludge disposal over the regulatory period. They also recommended that the cost of downstream interface works for the pipeline be reduced by $50 million compared to Melbourne Water's Water Plan forecast.
- mechanical and electrical renewals allocations (Melbourne Water) – The consultants reduced the forecast allocations for mechanical and electrical renewals by $37.4 million over regulatory period. Melbourne Water had proposed a large increase in mechanical and electrical renewals as it had incurred far higher than anticipated spending in the last regulatory period. The consultants reviewed the proposed expenditure and the models used to develop the expenditure profile and agreed that, while an increase in renewals is warranted, its own modelling suggested the proposed increase by Melbourne Water was larger than necessary.
- Melbourne Main Sewer (Melbourne Water) – The consultants recommended an $8.7 million reduction in expenditure over the period. The reduction related to removing a $6.0 million cost escalation allowance and a $2.7 million allowance for performance fees on the basis that these fees are not yet certain so only a proportion of fees should be included in the forecast.
- Tarago Reservoir (Melbourne Water) – Melbourne Water indicated that the project will be completed in 2008-09 for $11.6 million less than forecast.
- Northern Sewer (Melbourne Water and Yarra Valley Water) – The consultants identified a $3.6 million reduction for Melbourne Water. Yarra Valley Water deferred expenditure from 2008-09 ($14 million) and 2009-10 ($2 million) until later in the regulatory period.
- capital expenditure escalation factors (City West Water and South East Water) – The consultants identified that City West Water and South East Water used escalation factors greater than CPI to forecast future construction costs. No real cost increases have been allowed above CPI (see below for more detail).

- water main and sewer main renewals (South East Water) – The consultants reduced the expenditure forecasts by $14.3 million over the period due to changed work programs and the adoption of lower unit rates.
- Dunning Road to Synes Road water main (City West Water) – City West Water advised that the project had been completed earlier and at lower cost so $1.14 million has been removed.

Since businesses submitted their Water Plans, some have revised their proposals:

- Yarra Valley Water, City West Water and Melbourne Water moved some expenditure for 2008-09 into the next regulatory period. South East Water also shifted expenditure for some projects into the regulatory period but this was offset by bringing forward some projects to 2008-09.
- New projects or capital costs not known at the time of finalising Water Plans were added, including Melbourne Water's desalination interface works ($79.9 million, discussed below) and a desalination project payment to DSE of $39 million.
- Corrections have been made for errors or omissions from the Water Plans, including Yarra Valley Water's $65 million of expenditure related to the construction of shared distribution assets, which it had assumed would be funded by developers. The Commission agreed that this expenditure needed to be included in its forecasts.

The Commission's proposed adjustments to the businesses' expenditure profiles are summarised in section 5.4 and set out in detail in Volume II of this draft decision.

5.3.3 Real increases in capital program input costs

At the time the Water Plans were being prepared in mid-to-late 2008, real labour costs and the prices of key inputs to water and sewerage infrastructure, such as oil and steel, had been rising rapidly for a number of years, causing input costs to increase faster than the CPI. Businesses' Water Plans incorporated, to varying degrees, sustained increases in the cost of these inputs, either through the use of escalation factors or by incorporating assumptions about rising input costs into project costs.

The businesses engaged Econtech (now KPMG Econtech) to forecast construction price indexes relevant to core aspects of their construction projects. Its report was completed in July 2008 (using data to December 2007) and provided a forecast of increases in capital project prices across the regulatory period. Econtech's report provided separate escalation indexes for water distribution, reticulation, sewer transfer and treatment capital project costs, as shown in table 5.3.

As part of its review, the Commission's expenditure consultants considered the findings of the Econtech report in the context of a downgrading of the economic outlook since the report was completed. A key assumption in Econtech's report is for a sustained increase in oil and steel prices, which are key inputs to water infrastructure (particularly distribution and reticulation assets). When the report was finalised, this appeared to be a reasonable assumption, as both commodities had experienced sustained increases for some time. Since the Econtech report was finalised, there has been a significant downturn in the economic outlook and significant volatility in global equity, credit, commodity and product markets.

Table 5.3 **Econtech forecast capital escalation factors, 2008 to 2014 (nominal)**

Index	*Annual price increase (nominal) a*
Water distribution	5.7
Reticulation	4.2
Sewer transfer	3.2
Treatment	2.8

a Econtech assumed an annual inflation rate of 2.6 per cent.

In reviewing the businesses' expenditure, the expenditure consultants identified the extent to which businesses had relied on the Econtech report or other escalation indices. South East Water had applied the four indexes for the capital project categories in the Econtech report. City West Water undertook to simplify the process by using a single escalation factor of 2.5 per cent for most projects (and 3.5 per cent for four projects), based on the Econtech indexes.

The Commission's consultants concluded that the sudden (and generally unanticipated) change in economic outlook had meant the assumptions and forecasts in the Econtech report are no longer appropriate. The consultants did not question the veracity and methodology in the report and commented that, at the time the report was being written, the assumptions used appeared reasonable.

The consultants noted that the forecasts of certain input prices prepared in early to mid 2008 are unlikely to reflect current market conditions. In particular, impacts of the world economic downturn are likely to include (compared to a 2007-08 baseline): equal or lower cost of materials such as steel, plastics-based pipes and chemicals; equal or lower unit capital expenditure costs due to less competition from other large infrastructure projects, not only in the mining sector but in construction more generally; equal or lower fuel costs; and reduced pressure on wages.

The consultants further observed that anecdotal evidence suggests that the economic downturn has resulted in greater competition among contract maintenance and engineering/construction businesses in the water sector due to the downturn in the mining industry. This is supported by evidence from the Reserve Bank of Australia (RBA), which noted in its February 2009 Statement on Monetary Policy that in the December 2008 quarter that there was 'a significant fall in construction costs in Victoria'. At the public hearing arranged by the Commission in March 2009, the AiGroup noted that its most recent surveys indicated significant falls in construction activity. The consultants also noted that recent falls may be partly offset in future by the Australian Government's stimulus package, which will increase capital spending in the residential and education sectors in particular.

The consultants observed that, given current economic circumstances and the difficulties in forecasting a new construction index, it is reasonable to adopt the CPI rather than a separate construction cost index as the basis for forward projections. While the CPI and a construction index will diverge over time, over the medium to longer term it believed the CPI provides the best measure of changes in input costs. Adopting CPI as the nominal escalator in the next regulatory period also has the advantage of simplicity. If some other index was used to inflate future prices, it would be necessary to identify escalators for different services and materials. Some may be forecast to rise relative to CPI, whereas others may fall relative to CPI. On balance, CPI is the best indicator to use as it represents a bundle of goods and services and is easily accessible.

The consultant adopted the assumption that, on average, water sector construction costs will increase at the same rate as the CPI, that is, there will be no real increase in prices. While there is arguably a case that increases in construction costs will be lower than CPI, at least during the early phases of the global economic downturn, adopting a CPI-based nominal escalation factor provides a reasonable average outlook during the regulatory period.

The Commission has adopted the consultants' recommendation to remove cost escalation used in South East Water's and City West Water's proposed capital expenditure. As Yarra Valley Water and Melbourne Water did not escalate their forecast capital costs using a cost escalation index, no general adjustment has been made. Where businesses have used higher cost assumptions for materials or labour, or included higher input costs within project contingencies, these have been separately examined as part of the major projects review.

The consultants recommended the adjustments shown in table 5.4 to City West Water's and South East Water's capital expenditure forecasts to remove the escalation factors adopted by these two businesses.

Table 5.4 **Capital cost escalation adjustments accepted by the Commission**
$million in January 2009 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
City West Water	-2.20	-6.74	-11.39	-10.25	-7.14
South East Water	0	-2.36	-5.18	-6.48	-8.48

The consultants also identified that if a separate construction index such as that developed by Econtech (or a more general construction index) is to be used to escalate future capital costs then the issue of how that index should be determined will need consideration if applied to the whole industry. The mix of input costs facing the metropolitan water businesses will be unique and an accurate index would need to consider such things as prices, parameters and weightings.

The consultants noted that the Independent Pricing and Regulatory Tribunal (IPART) in New South Wales had considered a similar issue in its 2005 and 2008 reviews of Sydney Water. In its 2005 Determination for Sydney Water, IPART commented that:

> *Having carefully considered the evidence available to it, the Tribunal believes that while there may be short-term variations in the rate of growth in the CPI and Total Non-dwelling Construction costs, both of these price indices are likely to follow general movements in the Australian economy as a whole. With this in mind the Tribunal does not consider that the recent higher rate of*

> *growth in Total Non-dwelling Construction costs represents a long-term trend which requires special consideration in the 2005 determination period.*

In IPART's 2008 draft Sydney Water price decision (confirmed in the final decision), IPART concluded that:

> *there are significant uncertainties in the global equity markets and credit markets that could have a negative impact on construction activity. Construction activity (and costs) could also be dampened by anticipated further increases in domestic interest rates, which would increase borrowing costs for businesses.*
>
> *On balance, IPART has decided against Sydney Water's proposal to inflate the future capital expenditure by the construction cost index and, instead, proposes that this expenditure be escalated by the CPI.*

The Commission agrees with the consultants' recommendations and IPART's observation that the CPI remains, on balance, the best mechanism for escalating future capital expenditure and does not propose to adopt another index or escalation factor.

5.3.4 Other adjustments

The Commission has considered a number of other adjustments identified by the expenditure consultants.

Yarra Valley Water's office extension

Yarra Valley Water proposed to construct an extension to existing buildings at its Mitcham office to accommodate staff and contractors at a cost of $14.6 million. The proposed extension would be constructed over three years commencing in 2009-10. Yarra Valley Water indicated that the office extension was needed to increase the space available per staff member. In response to the Commission's request for reductions in capital expenditure, where possible, to reduce the impact on prices, Yarra Valley Water revised down its proposed expenditure on the extension to $11.22 million. The expenditure consultants have noted that the proposed extension could, in the context of water prices doubling and capital programs being deferred, be seen as discretionary. They recommended removing the capital expenditure associated with the office extension from the capital forecasts.

The Commission agrees with the consultants' observation that an office extension could be seen as a discretionary project. Further, it observes that the implementation of the Victorian Competition and Efficiency Commission's recommendation on shared services (discussed in chapter 4) and the current review of access arrangements for the Victorian water industry could have implications for the functions and staffing levels of the water businesses in the medium term. However, the Commission is mindful that Yarra Valley Water has deferred a considerable amount of capital expenditure across the regulatory period from a broad range of projects. As such the Commission is prepared to accept a capital expenditure forecast that includes Yarra Valley Water's revised $11.2 million office extension.

Desalination plant integration works

Melbourne Water updated its forecast expenditure by $79.9 million in relation to works to integrate the desalination plant into the metropolitan reticulation system. Melbourne Water has indicated that the preferred water transfer strategy is to utilise available capacity in the existing Cardinia-Pearcedale pipeline to transfer desalinated water from the desalination pipeline delivery point to the Cardinia Reservoir site and from the Cardinia Reservoir to the Silvan Reservoir. It has been estimated that using available capacity avoids additional capital expenditure on a new pipeline (approximately $80-$100 million). The consultant included Melbourne Water's estimate of $79.9 million in its capital assumptions but indicated that this project is still in development. They also noted that they have not had the opportunity to fully review the costs. The consultants observed, on the basis of their high-level review of the project, that some of the cost elements may be overstated. The consultants recommended that the project costs be subject to review following the Commission's draft decision at which time there should be a greater degree of certainty over the estimate and expected costs should be available.

The Commission agrees with the consultant's recommendation to include the desalination interface costs in the capital expenditure forecasts for arriving at a draft decision but to further review the proposed costs between the draft and final decisions.

In April 2009, Melbourne Water advised that the Minister for Water had requested it to provide $39.7 million in funding to DSE in 2008-09 as a contribution to the Victorian desalination project. The Commission has included the proposed amount in Melbourne Water's regulatory asset base.

5.3.5 Uncertain capital expenditure

The Commission has proposed an uncertain and unforeseen events mechanism to deal with uncertainty during the regulatory period, as adopted in the 2008 price review final decision for the regional and rural businesses (discussed further in chapter 14).

Melbourne Water was the only businesses to identify specific projects with significant uncertainty, which may require a mid-period adjustment to prices if the level or timing of capital expenditure differs materially from that forecast. These projects included:

- the desalination plant
- the Eastern Treatment Plant outfall extension or tertiary treatment and
- the Western Treatment Plant biosolids energy recovery project.

None of the retail businesses nominated specific projects but they discussed the broader treatment of uncertainty.

As the desalination plant is a PPP, changes in costs at the plant will not have an impact on capital expenditure forecasts. Estimates of the cost of works associated with the interface assets may be revised between the draft and final decisions and further contributions may be requested from Melbourne Water for project costs associated with the desalination plant.

5.4 Draft decision

For the purposes of this draft decision, the Commission has adopted the expenditure forecasts set out in table 5.5.

In making its draft decision, the Commission has generally accepted the recommendations of the consultants regarding the required level of capital expenditure for each water business. As shown in table 5.5, capital expenditure under the draft decision is lower over the regulatory period than that proposed by the businesses in their Water Plans, though slightly higher in 2009-10 and 2010-11.

Table 5.5 **Draft decision capital expenditure, 2008-09 to 2012-13**
$million in January 2009 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*	*Change*[a] *(per cent)*
City West	85.4	133.6	150.0	98.5	54.3	521.8	-6.9
South East	123.0	153.6	148.0	136.2	128.4	689.3	-5.1
Yarra Valley	175.3	269.2	252.5	226.9	233.4	1 157.2	0.9
Melbourne Water[b]	1 004.6	836.4	562.8	248.8	117.1	2 769.7	-0.7
Total	**1 388.2**	**1 392.8**	**1 113.3**	**710.4**	**533.3**	**5 137.9**	**-1.6**

[a] Change between businesses' proposals and draft decision. [b] Excludes drainage and waterways expenditure.

The major differences between the businesses' proposals and the draft decision are:

- the shift of expenditure from 2008-09 into the 2009-13 regulatory period
- the reduction in cost escalations used by the businesses
- changes in the timing of projects within the period due to revisions of capital works programs following consultation among the businesses, the consultants and other regulatory agencies and
- adjustments due to expected slippage and/or potential for prudent deferral due to proposed works being non-urgent.

In relation to specific businesses, the Commission has not accepted the proposed expenditure forecasts for all four businesses. For the period 2008-09 to 2012-13, the Commission has reduced the expenditure forecast for South East Water by

5.1 per cent, City West Water by 6.9 per cent, and Melbourne Water by 0.7 per cent. It has increased expenditure for Yarra Valley by 0.9 per cent.[36]

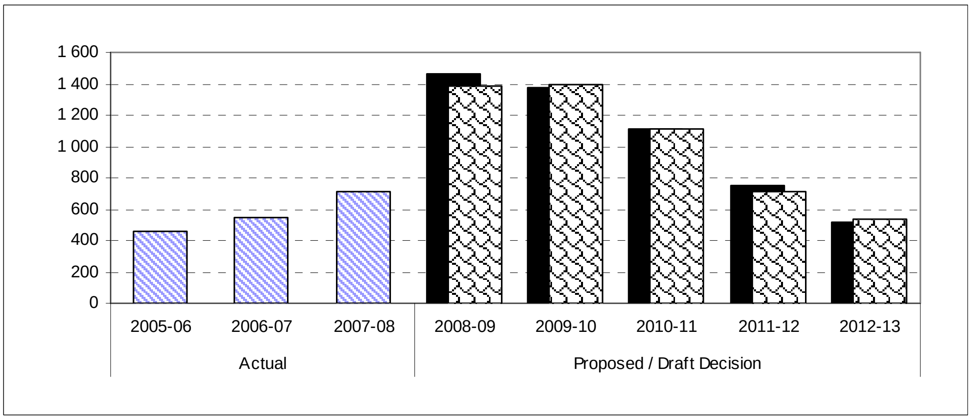
The year by year adjustments for each business are set out on table 5.6. The detailed adjustments for each business are set out in Volume II.

Table 5.6 **Total capital expenditure changes, 2008-09 to 2013**
$million in January 2009 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*	*Change (per cent)*
City West	-5.0	-6.2	-9.6	-10.6	-7.1	-38.5	-6.9
South East	-0.5	-3.7	-8.2	-11.5	-13.1	-36.9	-5.1
Yarra Valley	-59.2	-7.8	21.5	11.6	44.0	10.1	0.9
Melbourne Water	-11.6	31.1	-1.6	-28.5	-9.9	-20.5	-0.7
Total	**-76.3**	**13.5**	**2.2**	**-38.9**	**13.8**	**-85.7**	**-1.6**

Figure 5.1 shows the actual and proposed capital costs and the Commission's recommended adjustments. The draft decision supports capital expenditure that is well above historical levels.

Figure 5.1 **Actual and forecast capital cost and draft decision adjustments 2005-06 to2012-13**
$million in January 2009



5.5 Other capital expenditure issues

The Commission has identified other issues relevant to the businesses' capital expenditures.

36 The increase for Yarra Valley Water includes $65 million of shared distribution assets not included in its Water Plan.

5.5.1 Monitoring performance

The Commission has allowed significant increases in capital expenditure programs for all businesses to meet relevant environmental or health standards or the needs of customers. Between the draft and final decisions, the Commission will work further with the businesses and other regulatory agencies to clarify the key outputs or deliverables associated with the capital expenditure forecasts on which prices will be based for the regulatory period.

Between the draft and final decisions, businesses should review whether the timelines to which they have committed for project delivery continue to be achievable and if any further deferral of expenditure to later in the regulatory period is required, noting that the revised expenditure for 2007-08 is significantly below that proposed.

The Commission will publish details annually of the businesses' actual capital expenditure against proposed expenditure in its performance reports. Also, given the major impact of a small number of projects on the total capital expenditure program of each business, the Commission will identify businesses that fail to deliver major capital projects against the timelines proposed in Water Plans and seek explanation as to the reasons for the failure. The Commission notes that there are instances where priorities will change and that customers need to be provided with sufficient information to keep them informed of these changes.

5.5.2 Timing of inclusion of expenditure in regulatory asset base

For this regulatory period, all water businesses forecast the inclusion of capital expenditure in the regulatory asset base at the time it is incurred. However, a number of regulators in other jurisdictions (such as the ACCC in the case of electricity transmission) have included large capital investments and the capitalised interest costs associated with the project in the regulatory asset base when the asset comes into service. The advantage of this approach is that businesses have an incentive to complete large projects on a timely basis, ensuring that customers do not pay for incomplete large projects. As a result, prices do not reflect large projects that may be deferred or spread into future regulatory periods.

A similar approach could also be considered for projects such as recycled water pipeline networks. Such pipelines require large initial expenditures but it may take a number of years for customers to connect to the network and for revenue to be earned.

The Commission does not propose to adopt this approach in this regulatory period but will consider whether this incentive is necessary in light of businesses' actual project implementation over this regulatory period.

6 FINANCING CAPITAL INVESTMENTS

The Water Industry Regulatory Order (WIRO) requires that prices allow each water business to recover:

- its expenditure on renewing and rehabilitating existing assets
- a rate of return on assets as at 1 July 2004 that are valued in a manner determined by, or at an amount otherwise specified by the Minister at any time before 1 July 2004
- a rate of return on investments made after 1 July 2004 to augment existing assets or construct new assets.

In practice, these principles allow each water business to recover the cost of capital investments (which are initially funded by the water business) over time through regulatory depreciation, and to recover financing costs through a return on assets.

This chapter sets out the Commission's draft decision on the assumptions used by the metropolitan water businesses in their Water Plans on financing capital investments, namely the initial regulatory asset values, the rate of return on investments and methods for calculating regulatory depreciation.

6.1 Rolling forward the regulatory asset base

The regulatory asset base (RAB) of each business represents the net value of its past capital investments for pricing purposes. The businesses recover a return on assets which is calculated by multiplying the RAB by a regulatory rate of return.

The RAB reflects the initial regulatory asset value (1 July 2004), as determined by the Minster for Water, and the net value of new assets constructed by the businesses since the initial value was set. The RAB is adjusted each year to include new capital expenditure undertaken by the water business and to deduct contributions, proceeds from asset disposals and regulatory depreciation.

The Commission will adopt the standard method for calculating an opening RAB for the regulatory period for each water business. The formula for calculating the opening RAB is:

Opening RAB $_{2009}$

equals Opening regulatory asset value $_{2004}$

plus Gross capital expenditure $_{2004\text{-}2009}$

less Contributions (by government and customers) $_{2004\text{-}2009}$

less Proceeds from disposal of assets $_{2004\text{-}2009}$

less Regulatory depreciation $_{2004\text{-}2009}$

In updating the RAB, the Commission has adopted actual figures of capital expenditure, contributions and proceeds from disposals for the period 1 July 2004 to 30 June 2008 and forecasts for 2008-09. The regulatory depreciation assumptions adopted for the 2005-2008 regulatory period have also been used to update the RAB. Once the opening RAB has been established, the same approach is then used to roll forward the RAB for each subsequent year of the regulatory period, using forecasts of capital expenditure, contributions, proceeds from asset disposals and regulatory depreciation for this calculation. The RAB is then updated for actual figures at the start of the 2013 regulatory period.

Transfers of regulatory asset values

Based on advice from the Minister for Water, Melbourne Water, South East Water and City West Water incorporated adjustments to their opening regulatory asset bases. Melbourne Water reduced its opening regulatory asset base by $300 million, while South East Water and City West Water increased their opening regulatory asset values by $189 million and $111 million respectively. The aim of this was to better achieve the Government's pricing objectives. For the purpose of this draft decision, the Commission considers that the RAB transfers proposed by the businesses are not required to achieve the Government's pricing objectives and has not included them in its calculation of their opening asset bases.

The Commission has previously indicated that any transfer of RAB from Melbourne Water to the retailers would need to be implemented through an adjustment by the Minister for Water to the initial regulatory asset values. The Commission will seek guidance from the Minister whether a RAB transfer is still appropriate in light of this draft decision.

Deferral of regulatory depreciation

Each of the metropolitan water businesses has generally adopted the standard approach to updating and rolling forward the RAB in its Water Plan and provided all the required information. However Yarra Valley Water did not include regulatory depreciation on existing assets for 2008-09 in rolling forward its RAB for 2009-10. The Commission does not accept this approach, as regulatory depreciation incurred in 2008-09 should be included in the roll forward of the RAB for 2009-10. The Commission has therefore included Yarra Valley Water's regulatory depreciation on existing assets for 2008-09 in calculating its opening asset base for 2009-10. City West Water also deferred regulatory depreciation on existing assets in 2008-09. The Commission has not allowed this deferral and has included all regulatory depreciation on existing assets for 2008-09 in determining City West Water's opening asset base for 2009-10.

2008-09 capital expenditure forecasts

In determining the businesses' opening asset bases, the Commission also sought actual figures for net capital expenditure for the period between 1 July 2008 and 31 December 2008 and updated forecasts for the second half of 2008-09. This included the value of contracts in progress, contracts awarded but not started and contracts yet to be tendered. This provided the Commission with a more accurate estimate of capital expenditure for the current year and the extent to which actual capital expenditure will deviate from the Water Plan forecast.

The Commission has adopted these as the revised forecast capital expenditure for 2008-09 for each business, and also included some further revisions that resulted from the consultants' review. The Commission will seek a further update on 2008-09 capital expenditure between the draft and final decisions to ensure the most recent and accurate information is used to update the opening RAB.

Other adjustments to the regulatory asset base

The Commission has also assessed the amount of capital expenditure rolled into the opening asset base against the regulatory accounts submitted by each business for the years 2005-06 and 2006-07. Where there was a discrepancy between actual expenditure in the Water Plans and the regulatory accounts, which could not be explained by the businesses, the Commission has adopted the expenditure in the regulatory accounts to determine the businesses' opening RAB.

South East Water included non-prescribed revenue totalling $56.10 million relating to the sale of assets, with a profit of $18.91 million. South East Water advised that this revenue and expenditure is largely driven by the sale of land at the site of the decommissioned Cranbourne Waste Water Treatment Plant (WWTP). The consultants noted that South East Water's internal capital expenditure spreadsheet identified $1.76 million as being spent on the site since 2005. Since the Commission included capital expenditure on the Cranbourne WWTP as prescribed expenditure in its 2005 price decision, customers should receive some of the proceeds from the sale. The consultants recommended that this expenditure be removed from South East Water's regulatory asset base.

The Commission agrees that the $1.76 million of capital spent at the Cranbourne treatment must be removed from the South East Water's regulatory asset base. The Commission also requires South East Water to identify why the full value of the sale of the treatment plant should not be removed from the regulatory asset base.

In the regulatory period Melbourne Water has removed the value of land sales and office disposal and the rehabilitation cost of the Dandenong Treatment Plant from its regulatory asset base.

The detailed assumptions adopted by the Commission regarding the opening RAB and rolling it forward over the regulatory period are included in Volume II of this draft decision.

6.2 Rate of return

The WIRO allows the metropolitan water businesses to recover a rate of return on existing assets and on new capital expenditure.

Consistent with previous regulatory decisions by the Commission and regulators in other jurisdictions, the Commission uses a weighted average cost of capital (WACC) approach to estimate an efficient rate of return. The WACC reflects the cost of debt and equity, which are the two alternative sources of finance. The Commission's standard practice is to adopt a WACC that is expressed in real post-tax terms. As a post-tax WACC is adopted, benchmark assumptions about the businesses’ tax liabilities also need to be incorporated into their revenue requirements.

The return on assets component of a water business’ revenue requirement for any particular year is calculated as the product of the average regulatory asset base for that year and the approved WACC.

The formula for the WACC is:

$$WACC = R_e \frac{E}{V} + R_d \frac{D}{V}$$

where:

R_e is the required return on equity

R_d is the cost of debt and

E/V and D/V are the shares of equity and debt in the financing structure respectively.[37]

The required return on equity and the cost of debt is further calculated with reference to the underlying real risk-free rate of return. The cost of debt is the sum of the real risk-free rate and the debt margin. The required return on equity is calculated using the capital asset pricing model formula:

$$R_e = R_f + \beta_e \left(R_m - R_f\right)$$

where:

R_f is the real risk-free rate

$\left(R_m - R_f\right)$ is the equity risk (or market risk) premium and

β_e is the equity beta.

In order to calculate the WACC, assumptions need to be made about efficient benchmarks for all of the above elements. The Commission’s assessment of the individual WACC elements is discussed in section 6.2.1.

In its Water Plan, each business was required to propose an estimate of the rate of return using a real post-tax WACC. Each of the businesses adopted a WACC of 5.8 per cent, which was the rate adopted by the Commission in the 2008 water price review final decision. However, the businesses also indicated that they

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37 V is the value of regulatory assets, E is the value of regulatory assets financed through equity, D is the value of regulatory assets financed through debt and E + D = V.

expect the WACC to be reviewed for the draft and final decisions to reflect the most up-to-date financial market conditions.

6.2.1 Draft decision

In assessing the WACC, the Commission has been mindful of the significant volatility and events that have occurred in financial markets over the previous twelve months. Of particular concern has been the severe tightening of credit markets and subsequent increases in the cost of debt. Further, significant cuts in the official target cash rate by the Reserve Bank of Australia (RBA) have led to large decreases in the real risk-free rate.

While the WACC has generally been assessed on current information, the Commission has also recognised recent volatility and the difficulty in forecasting how financial conditions may change over the forthcoming regulatory period. It has also had regard to the fact that the businesses obtain credit at fixed rates, and are likely to have borrowed at rates that are higher than present levels. The Commission has therefore derived a feasible range for the WACC by considering probable ranges for the 'market-based' WACC parameters, namely the real risk free rate (by taking into account the range of inflation forecasts) and the debt margin. To account for recent volatility and to provide some margin should financing costs increase over the regulatory period, the Commission proposes to adopt a WACC towards the conservative (higher) end of the feasible range.

The Commission has calculated a feasible range of between 4.3 and 4.9 per cent for the WACC. For this draft decision, the Commission proposes to adopt a real post-tax WACC of 4.8 per cent.

The reduction in the WACC to 4.8 per cent (from the 5.8 per cent proposed by the businesses in their Water Plans) is primarily driven by the lower real risk-free rate, which has been partly offset by an increase in the debt margin.

While recognising that the proposed WACC has reduced significantly since the 2008 water price review, it is closer to the rates adopted in the Commission's previous reviews for the water industry. For example, the Minister for Water adopted a WACC of 5.1 per cent when determining the initial regulatory asset values in 2004, while the Commission adopted a WACC of 5.2 per cent in the 2005 and 2006 water price reviews.

The WACC parameters adopted by Commission, including the feasible range where relevant, are set out in table 6.1. The individual parameters are discussed below.

Table 6.1 **Draft decision - real post-tax WACC**

Real risk free rate	*Equity beta*	*Market risk premium*	*Debt margin*	*Financing structure*	*Franking credit value*	*WACC (feasible range)*	*WACC (draft decision)*
(per cent)		*(per cent)*	*(per cent)*	*(per cent)*		*(per cent)*	*(per cent)*
1.508 - 1.755	0.65	6.00	2.0 - 2.7	60	0.5	4.3 – 4.9	4.8

Real risk-free rate

The real risk-free rate benchmark used to calculate the cost of debt and required rate of return on equity should represent the yield on a risk-free financial instrument.

In the 2008 water price review, the Commission calculated the real risk-free rate by using the average yield over a 40 day trading period on nominal Commonwealth Government Securities with a ten year term to maturity as a proxy for the nominal risk-free rate. An independent forecast of inflation was then used to convert this into a real risk-free rate according to the following 'Fisher equation':

$$R_f = \frac{(1+R_n)}{(1+\pi)} - 1$$

where:

R_f is the real risk-free rate

R_n is the nominal risk-free rate and

π is the inflation forecast.

In 2008, this approach resulted in a real risk-free rate of 3.23 per cent based on a nominal risk-free rate of 6.227 per cent and an inflation forecast of 2.9 per cent. These assumptions were also adopted by the metropolitan businesses in their Water Plans.

This approach to calculating the real risk-free rate was also used by the Commission during the Gas Access Arrangement Review (GAAR) in 2007, although a 20 day trading period was used to calculate the average nominal yield on Commonwealth Government Securities. The Commission had previously used the yield on inflation-indexed Commonwealth Government Securities as a direct proxy for the real risk-free rate. However, the Commission adopted the present approach when issues relating to absolute and relative bias with the inflation-indexed bonds were identified during the GAAR.[38] The present approach

[38] Essential Services Commission 2008, *Gas Access Arrangement Review 2008-12 – Final Decision*, March 2008.

is also generally consistent with the position recently adopted by the Australian Energy Regulator (AER). It recommended that the average yield be calculated on a trading period of between 10 and 40 days. However, unlike the Commission's current approach, it recommended that the yield on a bond with a shorter term to maturity should be used to mirror the length of the regulatory period.[39]

The Commission proposes to adopt the present approach to calculating the real risk-free rate. It considers that calculating the average yield on nominal bonds over a 40 day trading period provides an appropriate balance between reflecting up-to-date information and addressing volatility. Further, the yield on Commonwealth Government Securities remains the generally accepted proxy for the nominal risk-free rate. The Commission also considers that it is appropriate to adopt the yield on 10 year bonds for consistency with the regional and rural water businesses.

For this draft decision, the Commission has calculated the nominal risk-free rate based on the average yield on nominal Commonwealth Government Securities over the 40 day trading period to 31 March 2009, which has resulted in a rate of 4.299 per cent.[40]

In determining an appropriate inflation forecast, the Commission has had regard to current inflation levels, the RBA's long-term inflation target and the RBA's inflation outlooks, which are made in its quarterly statements on monetary policy. In the 2008 water price review, a forecast inflation rate of 2.9 per cent was adopted, which reflected the 2.7 per cent forecast adopted in the GAAR, the significantly higher than expected inflation result for the March quarter of 2008, and expectations by the RBA that inflation would remain high in the short term.

Over the previous six months, the impacts of the current financial situation have resulted in downward revisions to inflation forecasts. In its Statement of Monetary Policy in February 2009, the RBA noted that:

> *While year-ended underlying inflation is expected to remain above the Bank's medium term target range in coming quarters, price pressures in the domestic economy should ease …*
>
> *The projected decline in inflation will also be aided by the significant decline in inflation expectations since mid 2008 and the falls in the prices of oil and many other commodities. However, the decline in overall inflation is likely to be a gradual process as price pressures in the non-tradables component have been significant and broad-based in recent years.*[41]

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39 Australian Energy Regulator 2008, *Explanatory Statement: Electricity transmission and distribution network service providers, review of the weighted average cost of capital parameters,* December.

40 The actual yields used to calculate the nominal risk-free rate can be accessed through the Reserve Bank of Australia website: http://www.rba.gov.au/Statistics/HistoricalIndicativeMidRates/index.html.

41 Reserve Bank of Australia 2009, *Statement of Monetary Policy*, February 6, p. 66.

The Commission has also taken into account the RBA's forecasts for the CPI and underlying inflation until June 2011, which imply average inflation rates of between 2.3 and 2.75 per cent, and the RBA's long-term inflation target range of between 2 and 3 per cent. It has also had regard to the CPI results for the June, September and December quarters of 2008, which implied annual percentage changes of between 4.3 and 4.7 per cent.[42] Having regard to these factors, the Commission considers that a feasible range for inflation for the forthcoming regulatory period is between 2.5 and 2.75 per cent.

The assumptions about the nominal risk-free rate and inflation result in a feasible range for the real risk-free rate of between 1.508 per cent and 1.755 per cent. The Commission notes that this range reflects current financial market conditions. The range will be updated for the final decision.

Equity beta

The equity beta reflects the non-diversifiable risk of an asset relative to the market as a whole. Assets that exhibit higher than average risk (that is, variability in returns) would be expected to compensate investors for this risk through a higher rate of return. The equity beta reflected in these assets would be greater than one, while assets with less than average risk would have an equity beta of less than one.

Estimating the equity beta for a particular entity requires information on the economic returns to the entity as reflected in dividends and changes in the value of its assets. As Victorian water businesses are not listed on the stock exchange, this information is not available and a proxy representing a firm facing similar non-diversifiable risks needs to be determined.

In the 2008 water price review, the Commission adopted an equity beta of 0.65, compared with 0.75 in the first regulatory period. This reflected analysis from the GAAR in 2007 that demonstrated that the appropriate equity beta for gas distribution businesses was 0.70. It also reflected recent regulatory decisions in other industries and the generally accepted view that the level of non-diversifiable risk experienced by the water businesses is lower than that for energy businesses.

The Commission notes that the equity beta of 0.65 was established within the past 12 months. It does not consider that there has been any underlying change to the non-diversifiable risk faced by the water industry during this time. Further, an equity beta of 0.65 is the midpoint of the feasible range for gas distribution businesses of 0.5 to 0.8 identified by the Allen Consulting Group during the GAAR.[43] This suggests that an equity beta of 0.65 would be above the midpoint for the feasible range for water, should such a range be calculated. The Commission therefore proposes to adopt an equity beta of 0.65 for the metropolitan water businesses for the forthcoming regulatory period.

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[42] *ibid*., p. 65.

[43] Allen Consulting Group, ***Empirical evidence on proxy beta values for regulated gas distribution activities***, June 2007.

Market risk premium

The benchmark market risk premium should reflect the return an investor would expect to earn over and above the risk-free rate by holding a well-diversified portfolio of assets.

In the 2008 water price review the Commission adopted a market risk premium of 6.0 per cent. It can be difficult to establish an accurate estimate of the market risk premium as assumptions are required on matters including the timeframe over which historical market returns are considered and methods for calculating average time series data. However, a market risk premium of 6.0 per cent is generally considered to be consistent with observable market returns.[44] Further, it is consistent with the Commission's previous pricing decisions in water and energy and is the benchmark generally adopted by other Australian regulators, including the AER in its recent review of WACC parameters.[45]

The Commission proposes to adopt a market risk premium of 6.0 per cent for the metropolitan businesses.

Debt margin

The typical practice among Australian regulators is to adopt a benchmark assumption for the cost of debt that reflects the latest market evidence on the borrowing costs of efficiently financed businesses. Benchmarks are used as opposed to actual borrowing costs as they provide greater incentives to pursue efficient financing arrangements. The benchmark assumptions previously adopted by the Commission to estimate the cost of debt for water and energy is a BBB+ credit rating, a 10 year term to maturity for corporate bonds and a margin to account for establishment fees. This has been the approach generally adopted by Australian regulators to estimate the cost of debt. Market data on corporate borrowing costs used to estimate the cost of debt has typically been accessed through Bloomberg or CBASpectrum, which are the two major yield estimate service providers.

The most common method used by regulators to determine the applicable debt margin is by taking the yield premium for 10-year BBB+ corporate bonds over 10-year Commonwealth Government bonds for the 20 days (or 40 days) preceding the determination. In lieu of Australian 10-year BBB+ corporate bond yields, Australian 8-year BBB corporate bond yields have been applied in recent regulatory decisions. This is due to Bloomberg discontinuing the 10-year BBB Corporate index for Australia in March 2008 because of insufficient issues. Since

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44 For example, the Commission noted in the 2005 water price review that a market risk premium of 6.0 per cent is within the range of results modelled over varying time periods extending beyond a full market cycle (3.4 to 7.3 per cent), is within a 95 per cent confidence interval for long-term historical returns and is above forward looking estimates (4.0 per cent). In the 2007 GAAR a range of between 5.0 and 7.0 per cent was identified.

45 Australian Energy Regulator 2008, *op. cit*.

then regulators have used 8-year BBB corporate bond data in determining the applicable debt margin.[46]

Regulators have recently begun to question the consistent usage of BBB or BBB+ rated bonds for the debt premium due to volatility and market liquidity. In the AER's Review of WACC Parameters, it decided that there was sufficiently persuasive evidence to depart from the currently adopted BBB+ to an A- credit rating for a benchmark service provider. The AER based this finding on observed credit ratings in private and government-owned energy networks.

In deciding on a credit rating of A-, the AER considered that the change in approach:

- is supported by the most recent available and reliable empirical evidence
- generates a forward looking rate of return that is commensurate with prevailing conditions in the market for funds and
- generates a return on debt that reflects the current cost of borrowings for comparable debt.

In July 2008, the ACCC released a final decision for the price notification for Australia Post. This decision used a credit rating of AAA to determine the debt premium. This decision was based on Australia Post's strong balance sheet and its low business risk.

The ACCC has also applied an A rating on previous decisions regarding electricity transmission networks. It was noted in the 2000 New South Wales and Australian Capital Territory transmission networks revenue cap decision that as TransGrid was a Government Business Enterprise (GBE), it was required by the New South Wales Treasury to maintain a minimum A rating. This requirement was subsequently adopted as the credit rating for regulatory purposes.

In its 2001-2005 Electricity Distribution Price Determination, the Commission (then Office of the Regulator-General) applied a credit rating within the range of BBB to A. It was satisfied that, on the basis of the revenue benchmarks that underlie its price control decisions, each distributor can comfortably expect an investment grade rating (BBB to A).

The Independent Pricing and Regulatory Tribunal's (IPART) review of electricity distribution networks in 2004 also acknowledged the role that the New South Wales Treasury Corporation (NSWTC) (the NSW equivalent of the Treasury Corporation of Victoria (TCV)[47]) plays in GBE borrowings. While IPART did not use the rates from NSWTC, it noted that these funds are guaranteed and used this

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46 Unlike CBA Spectrum, Bloomberg does not distinguish between BBB and BBB+ rated bonds, though the BBB index is closely representative of BBB+ yields as the majority of bonds used to estimate it are BBB+. In addition, using a consolidated BBB index rather than a pure BBB+ index should theoretically result in a slightly higher debt margin as the lower rated bond carries a greater risk.

47 The Treasury Corporation of Victoria (TCV) is Victoria's central financing authority and provides loans and financial services to Victoria's government business enterprises.

information to determine the appropriate credit rating, which was then used to determine the debt margin through Bloomberg.

The approach adopted by the Commission in the 2008 water price review was to adopt advice from TCV on its lending rates to establish a benchmark debt margin. The Commission considered that because the water businesses are only able to access funds through TCV (as opposed to private debt markets), a range of borrowing rates for representative government entities was likely to generate a more appropriate benchmark than corporate bond rates. Using the advice from TCV, the Commission adopted a debt margin of 1.75 per cent in the 2008 water price review final decision.

The Commission has again sought advice from TCV and proposes to adopt a similar approach to estimate the debt margin in the current price review. However, considering the significant volatility in credit markets, the Commission proposes to adopt a WACC that implies a debt margin towards the higher end of the feasible range. This differs from the previous price review, where a debt margin close to the midpoint of the feasible range was adopted.

The advice provided by TCV suggested a range for the debt margin of between 2.0 and 2.7 per cent for debt with 10 year terms to maturity. The range was primarily driven by differences in the Financial Accommodation Levy (FAL) applying to government entities with credit ratings ranging from BBB to AA+. The lower bound of the feasible range is higher than the debt margin of 1.75 adopted for the 2008 water price review while the upper bound is significantly higher. This increase is primarily due to the general tightening of credit markets and the restricted ability of all lenders to generate funds in wholesale markets.

The Commission has also had regard to the fact that the metropolitan businesses have also previously acquired fixed-rate debts at higher borrowing rates.[48] In other words, it has sought to ensure that the nominal cost of debt implied by the WACC is sufficient to cover current borrowing costs. Adopting a debt margin towards the higher end of the feasible range and the assumptions on the risk-free rate and inflation discussed previously implies a nominal cost of debt that is sufficient to cover these costs. For example, a debt margin of 2.5 per cent and inflation forecast of 2.5 per cent result in a nominal cost of debt of 6.9 per cent. Alternatively, a debt margin of 2.7 per cent and inflation forecast of 2.65 per cent result in a nominal cost of debt of 7.1 per cent.[49]

Table 6.2 outlines the nominal weighted average cost of borrowing for each of the metropolitan water businesses provided in its annual report. For most of the businesses, this rate increased between 2006-07 and 2007-08, suggesting that incremental borrowing costs are greater than existing debt costs.

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48 Summary information on the borrowing costs of debts with varying terms to maturity are set out in the businesses' annual financial statements.

49 Both of these scenarios produce a real post-tax WACC of 4.8 per cent.

Table 6.2 **Nominal weighted average cost of borrowing**
Metropolitan water businesses

	2006-07 *(per cent)*	*2007-08* *(per cent)*
City West Water	5.90	6.13
South East Water	6.00	6.22
Yarra Valley Water	6.35	6.23
Melbourne Water	6.12	6.20

Source: Water businesses' annual reports.

The assumptions for the debt margin and nominal risk-free rate included in this draft decision imply a nominal cost of debt for the WACC of 7 per cent. Since the businesses' actual borrowing costs, as shown in table 6.2, have in the past been around 6-6.5 per cent, the Commission considers its draft decision on the WACC provides the businesses with a return sufficient to cover their current borrowing costs.

The Commission understands that the financing structure of the water businesses covers a range of debt maturities in order to mitigate their refinancing risk and to hedge against market volatility. This reduces the cost of refinancing debt as expiry terms are staggered to avoid needing to refinance a significant amount of debt in a short period of time.

As with the real risk-free rate, the Commission will calculate a further estimate of the debt margin for the final decision to reflect current credit market conditions. One factor that may result in changes to the debt margin between the draft and final decision is the federal Government's recent offer (at a price) to guarantee all existing and new debt issued by the state governments. The Commission has not been able to consider fully the effects of this announcement on the debt margin, although it is likely to have a downward effect. The Commission will consider the matter, including the effects of the Victorian Government's response to the federal Government offer, in more detail between the draft and final decisions.

Financing structure

The standard practice among Australian regulators is to adopt benchmark assumptions about efficient financing arrangements, instead of using the businesses' actual gearing levels. This provides incentives for businesses to develop efficient financing solutions.

The Commission adopted a financing structure of 60 per cent debt to regulatory assets in the 2008 water price review. This was considered to be consistent with:

- actual observed gearing levels of comparable listed utility businesses which suggest that 60 per cent is the appropriate benchmark for an efficient private sector business and
- assumptions adopted by most Australian regulators.

None of the businesses have suggested adopting an alternative benchmark financing structure. The Commission proposes to continue to adopt a debt to regulatory asset ratio of 60 per cent.

Benchmark taxation liability

As state-owned businesses, the water businesses are subject to a tax equivalence regime that reflects the corporate tax regimes faced by private sector firms.

The WACC estimate adopted by the Commission in this draft decision is expressed in post-tax terms, as opposed to taxation being specifically included in the WACC formula. It is therefore necessary to include an estimate of tax liabilities in the businesses' revenue requirements.

Estimating a business' tax liability relies on a number of assumptions. Many of the inputs required to calculate a taxation liability can be taken directly from the inputs required to calculate prices. For the other inputs, the Commission has previously used benchmark assumptions, particularly in relation to interest and tax depreciation deductions.

Using benchmarks reduces the difficulty associated with estimating explicit taxation liabilities for each business, provides incentives for the businesses to adopt efficient financing and taxation practices, is less reliant on information held by individual businesses and is internally consistent with WACC assumptions.

The revenue requirements used to determine prices are expressed in real terms, but tax liabilities depend on nominal revenues and expenses. As such, the benchmark taxation liability is calculated by converting revenues and expenses into nominal terms using an inflation forecast and calculating the total taxable income and the nominal tax liability. This is then converted into a real benchmark taxation liability and included in the revenue requirement.

Some of the benchmark assumptions adopted for the purposes of calculating the benchmark taxation liability include the following:

- Interest expenses (deductions) reflect the nominal cost of debt and assumed stock of debt (gearing multiplied by the regulatory asset base) used to estimate the WACC.
- Taxation depreciation decisions – the opening taxation value has been carried over from the previous regulatory period.
- Assessable revenue and expenditure are consistent with those adopted elsewhere in this draft decision.

The approach applied by the Commission when calculating the benchmark taxation liability is summarised in table 6.3.

Table 6.3 **Benchmark taxation liability calculation** [a]

	Revenue requirement
plus	Customer contributions
less	Operating and maintenance expenditure
less	Taxation depreciation
less	Interest expense
less	Assessed tax losses brought forward
equals	**Total benchmark taxable income**
multiply by	Corporate taxation rate [b]
equals	**Total benchmark taxation liability (gross)**
less	Value of imputation credits [c]
equals	**Total benchmark taxation liability (nominal)**
	Convert to real terms ($ 1 January 2009)
equals	**Total benchmark taxation liability (gross) (real)**

Note: **a** Nominal values are used to calculate total benchmark liability. **b** Total benchmark taxable income is multiplied by the corporate tax rate of 30 per cent divided by (1-0.3(1-γ)), where γ (gamma) represents the value of franking credits as a proportion of total tax payments. **c** Value of imputation credits is the gross tax payment multiplied by (1-γ).

The Commission's approach in this draft decision is consistent with previous pricing decisions for the water industry in 2005 and 2008. The benchmark taxation liabilities of the individual businesses are set out in Volume II of this draft decision.

Franking credits

A feature of the Australian taxation system is the dividend imputation system, whereby Australian resident shareholders receive credits for taxation paid at the corporate level in determining their personal income tax liabilities. The standard practice in Australian regulatory decisions is to take the benefit of these franking credits into account when determining the benchmark tax liabilities and hence revenue required by regulated businesses. While the metropolitan water businesses do not pay income tax and do not directly benefit from the dividend imputation systems, it is important that franking credits be taken into account in order to simulate the tax liabilities of an efficient privately-owned firm.

The value of franking credits as a proportion of total tax payments is represented by gamma (*γ)*. While this parameter is not specifically part of the WACC calculation, it is used to determine each businesses benchmark taxation liabilities and hence revenue requirements.

Gamma is calculated as the product of the value of imputation tax credits created as a proportion of their face value and the proportion of credits that can be distributed. In the 2008 water price review, the Commission adopted a gamma of 0.5. This reflected the assumption that franking credits are valued at 60 per cent of their face value and that 82 per cent are distributed. This was also the figure adopted by the Commission in the previous water price reviews in 2005 and 2006 and in the GAAR in 2007. It is also within the range of 0.35 to 0.5 adopted by most Australian regulators. However, it is below the figure of 0.65 recently recommended by the AER.[50]

No issues have been raised regarding adopting a gamma of 0.5 since Water Plans were submitted. The Commission proposes to keep the gamma at a level of 0.5.

Draft decision

The Commission proposes to adopt a real post-tax weighted average cost of capital of 4.8 per cent.

6.3 Regulatory depreciation

The purpose of allowing a 'return of' capital expenditure through regulatory depreciation when setting regulated charges is to return to investors the value of the capital that has been invested over the life of the relevant asset. In the past, water businesses have generally proposed straight-line depreciation profiles and these have been approved by the Commission.

In the current situation where the metropolitan businesses' asset bases are growing rapidly over a short period, it is appropriate to consider whether other approaches to regulatory depreciation may be more appropriate.

The Commission's current approach is to recognise regulatory depreciation from the year in which the expenditure is incurred. For projects that take a number of years to complete, this approach results in businesses receiving regulatory depreciation on projects prior to assets coming into service. For small projects and projects that are spread across one or two years, this has little impact. However, for major projects with capital costs greater than $10 million per annum and spread across a number of years — as will occur in Melbourne over the next period — the impact is more significant.

The Commission considers it reasonable for businesses to receive regulatory depreciation on assets when they are completed. Businesses should only receive a sufficient return on the asset while under construction to ensure that working capital is available to finance the asset. The Commission advised the businesses that they should prepare their Water Plans on the basis that depreciation is not claimed on major assets until the asset enters service.

In their Water Plans, City West Water and Yarra Valley Water deferred the receipt of depreciation on major capital expenditure projects until the year they are expected to come into operation. They also deferred some depreciation on existing assets to assist in meeting the Government's pricing objectives. Melbourne Water deferred depreciation on all new capital expenditure undertaken during the regulatory period. South East Water also proposed a shift of regulatory

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50 Australian Energy Regulator 2008, *op. cit*.

depreciation from existing assets although it did not defer depreciation received on major projects constructed during the period. In their Water Plans, all businesses requested that any cost savings identified during the review process result in a shift back of deferred depreciation.

Due to the significant reduction in the WACC, the Commission does not consider it is necessary to defer regulatory depreciation on existing assets to achieve the Government's pricing objectives. However the Commission agrees that regulatory depreciation on new assets valued at greater than $10 million and taking more than one year to construct should be deferred until the year the project is planned to come into operation.

All businesses, apart from South East Water, proposed a straight line approach to forecasting regulatory depreciation, whereby an equal amount of the asset is depreciated each year based on the expected useful life of the asset. South East Water alternatively proposed a depreciation schedule using a declining balance approach. The Commission is concerned that this approach is not consistent with the VCEC recommendation that the depreciation profile should better reflect the utilisation profile of an asset. The Commission has previously stated its view that the straight-line depreciation approach on an inflation indexed asset base is the most appropriate approach for the businesses. An advantage of using a common approach to depreciation across all businesses and projects is that it will ensure the price impacts of the businesses' proposed expenditure on capital projects are calculated consistently, and hence improves transparency. South East Water agreed with the Commission that it should adopt a straight line approach to depreciation.[51]

[51] Email from South East Water to the ESC, 20 February 2009.

7 DEMAND

Demand forecasts play an important role in determining the prices needed to raise the revenue required by businesses to deliver services over the regulatory period. The demand forecasts have a direct bearing on the prices that customers will pay during the period. Cautious forecasts that result in low demand levels would imply that water prices would have to be higher in order to recover the costs associated with operating Melbourne's water system, and vice versa.[52]

Changes in customer numbers and consumption levels are determinants of the capacity of the water and sewerage infrastructure to provide services and of the need for expenditure on renewal and augmentation. The water businesses' demand forecasts represent a critical element of their service and expenditure proposals for the regulatory period.

In this chapter, the Commission sets out what it considers are reasonable demand forecasts for the purpose of setting prices. It acknowledges that there may be uncertainty over future demand levels and will deal with this uncertainty under an uncertain and unforseen events mechanism similar to that introduced for the regional and rural businesses in the 2008 price review (see chapter 14).

7.1 Commission's approach to assessing demand forecasts

In reviewing the businesses' proposed demand forecasts, the Commission considers whether they:

- have been developed using appropriate forecasting methodologies or approaches
- reflect reasonable assumptions about the key drivers of demand, including the impact of supply restrictions
- use the best available information, including historical data that can support trends in demand, and
- take account of current demand, climatic and economic conditions.

The Commission engaged PricewaterhouseCoopers (PwC) to assist in the review and assessment of the demand forecasts put forward by the water businesses. The detailed review has encompassed water, sewerage, recycled water and trade waste. Key issues in this assessment include the businesses' assumptions relating to future connections growth, the impact on demand of water conservation

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52 Much of the businesses' costs are fixed and do not vary with the volume of water or sewerage services provided to customers. The businesses incur these fixed costs regardless of the level of demand.

measures that are not price-based, and the impact of restriction levels applying to water consumption.

7.2 Overview of businesses' proposed forecasts

The key demand parameters influencing prices and revenue are the total volume of water sold and the number of water and sewerage connections (which are primarily influenced by the new connection growth rate). The volume of wastewater is also a key charging parameter, although it is directly related to the volume of water sold. Figure 7.1 shows actual and forecast residential and non-residential water consumption from 2002-03 to 2012-13 as proposed in the businesses' Water Plans. It indicates that the businesses are not forecasting volumes to return to levels consumed in 2002-03, despite ongoing population and connections growth and the easing of restrictions in the latter years.

Figure 7.1 **Historical and forecast sales volumes supplied by the water businesses (ML)**

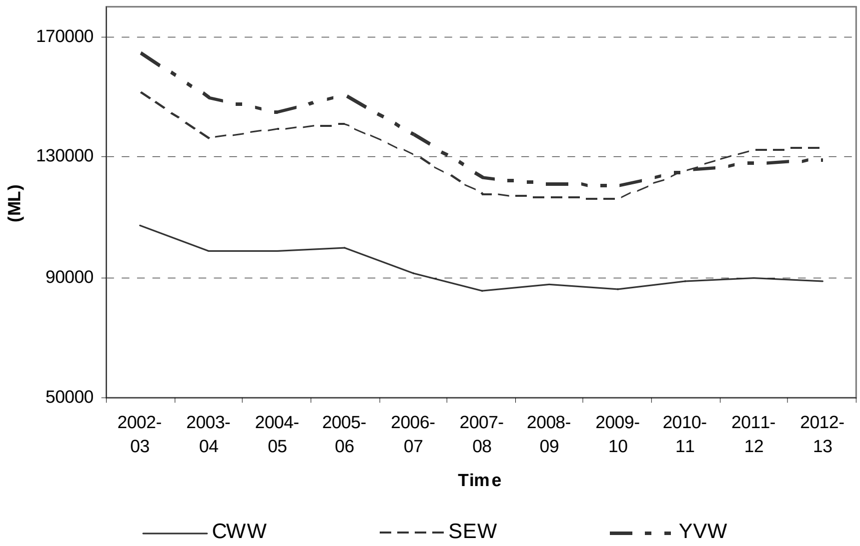


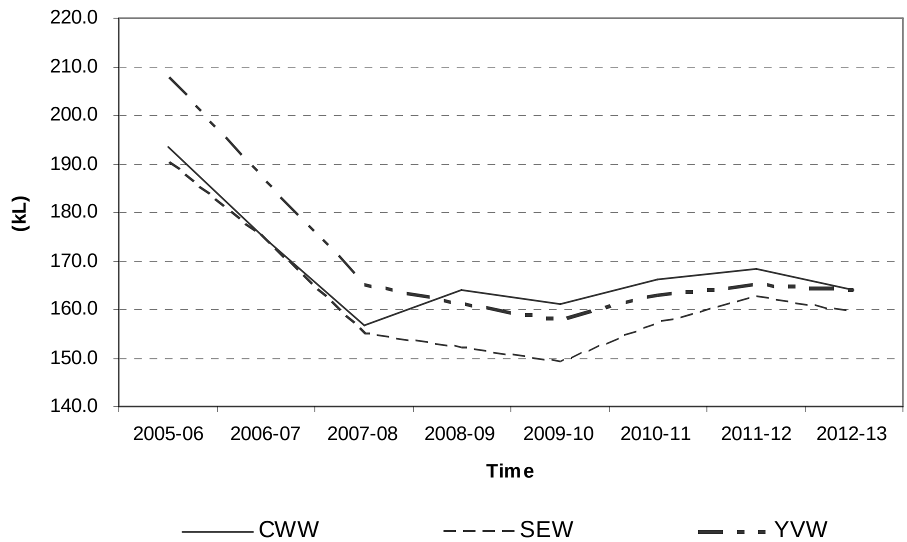
Table 7.1 outlines the water sales forecast for the regulatory period. South East Water and Yarra Valley Water have forecast an increase in sales as restrictions are eased during the regulatory period. City West Water has forecast volumes to remain consistent over the period, largely due to planned substitution to recycled water later in the period.

Table 7.1 **Forecast water sales volumes as proposed by the businesses (ML)**
(excluding recycled water)

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	86 311	88 942	89 639	88 683
South East Water	115 613	125 213	132 194	132 699
Yarra Valley Water	120 406	125 239	128 132	129 250
Total	**322 331**	**339 393**	**349 965**	**350 632**

Figure 7.2 sets out the businesses' proposed average residential consumption per customer for each business.

Figure 7.2 **Proposed average household consumption as provided by the water businesses (kL) [a]**



[a] Average household consumption is based on volumes divided by the number of customers paying fixed service charges. This differs from the average household consumption figures reported in the ESC's performance report, which is volumes divided by total customers receiving a volumetric charge.

As indicated in figure 7.2, businesses have generally forecast an increase in average household consumption as restrictions are eased from 2010-11 onwards. City West Water has forecast average annual household consumption from 2007-08 to 2012-13 to increase from 157 kL to 164 kL, South East Water to increase from 155 kL to 159 kL, and Yarra Valley Water to decrease from 165 kL to 164 kL. The decline in average household usage in the final year is largely due to the impact of conservation measures assumed by the businesses.

The majority of residential consumption for each business is forecast to occur within tier 1 of the block tariff. As restrictions are eased, growth in usage over the period is forecast to occur largely in tiers 2 and 3, though consumption in tier 3 remains a small proportion of total consumption.

Overall, the businesses' demand forecasts appear to be quite conservative, reflecting drought conditions, uncertainty about future climate conditions and demand reduction targets. A key issue for the Commission is whether the level of caution applied by the businesses in developing their forecasts, which lead to a lower level of demand, provides for a reasonable sharing of risk between businesses and customers.

7.3 Consultant analysis of businesses' proposals

In reviewing the businesses' demand forecasts, PwC has focussed on:

- the assumptions underpinning customer growth rates
- assumptions about future levels of restrictions and price elasticity of demand
- the demand reduction targets that form the basis of businesses' forecasts and the impact on these targets of the substantial supply augmentations planned for metropolitan Melbourne over the regulatory period.

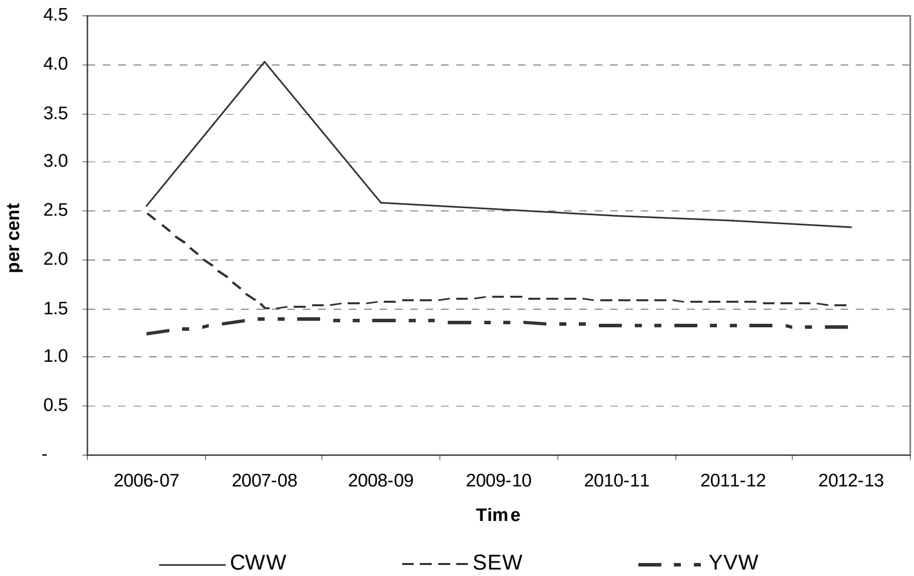
PwC provided a draft report to businesses in January 2009. The businesses responded to some of the issues raised by PwC and amended volumes based on a revised restriction schedule and the impact of the Target 155 campaign. PwC's final report to the Commission has taken into account the responses of the businesses to its draft report. The report is available on the Commission's website. The following sections outline the key issues from PwC's analysis and its recommendations on the businesses' demand forecasts for the next regulatory period.

7.3.1 Customer growth

Figure 7.3 summarises the businesses' forecast customer growth over the next regulatory period. All three retail businesses have forecast an average annual growth rate of between 1.2 and 2.6 per cent. City West Water and South East Water based their forecasts on the Department of Sustainability and Environment's (DSE) 2004 *Victoria in the Future* (ViF) population and dwelling projections, while Yarra Valley Water based its assumed connections growth on historical growth rates in actual connections over the preceding six year period.

The proposed annual increase in customer numbers is similar across businesses, though figure 2.4 indicates a higher growth rate for City West Water 2.3 to 2.6 per cent, due to its smaller customer base. This compares with South East Water (1.5 to 1.6 per cent) and Yarra Valley Water (1.2 to 1.3 per cent). Although City West Water experienced higher than normal growth in 2007-08 of 4 per cent due to a large increase in household numbers, its forecast is consistent with historical levels.

Figure 7.3 **Average growth in water customer numbers (2006-07 to 2012-13) as provided by the water businesses**



In its assessment of the businesses' proposed customer numbers, PwC has taken into account the revised 2008 ViF household and population projections. According to the 2008 ViF forecasts, population will continue to increase in the future and household size will decline over the same period (mainly due to the ageing population). This combination means that the rate of growth for households is higher than the rate of population growth. As City West Water and South East Water have primarily adopted 2004 ViF numbers, PwC has recommended the proposed growth in customer numbers should reflect the new 2008 ViF forecasts for these businesses. PwC recommended no amendment to Yarra Valley Water's forecast as it was based on historical rates in actual connections over the preceding six year period and was consistent with the 2008 ViF forecasts.

The growth rates for sewerage connections are broadly similar to the proposed growth rates in water connections. PwC advised that the growth rate for residential sewerage connections for City West Water and South East Water be amended upwards consistent with the 2008 ViF (as it also advised in relation to water connections).

The businesses have forecast non-residential customer growth generally consistent with residential customer growth. However, the businesses used a variety of methods to derive non-residential connections from residential connections. City West Water and South East Water based their forecasts on a historic mean of the non-residential to residential growth ratio. Yarra Valley Water used regression analysis which forecast an additional 6.7 non-residential customers for every 100 residential customers, which is lower than the other two businesses. Given that non-residential connections are derived from residential connections, PwC recommended that City West Water and South East Water's non-residential connections be updated consistent with the 2008 ViF.

7.3.2 Restriction schedules and usage

The demand forecasts proposed by the retailers in their Water Plans were prepared in June 2008 based on an 11 year average inflow (1997 to 2007). The demand forecasts assumed the same restriction schedule of Stage 3a in 2008-09 and 2009-10, stage 2 in 2010-11, stage 1 in 2011-12, and permanent water saving rules (PWSR) in 2012-13. In its draft report, PwC did not consider the underlying assumptions regarding restriction levels to be overly conservative (that is, too low).

In response to PwC's draft report, the businesses reassessed their water restriction assumptions for the regulatory period. They noted that the original projections had not accounted for:

- revised inflow assumptions from an 11 year to a 5 year average
- recent inflows and climatic conditions (such as low winter inflows in 2008)
- the introduction of Target 155 voluntary restrictions
- refined modelling of environmental flows
- updated population forecasts.

In relation to easing restrictions, the businesses stated that the introduction of the 150 GL desalinisation plant will mean that around 35 per cent of the demand from the Melbourne system in 2012-13 will come from climate independent sources. However modelling undertaken by Melbourne Water shows that Melbourne's storages need to recover to a 65 per cent level to provide a safe buffer to avoid Melbourne re-entering water restrictions. The businesses have adopted this storage level as the target for refilling Melbourne's storages and used it in revising their restriction assumption for 2012-13.[53]

Table 7.2 outlines the revised restriction schedule proposed by the businesses compared with their original schedule. PwC noted that the revised restriction levels primarily result from the unanticipated low rainfalls currently being experienced and the resulting low system storage. PwC considers that, given the uncertainty surrounding future inflows, the year to date performance of inflows and the implementation of Target 155, the amended restriction level assumptions can be taken into account for the purposes of this pricing decision.

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[53] Yarra Valley Water, South East Water, *Response to PwC's draft report on demand forecasts*, February 2009.

Table 7.2 **Revised restriction schedule**

	2008-09	2009-10	2010-11	2011-12	2012-13
Water Plans	3A	3A	2	1	PWSR
Response to PwC draft report	3A (T155)	3A (T155)	2	2	1

Note T155 is Target 155 voluntary restrictions.

While the businesses adopted a common set of assumptions regarding the level of restrictions, PwC noted that they differed in their approach to determining the impact of restriction levels on consumption. Businesses' restriction levels are expressed in a Drought Response Plan (DRP) developed for each business. These plans outline the restrictions, as well as forecast reduction in consumption that is expected to result for each stage of restrictions. Table 7.3 outlines the businesses' forecast demand reductions based on each level of restriction.

Table 7.3 **Demand reductions based on level of restrictions** (percent)

Stage	*1*	*2*	*3*	*3a*	*4*
City West Water (residential)	0.0	3.5	8.7	NR	15.2
City West Water (non-residential)	0	2.9	7.3	NR	12.8
South East Water	2.5	2.5	NR	15	17.5
Yarra Valley Water	2.5	8	12	NR	17.5

Note: NR - not reported

Source: PwC report, p. 14.

In terms of allocating these demand reductions under restrictions across the tiers of the block tariff, City West Water regressed demand on seasonal base demand, gross state product, conservation savings and temperature. This resulted in demand reductions across all three blocks with the bulk of reductions occurring in block 2. South East Water attributed 5 per cent of its demand reductions to block 1, 52 per cent to block 2 and 43 per cent to block 3, while Yarra Valley Water attributed the bulk of the reductions to block 3.

PwC also noted that City West Water sought to avoid double counting by adjusting the DRP forecasts for behavioural change. South East Water did not make this adjustment, while Yarra Valley Water assumed all reductions were related to outdoor use and then applied the reductions to the garden and lawn category of its end use model.

In relation to demand reductions allocated to non-residential customers, table 7.3 outlines City West Water's demand reductions from restrictions applied to non-residential customer forecasts. South East Water applied 37 per cent of the volume reductions to non-residential customers. Yarra Valley Water did not apply any restriction assumptions to non-residential customers as it claimed the bulk of water savings result from the waterMAP program.[54]

PwC considered that the forecast restriction levels are not overly conservative and the manner in which restrictions have been translated into actual water savings is acceptable. In its draft report, PwC considered that it is reasonable to assume some further bounceback in demand levels in the final year when moving from stage 1 to PWSRs. Therefore PwC recommended a bounceback of 2 per cent in the final year, based on the corresponding assumed savings outlined in the Drought Response Plans and an assumption that consumption should increase to around 80 per cent of pre-restriction levels. However, since the restriction schedule assumptions have been changed, this has not been included in 2012-13. The issue of a bounceback in consumption as restrictions are replaced with PWSRs will need to be considered at the beginning of the next regulatory period.

In allocating the demand reductions, PwC noted that it is reasonable to expect the majority of savings from restrictions to fall in either the second or third block, as restrictions are aimed at discretionary use. However, this is not the case for Target 155, which is aimed at both indoor and outdoor usage (see section 7.3.3).

7.3.3 Target 155 and usage

In December 2008, the Victorian Government launched the Target 155 campaign as a program to encourage residential customers to use no more than 155 litres of water per person per day. The campaign has been targeted at both indoor and outdoor usage. In revising its forecasts, each business varied in how it accounted for the impact of the Target 155 campaign. Figure 7.4 compares revised daily usage per person, which includes businesses' assumptions regarding Target 155 and revised restrictions assumptions, with the average daily consumption per person proposed in the businesses' Water Plans.

In its response to PwC's draft report, City West Water amended its forecast for 2011-12 as restriction assumptions had changed from stage 1 to stage 2 in that year, though did not make material changes based on the impact of Target 155.

In its response to the draft report, South East Water proposed that the impact of Target 155, combined with stage 3A restrictions, was to have the combined effect of stage 4 restrictions. It therefore used the drought response plan savings for stage 4 as the basis for estimating the impact of Target 155. This resulted in South East Water forecasting a significant reduction in residential consumption in 2008-09 and, as indicated in figure 7.4, daily consumption falling to 148 litres per person in 2010. It also allowed for residual water savings from Target 155 in the subsequent years of the regulatory period. South East Water also made significant reductions to non-residential volumes but this was not explained in its response to PwC's draft report.

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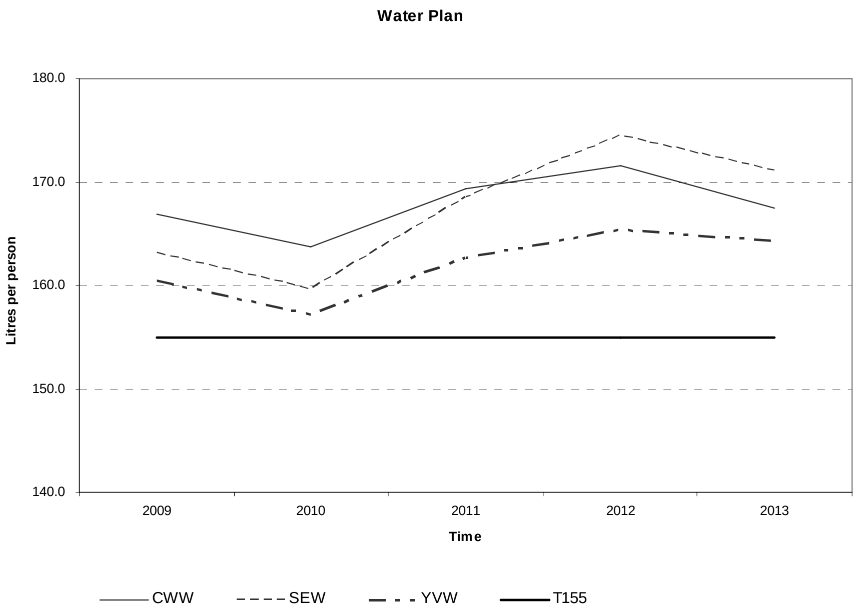
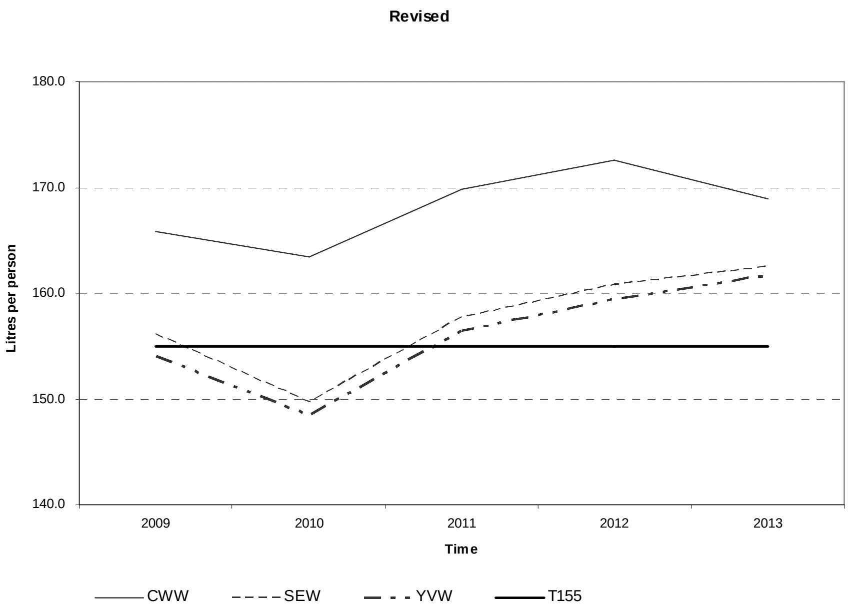
[54] The waterMAP program was designed to develop water management plans with significant water-using customers. The program will now cover all Victorian non-residential customer sites that consume 10 million litres of potable (drinking quality) water or more at any one site from an urban supply. This is a mandatory requirement as part of each water business' Permanent Water Savings Rules detailed in its Permanent Water Saving Plan (PWSP).

Figure 7.4 **Average daily consumption, litres per person, as forecast by the water businesses**





Yarra Valley Water proposed significant reductions to residential consumption due to Target 155, with daily consumption forecast to fall to 149 litres per person in 2010. This reduction is largely due to its revised assumptions regarding average shower times under Target 155 shifting from 6 minutes to 5.2 minutes in 2008-09 and 4.9 minutes in 2009-10. Yarra Valley Water claimed this is based on a survey conducted in December 2008, in which 56 per cent of respondents limited showers to 4 minutes or less. However Yarra Valley Water expects that the lifting of restrictions from stage 3A plus Target 155 to stage 2 will lead to shower times increasing to 6 minutes by 2011-12.

Yarra Valley Water allocated 43 per cent of its forecast residential water savings from Target 155 to tier 2 and 57 per cent to tier 3 of the block tariff. This reduced its forecast consumption in block 3 to 0.9 per cent of total residential consumption in 2009-10. Yarra Valley Water derived this on the premise that block 1 usage represents water consumption to support essential uses that are not responsive to restrictions, price or conservation measures. In contrast, it argued that consumption in blocks 2 and 3 have elements of non-essential use that are responsive to these factors.

Yarra Valley Water also revised its proposed forecasts of non-residential customers where the changes generally reflect:

- Support 155 initiatives[55] in the lower end of the 'Greater than 10ML' segment (10-24 ML) through waterMAP and the 'other' segment through low cost plumbing retrofits. Yarra Valley Water also expects savings derived under Support 155 to be permanent in nature and, as a result, a recovery in demand levels is not expected as restrictions are lifted.
- Council use at the end of 2007-08 that was lower than originally forecast, indicating that Council savings under stage 3A water restrictions were higher than anticipated. Forecasts in the Council segment have been adjusted to reflect this and to allow for lower usage in the latter years of the regulatory period consistent with the revised restriction levels.

In its final report, PwC noted that, since its inception, the Target 155 program has had mixed results when viewed on a weekly or monthly basis. It resulted in an initial positive response from consumers, followed by a period when consumption clearly exceeded the target during summer months. PwC also noted that given the relationship between levels of rainfall, temperature and daily consumption, businesses should not be excessively ambitious in anticipating the impact of Target 155 in a period of low rainfall levels.

In assessing the impact of Target 155 on demand volumes, PwC compared it with other similar programs, including the Target 140 program introduced in south east Queensland in March 2007. This program was considered a success as consumption in the region dropped from 180 litres per person per day to the targeted 140 litres within four months of the program's inception. However PwC argued that a major difference between the Target 155 and Target 140 campaigns was that the Target 140 program was mandatory rather than voluntary and was accompanied by both positive incentives for achieving targets and penalties for excessive use. PwC also noted that much of Target 140's success in decreasing water use can be attributed to the fact that there was genuine fear at an individual, business and broader community level that south east Queensland was going to run out of water.

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[55] Support 155 is a Government program which aims to help businesses, including small businesses, achieve water savings.

PwC considered therefore that the Commission should take a cautious approach to accounting for the impact of Target 155. It recommended that assumed residential volumes should not fall below an annual average usage of 155 litres per person per day. PwC also recommended that there should not be any residual impacts on consumer behaviour from Target 155 in the years 2010-11 to 2012-13 as augmentation projects commence operation. It also considered that volumes in 2010-11 should return to levels consistent with its draft report. This is supported by comments made by Yarra Valley Water, where it stated in response to PwC's draft report that with the lifting of restrictions during 2010-11, behaviours will revert to pre campaign behaviours.[56]

PwC considered that Yarra Valley Water's proposal to allocate the anticipated demand reductions from Target 155 to the third tier is not consistent with the aims and objectives of Target 155 which focuses on both indoor and outdoor use. PwC recommended that assumed savings for both Yarra Valley Water and South East Water be allocated equally across both the first and second tier of the block tariff. PwC stated that the reason for this recommendation is that the program itself is focused on both indoor and outdoor use and, given the pre-existing high levels of restrictions, it is more appropriate to assume these savings would occur in blocks 1 and 2 as opposed to blocks 2 and 3.

PwC has accepted Yarra Valley Water's revised forecasts in relation to non-residential consumption. It noted that South East Water had not justified its revised forecasts which assumed a significant reduction in volumes from its Water Plan in the final three years of the regulatory period. PwC recommended removing the residual impact of the voluntary restrictions in the latter years of the regulatory period in a manner consistent with the treatment of residential consumption.

7.3.4 Conservation measures

The businesses have assumed that demand will not return to pre-restriction levels due to the impact of restrictions and water conservation measures such as water efficient showerheads and rain water tanks.

Underlying the businesses' proposals for residential volumes is an assumption that many of the water conservation measures introduced in recent years, such as water efficient appliances, as well as greater public appreciation of water and the impact of restrictions on their consumption will lead to permanent declines in water consumption.

The assumptions about conservation have been structured to take account of usage along six specific use categories. Efficiency gains are expected as a result of mandatory minimum standards being applied to toilets, an observable increase in the market share of front loading washing machines, AAA showerhead programs, rain water tanks and less garden watering.

The water businesses have also made a number of assumptions regarding conservation measures undertaken by non-residential customers. PwC noted that City West Water has forecast non-residential consumption to decline by 2.5 per

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[56] Yarra Valley Water 2009, *Response to PwC draft report on demand forecasts*, February.

cent a year, which is consistent with historical savings from the waterMAP program. South East Water has generated volume estimates for its non-residential customers based on a five year average, as well as savings due to the introduction of waterMAP and investment in more efficient processes. Yarra Valley Water has also forecast large savings from the waterMAP program; its top 42 commercial users are forecast to reduce consumption by 21 per cent from 2006-07 to 2012-13, and customers who use over 10 ML are forecast to reduce consumption by 16 per cent over the same period.

In its final report, PwC accepted the majority of these assumed efficiency gains for both residential and non-residential customers. It stated that savings associated with both water-efficient showers and toilets may be overly optimistic but did not recommend amending the forecasts, due to a lack of information on which to base alternative estimates. In the absence of conducting its own surveys across greater Melbourne, PwC recommended that the Commission pursue this matter further after its draft decision or before the next price review.

7.3.5 Price elasticity

In their Water Plans, City West Water and South East Water made assumptions regarding residential price elasticity based on work commissioned by the Water Services Association of Australia and undertaken by KPMG. The non-residential elasticity assumptions were drawn from a report commissioned by the Smart Water Fund and undertaken by ACIL Tasman. These were the same studies used by the regional and rural businesses in the 2008 price review and are based on a normal year of consumption with no restrictions.

Table 7.4 **Price elasticity of demand assumed by the metropolitan businesses**

	City West Water	*South East Water*
Tier 1	0.0	0.0
Tier 2	-0.1	-0.1
Tier 3	-0.14	-0.15
Non-residential	-0.185	-0.185

Unlike City West Water and South East Water, Yarra Valley Water has not amended its baseline demand to account for price elasticity of demand for either residential or non-residential customers.

While PwC agreed that the elasticity estimates adopted by the businesses may be appropriate, it noted that when prices increase consumers would limit their demand by adopting more efficient water use practices. Since the end use model includes assumptions about the uptake of water efficient appliances and changes in water use behaviour, PwC considered that consumers' response to price increases are already factored into the baseline consumption. This view was supported by Yarra Valley Water in its Water Plan where it argued that there is a potential for double counting, such as where a customer who needs a new washing machine may decide to buy a replacement that is more water efficient because of the potential savings on their water bill.[57]

PwC considered that in order to avoid the potential for double counting, the forecast should be amended such that the price elasticity of demand is not imposed on the baseline forecasts for residential water customers.

In relation to non-residential customers, PwC identified a methodological issue with discounting consumption for both anticipated waterMap savings and price elasticity of demand. PwC considered that decisions by non-residential customers to improve their water use efficiency by adopting waterMap measures during the regulatory period may represent an elasticity response to price increases.

PwC concluded that, as with residential customers, there is a danger of double counting elasticity responses by applying an elasticity effect to those customers included in the waterMAP program. Accordingly, it recommended that the proposed demand forecasts for non-residential customers be amended to exclude elasticity effects from those non-residential customers participating in the waterMAP program.

7.3.6 Sewerage volumes

The businesses forecast sewerage volumes based on a percentage of forecast water volumes that they consider will return to the sewer, referred to as the sewage discharge factor. City West Water forecast a sewage discharge factor for residential customers of 63.5 per cent over the next regulatory period. It used the end use model for estimating the growth rate for sewage flows. City West Water also assumed that restrictions are exclusively focused on external use and therefore have no material impact on sewage volumes.

South East Water forecast a sewage discharge factor of 67 per cent, based on its forecast of published seasonal factors and the known sewage disposal charge factors assigned to customers.

Yarra Valley Water forecast an increase in its sewage discharge factor for the next regulatory period. It stated that, since restrictions have resulted in much less water being used on gardens, a higher proportion of water entering a typical household is returned to the sewer. Yarra Valley Water proposed that the sewage discharge factor would reduce over the period as restrictions are eased. In its draft report, PwC sought further information on how City West Water and South East Water had factored restrictions into residential sewage volumes.

In its final report, PwC noted that it agreed with Yarra Valley Water that it is likely that there has been a step increase in the proportion of water consumption collected as sewage. This position is logical given the degree to which the water businesses have stated there have been permanent water savings achieved in external water use. Widespread adoption of native gardens and drought resistant turf and implementation of third pipe recycled water schemes imply that the proportion of water consumed that is returned to the system for treatment as sewage must increase. To the extent that the volumes billed for the sewage

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57 Yarra Valley Water 2008, *Water Plan – Annexure Part 3: Demand*, p. 40.

disposal charge are intended to reflect actual volumes of sewage, PwC consider that the discharge factors should be increased.

PwC acknowledged that determining what constitutes an appropriate volume is problematic, and would require extensive survey and statistical analysis.

PwC therefore did not amend City West Water or South East Water's sewage discharge factors for residential customers on the basis that it was not in a position to recommend alternative forecasts. However it believes these factors may be biased downwards and recommended that the Commission review the calculation of their sewage discharge factors either prior to its final decision or before the next price review.

For non-residential customers, City West Water forecast a decline in volumes consistent with its water volume forecasts for non-residential customers and adjusted the sewage discharge factor from 38 to 34 per cent (of water used). South East Water and Yarra Valley Water have forecast sewage levels consistent with historical levels.

In relation to non-residential sewerage, City West Water proposed a sharp decline in volumes from 2008-09 onwards. This was due to City West Water reducing its sewage discharge factor to 34 per cent, based on a seven year historical average. PwC noted that there was a strong growth trend in these years and that it would be inappropriate to base its forecast on this long term average. PwC recommended therefore that a short term average is more appropriate and that City West Water's non-residential sewerage volumes should be based on a sewage discharge factor of 37 per cent, reflecting the average of the last three years.

7.3.7 Recycled water

City West Water proposed a significant substitution of around 3.2 GL from non-residential water to recycled water in the final two years of the period, while residential recycled water volumes are forecast to increase to 277 ML. The growth in recycled water volumes are largely based on the Altona Recycling Plant beginning operations in 2010-11.

South East Water has forecast residential recycled water volumes to increase from 120 ML in 2008-09 to 566 ML by the end of the regulatory period. Yarra Valley Water has forecast usage for non-residential customers to increase from zero to 300 ML and for residential customers to increase from 50 ML to 220 ML by the end of the period. Yarra Valley Water's recycled water demand is driven largely by the commencement of third pipe schemes and demand from golf courses and other commercial customers.

PwC did not recommend any amendment to the proposed recycled water forecasts made by the businesses.

7.3.8 Trade waste

City West Water stated in its Water Plan that the 'less than 10 ML' group's forecasts have increased in proportion to the growth in total water usage, reflecting new businesses being formed to service the growing population. It has however forecast average annual reductions in trade waste volumes across the five volume categories of between 4 and 5.5 per cent. PwC considers these forecasts to be consistent with historical trends.

South East Water has forecast a slow decline across all trade waste parameters of 0.3 per cent per annum, while customer numbers are projected to grow over the period at an annual rate of 3 per cent. It stated that these forecasts reflect the success of targeted environmental improvement and cleaner production programs.

Yarra Valley Water has forecast low or no growth in trade waste customers, which is consistent with historical trends.

PwC has accepted each business' trade waste forecasts as proposed in its Water Plan.

7.3.9 Melbourne Water's forecasts

PwC has amended Melbourne Water's forecasts to reflect the amendments made in the retail water businesses' forecasts. To calculate volumes of unaccounted for water (that is, losses or so-called non-revenue water), PwC has based the revised numbers on the ratio of the difference between retail businesses' forecast consumption and total water supplied by Melbourne Water to total water supplied.

As with water volumes, PwC has recommended adjustments to sewage flows based on the ratio of the difference between the businesses' forecast discharges and Melbourne Water's total discharge for each business to the total discharge for each business.

Where businesses discharge sewage to both the Eastern and Western Treatment plants, PwC made amendments based on the proportional allocation of flows proposed by the businesses in their Water Plans.

7.4 Draft decision on demand forecasts

The Commission has generally accepted the recommendations made by PwC in relation to the demand forecasts for water and sewerage customer connections, water and sewerage volumes, recycled water and trade waste customers and volumes. The Commission considers that PwC's recommended demand forecasts reasonably take into account customer growth, water restriction assumptions, Target 155, and savings made from conservation measures.

The Commission considers that these demand forecasts provide a reasonable sharing of risk between businesses and customers. However, the Commission also notes that the volumes and restriction assumptions are based on conservative forecasts in relation to behavioural responses to restrictions, Target 155 and total inflows, given the augmentation projects that will begin operation during the regulatory period.

The Commission will monitor these behavioural responses and provide public updates as part of its annual water performance reporting framework. Additionally, if inflows are greater than forecast the Commission would expect stage 1 restrictions to be replaced with PWSR in 2012-13. Otherwise the Commission expects that stage 1 restrictions will shift to PWSR in 2013-14. The Commission notes that volumes would only be approximately 1-2 per cent greater under PWSR than under stage 1.

The following tables outline the Commission's draft decision for the demand forecasts for the three retail businesses.

Table 7.6 **Draft decision – residential connections**

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	306 449	314 723	323 220	331 947
South East Water	576 630	587 009	597 575	608 331
Yarra Valley Water	597 300	605 400	613 400	621 500

Table 7.7 **Draft decision – non-residential connections**

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	31 876	32 786	33 721	34683
South East Water	49 594	50 725	51 873	53 038
Yarra Valley Water	40 700	41 200	41 600	42 100

Table 7.8 **Draft decision – residential water volumes (ML)**

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	49 139	52 251	54 307	54 324
South East Water	83 355	92 220	91 880	96 742
Yarra Valley Water	92 860	98 645	97 715	100 268

Table 7.9 **Draft decision – non-residential water volumes (ML)**

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	37 765	37 624	36 580	35 882
South East Water	29 375	34 009	34 348	36 873
Yarra Valley Water	25 464	26 339	26 264	26 833

Table 7.10 **Draft decision – residential sewage volumes (ML)**

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	31 215	33 192	34 498	34 509
South East Water	58 024	62 152	61 923	64 526
Yarra Valley Water	71 873	73 293	72 602	71 692

Table 7.11 **Draft decision – non-residential sewage volumes (ML)**

	2009-10	*2010-11*	*2011-12*	*2012-13*
City West Water	13 917	13 865	13 481	13 223
South East Water	14 151	16 174	16 335	17 329
Yarra Valley Water	11 459	11 853	11 819	12 075

8 PRICES AND CUSTOMER BILLS

The Water Industry Regulatory Order (WIRO) specifies the principles against which the Commission is required to assess prices. These principles require that prices must:

- provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to water users about:
  - the costs of providing services, including costs associated with future supplies and periods of peak demands and/or restricted supply and
  - choices regarding alternative supplies for different purposes
- take into account the interests of customers, including low income and vulnerable customers and
- enable customers to readily understand the prices charged, or the manner in which such prices are to be calculated or otherwise determined.

The metropolitan water businesses' demand forecasts and revenue proposals over the 2009-13 regulatory period were discussed in the previous chapter. Prices are set to recover the revenue required to deliver services, taking into account expected demand for water and sewerage services.

This chapter provides an overview of average water and sewerage prices over the period. It discusses the implications of proposed prices for an average customer's bills, the impact of proposed prices on customers, and the pattern of price increases over the period. Prices for specific water and sewerage services, and tariff structures, are discussed in chapters 9-13.

It is important to note that as part of this price review, the Commission has only assessed prices for the metropolitan businesses' water and sewerage services (including trade waste, recycled water and Melbourne Water's bulk services). Melbourne Water drainage and waterways charges and the Parks Victoria charge are not subject to the current price review.[58] All figures presented in this chapter exclude Melbourne Water drainage and waterways charges and Parks Victoria charges.

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[58] The Commission approved prices for Melbourne Water's drainage and waterways services in the 2008 water price review final decision. Parks charges are collected on behalf of Parks Victoria and are set annually by Governor-in-Council on recommendation by the Minister for the Environment and the Treasurer.

8.1 Main factors driving price increases

In guidance provided to the businesses in September 2008, the Commission asked the metropolitan water businesses to demonstrate the link between their proposed prices and the outcomes that will be achieved over the regulatory period. This assists customers to understand the drivers of the proposed price increases.

The more revenue that a business requires to meet operating and maintenance costs and to finance capital investments, the higher prices need to be to recover that revenue. As noted in chapters 4 and 5, the main factors driving higher operating and capital expenditures are supply augmentation (including the desalination plant and Sugarloaf pipeline), water conservation and recycling initiatives, and sewer upgrades.

Prices are also affected by forecasts of customer numbers and consumption, with the latter influenced by the level of water restrictions. If demand is lower, due to reduced consumption levels or lower growth in customer numbers, prices will have to be higher to recover a fixed amount of revenue. The demand forecasts were discussed in chapter 7.

Each of the metropolitan water businesses provided information in its Water Plan on the individual components contributing to the proposed price increases. Melbourne Water identified the top five contributors to its price increases as (in order) the desalination plant, reduced demand, other capital investments, the Sugarloaf Pipeline and the higher average cost of capital. South East Water indicated that increased bulk charges from Melbourne Water and reduced demand were the key contributors to its proposed price increases. City West Water and Yarra Valley Water stated that higher bulk charges from Melbourne Water contributed significantly to their proposed price increases.

8.2 Average customer bills

To show the overall impact of the businesses' proposals and the prices proposed in this draft decision, the Commission has estimated illustrative annual household bills over the regulatory period. Average household bills are calculated using proposed water and sewerage prices for the three retailers and an assumed consumption level representing an average household. This measure illustrates the total impact of the businesses' pricing proposals on an average residential customer.

It is important to note that the actual impact of the businesses' proposals and the prices proposed in this draft decision will vary between customers, depending on individual consumption patterns and how customers respond to price changes.

8.2.1 Average bills under the businesses' proposals

Table 8.1 compares the illustrative annual household bills for each of the three retailers. Under the businesses' proposals, average annual household bills (calculated using a constant usage level) would increase over the four year regulatory period by 62.8 per cent for City West Water, 70.2 per cent for South East Water and 71.4 per cent for Yarra Valley Water. In real terms (excluding the impact of inflation), customers could generally expect their water and sewerage bills to increase by $80 to $120 a year.[59]

Table 8.1 **Illustrative annual residential bills based on prices proposed by the water retailers[a]**
Metropolitan retail businesses ($ in January 2009 prices)

	2008-09 [b]	*2009-10*	*2010-11*	*2011-12*	*2012-13*
City West Water	568	671	751	841	925
South East Water	566	667	774	867	963
Yarra Valley Water	585	725	838	921	1 004

Notes: a Estimated average annual household bills are based on average consumption of 165 kL each year and prices proposed by businesses in their Water Plans. Figures do not include Melbourne Water drainage and waterways charges or Parks Victoria charges. **b** The 2008-09 bill is based on price increases determined by the Minister for Water in June 2008.

All the businesses noted in their Water Plans that their pricing proposals were consistent with the Government's pricing expectations. The Government has previously indicated that it expects water bills will no more than double over the five year period from 2008-09.[60]

In the issues paper, the Commission noted that the large proposed price rises raise affordability issues. As noted above, the WIRO requires the Commission to be satisfied that the businesses' proposed prices take into account the interests of customers, including low income and vulnerable customers.

8.2.2 Responses to issues paper

Most submissions from customers and customer groups (Consumer Action Law Centre, Consumer Utilities Advocacy Centre, Ethnic Communities' Council of Victoria, and Victorian Council of Social Services), as well as customer comments at the March public hearing, raised affordability as a major concern due to the large proposed increase in customer bills over the regulatory period.

The Tenants Union raised particular concerns about the impact of higher prices on tenants, many of whom are low income earners and do not have water-efficient appliances. The Australian Industry Group highlighted the impact of higher water prices on businesses, particularly in the current economic conditions.[61]

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59 In 2009-10 the illustrative bill for an average Yarra Valley Water customer would increase by $140.

60 The Government's pricing expectations are a policy matter. As such, it does not fall within the Commission's regulatory framework.

61 Submissions to the issues paper, and the presentations by the water businesses and stakeholder groups to the March public hearing, are available on the Commission's website www.esc.vic.gov.au.

8.2.3 Draft decision

As a result of its draft decisions on operating and capital expenditures, the weighted average cost of capital and the demand forecasts, the Commission estimates that expected average bills will increase by less than those proposed by the businesses in their Water Plans. Table 8.2 shows estimated bills based on the prices resulting from the Commission's draft decisions.

Table 8.2 **Illustrative annual residential bills based on prices in this draft decision**
Metropolitan retail businesses ($ in January 2009 prices)

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
City West Water	568	636	698	766	840
South East Water	566	656	730	797	865
Yarra Valley Water	585	679	756	841	936

Note: Estimated average annual household bills are based on average consumption of 165 kL each year and prices resulting from this draft decision. Figures do not include Melbourne Water drainage and waterways charges or Parks Victoria charges.

Table 8.3 shows the annual average price increase for each retailer for the regulatory period and also the total price increase for the period. The table compares these price increases under the businesses' proposals in their Water Plans and under this draft decision. The table also shows the total average price increase over the five year period from 2007-08 to 2012-13. This allows the businesses' proposals and this draft decision to be compared to the Government's expectation that prices would no more than double over the five year period.

Table 8.3 **Comparison of prices proposed by the water retailers and prices in this draft decision (2008-09 to 2012-13)[a]**
Metropolitan retail businesses (in January 2009 prices)

	Average annual price increase		*Total four year increase 2008-09 to 2012-13*		*Total five year increase 2007-08 to 2012-13[b]*	
	Businesses' proposals (per cent)	*Draft decision (per cent)*	*Businesses' proposals (per cent)*	*Draft decision (per cent)*	*Businesses' proposals (per cent)*	*Draft decision (per cent)*
City West Water	14.0	10.5	63	48	87	70
South East Water	15.3	12.3	70	53	95	76
Yarra Valley Water	15.7	13.1	71	60	97	84

Notes: a Figures do not include Melbourne Water drainage and waterways charges or Parks Victoria charges. **b** Prices for the three retail businesses increased by 14.8 per cent in 2008-09.

The reduction from proposed prices to those presented in this draft decision, and consequent reduction in expected average bills, will assist in addressing overall affordability concerns. However, for particular customer groups such as low income and vulnerable groups, affordability will remain an issue and this is discussed further in section 8.3 below.

8.3 Managing customer impacts

In line with the Commission's concerns about affordability, a key focus of this price review is to understand how proposed prices are likely to affect various customer groups and how the businesses propose to manage customer impacts.

In guidance provided to the businesses in September 2008, the Commission indicated that businesses should outline the customer impacts of proposed prices, in particular how low income and vulnerable customers will be affected, and how these impacts will be addressed. The retailers included little analysis of customer impacts in their Water Plans on the grounds that they had not revised their existing tariff structures.

8.3.1 Responses to issues paper

Submissions from customers and customer groups, as well as comments at the March public hearing, noted that affordability was a particular concern for low income and vulnerable groups, including pensioners, low income tenants and large families.

The Consumer Action Law Centre and Consumer Utilities Advocacy Centre stated that the water businesses had provided insufficient information about the impacts of their proposed prices on customer groups and how they proposed to manage those impacts. They highlighted the need for sufficient funding of the businesses' hardship policies and suggested that the Victorian Government, in setting the level of concessions for water and sewerage services, take into account the level of price increases for those services. Their suggestion for a Guaranteed Service Level (GSL) for hardship policies is discussed in chapter 2.

The Victorian Council of Social Services commented that the water businesses have not adequately addressed customer impacts. It also stated that it 'would welcome a commitment by the Victorian Government to ensure that concessions keep pace with the rising costs of water'.[62]

The Tenants Union advocated, at the public hearing, retrofitting and setting appliance standards for rental properties to assist tenants to conserve water and reduce their water bills. It also stated that hardship policies should be improved.

The Ethnic Communities' Council of Victoria highlighted the importance of providing information about hardship assistance in languages other than English. It stated that many large families were from ethnic or migrant backgrounds and that

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62 Victorian Council of Social Services 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 9 February, p. 3.

the existing inclining block tariff structures disproportionately disadvantage those families. It was also concerned that the benefits of Government water conservation rebates

> *may be skewed towards higher-income people who are more likely to afford the more expensive items such as water tanks and grey water systems, while residents of poorer suburbs are only able to claim the smaller rebates, such as $10 to $20 for shower roses and $50 for dual-flush toilets.*[63]

A financial counsellor from the Berwick area noted at the March public meeting that there had been a significant increase in requests this year from families that are not eligible for concessions.

The three water retailers noted that they expect the number of people eligible for hardship assistance to increase during the regulatory period and that they have made provision for increased expenditures on hardship programs. In regard to the water and sewerage concessions provided by the Victorian Government, South East Water stated that:

> *It is imperative that Government increase these concessions at a rate similar to price increases – as occurred in 2008-09.*[64]

8.3.2 Draft decision

The Commission has specified in the Customer Service Code the minimum requirements on water businesses for addressing hardship issues.[65] The Code requires all businesses to have a hardship policy that provides a range of options for assisting customers experiencing financial hardship, including flexible payment plans, referral to financial counsellors and other relevant agencies and providing information on concessions and other government assistance to which customers may be entitled. At a minimum, hardship policies must:

- exempt customers in hardship from supply restriction, legal action and additional debt recovery costs while payments are made to the water business according to an agreed flexible payment plan or other payment schedule and
- offer information about the water business' dispute resolution policy and the Energy and Water Ombudsman (Victoria) or other relevant dispute resolution forum.

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63 Ethnic Communities' Council of Victoria 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 3 February, p. 3.

64 South East Water 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 9 February, p. 8

65 The Customer Service Code is available on the Commission's website. Clause 5.4 of the Code sets out the hardship policy requirements (see box 2.1 in chapter 2). Water businesses are required to publish their hardship policies on their website and to provide a copy on request.

Attachment 8A outlines the various measures available to assist customers with their water and sewerage bills through federal and Victorian Government programs and the water businesses' hardship policies.

The Commission has noted several issues associated with the current range of water grants, rebates and concessions. First, the large number of programs, and differences in eligibility requirements between programs, can make it difficult for customers to work out their entitlements to the various types of assistance. Eligibility for some concessions is automatically assessed while customers must apply for other types of assistance. Some customers experiencing financial difficulties may not have applied for assistance because they were not aware of their eligibility.

Second, some programs have narrowly defined eligibility criteria, which restrict the number of customers who are eligible. For example, the Utility Relief Grant Scheme (URGS) requires customers to be registered under a water business' hardship program in order to be eligible. In 2007-08, only 0.04 per cent of Melbourne customers had been approved for an URG.[66] In turn, the Water Wise program is only available to customers who have received an URG in the past 12 months.

Third, as indicated in table 8.2, estimated annual residential bills are expected to rise significantly in the next four years. While water and sewerage concessions are increased annually in line with inflation, the Consumer Action Law Centre and Consumer Utilities Advocacy Centre noted that the value of concessions will not keep up with the increases in water bills under existing policies.

The Commission will draw these issues to the attention of the Victorian Government, which is responsible for setting the level of water and sewerage concessions. It will also monitor the businesses' compliance with their obligations under the Customer Service Code, including their provision of hardship assistance. As noted in chapter 2, the Commission has asked the water businesses to formulate a Guaranteed Service Level (GSL) event related to the businesses' compliance with the standards of customer service set out in their hardship policies and the Customer Code.

Regarding the impact of inclining block tariff structures on large families, the Commission has previously raised concerns that large families' non-discretionary water usage can fall into the second and third tiers.[67] It has also raised concerns about the cost reflectivity of the different volumetric charges imposed under inclining block tariffs. The Commission will highlight these issues when considering the businesses' proposals from their reviews of tariff structures during the period ahead.

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66 Essential Services Commission 2009, *Performance of Urban Water and Sewerage Businesses 2007-08*, March.

67 Essential Services Commission 2007, *Water Tariff Structures Review Final Report*, December.

8.4 Price paths

A price path represents how prices change over the duration of the regulatory period. The prices (and the associated price paths) proposed by each business should be set so as to recover the total revenue requirement over the regulatory period. The businesses are not required to set prices in accordance with the revenue requirement in each separate year. The businesses may under-recover in some years and over-recover in others, for example, to smooth out price changes. In doing so, a variety of price paths may be possible.

Regardless of the price path proposed, businesses will still recover the same amount of revenue from customers, the only difference being when the revenue is recovered during the regulatory period.

8.4.1 Businesses' proposed price paths

Each of the metropolitan retailers proposed price paths with higher than average price increases in 2009-10 followed by lower price increases in the later years of the regulatory period. Table 8.4 sets out the annual price increases proposed by the metropolitan retail businesses and the average price increase over the regulatory period.

Table 8.4 **Annual price increases as proposed by the metropolitan retail businesses (2008-9-2012-13)**
Metropolitan retail businesses (per cent)

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Average*
City West Water	18.0	12.0	12.0	10.0	14.0
South East Water	18.0	16.0	12.0	11.0	15.3
Yarra Valley Water	19.0	17.0	11.0	10.0	15.7

Note: Prices for the three retail businesses increased by 14.8 per cent in 2008-09.

City West Water noted that the proposed price path would ensure that the revenue raised each year broadly reflected the revenue requirement for that year. It highlighted that a larger first year price increase, followed by smaller increases, would result in a lower average bill at the end of the period than constant percentage price increases each year. The proposed price path would therefore reduce the need for large price adjustments in the following regulatory period.

South East Water noted that larger initial price increases would provide additional incentives to conserve water before the planned supply augmentation projects are completed and ensure a smooth transition into the following regulatory period.

8.4.2 Responses to issues paper

Several customers and customer groups opposed higher initial price increases for affordability reasons. The Consumer Action Law Centre and Consumer Utilities Advocacy Centre stated that the businesses' proposed price paths would create 'an unnecessary price shock for consumers in the first year, when drought and water restrictions are still in place' and do little to encourage further water conservation.[68] They advocated smoothing the price increases over the period.

The Australian Industry Group also argued, at the public meeting, for a smoother price path to better align price increases with the delivery of benefits to customers, that is, when the augmentation projects start delivering substantial amounts of additional water and restrictions are eased.

8.4.3 Draft decision

When assessing businesses' proposed price paths under the WIRO pricing principles, the Commission balances the different factors affecting the interests of customers. As noted in submissions, customer 'price shocks' can be minimised by spreading price increases more evenly over the regulatory period to avoid a larger first year increase.

However, on current prices, the businesses are raising significantly less revenue than required to recover their costs (see chapters 4 to 6). A larger than average price increase in the first year of the period would assist in bringing prices more into line with the businesses' underlying costs. Without such an increase, the businesses would raise insufficient revenue, with negative implications for their capacity to deliver services to customers and for their financial viability.

The longer prices remain below the businesses' underlying costs, the more the businesses' accumulated revenue shortfall would grow. Eventually prices would have to be increased above costs to allow the businesses to recover the revenue shortfall. Consequently, the Commission considers that suppressing price increases would not be in customers' longer term interests since they would end up paying much higher prices that exceeded costs at some later time.

Consequently, the Commission proposes to approve price paths for the retail businesses that include larger first year price increases followed by lower annual price increases in the subsequent years. To minimise the 'price shock' to customers, the Commission proposes that the first year price increase should not exceed 16 per cent for any of the retailers. In determining price increases for the remaining years of the regulatory period, the retail businesses should aim to set a price path that results in 2012-13 prices being close to, and no more than, their revenue requirements for that year. This is to avoid any large price adjustments in the following regulatory period.

Table 8.5 shows the indicative price path assumed by the Commission in calculating household bills and price increases over the period.

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68 Consumer Action Law Centre and Consumer Utilities Advocacy Centre 2009, *op. cit.*, p. 6.

Table 8.5 **Indicative annual price increases (2008-09-2012-13)**
Metropolitan retail businesses (per cent)

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Average*
City West Water	12.0	9.7	9.7	9.7	10.5
South East Water	16.0	11.3	9.2	8.5	12.3
Yarra Valley Water	16.0	11.3	11.3	11.3	13.1

Note: Prices for the three retail businesses increased by 14.8 per cent in 2008-09.

ATTACHMENT 8A

This attachment outlines the various measures available to assist customers with their water and sewerage bills, including eligibility conditions.

8A.1 Federal concessions & government assistance

Commonwealth Government Utilities Allowance

The Commonwealth Government Utilities Allowance was introduced to assist older people with the cost of utilities including gas, electricity and water. It is paid to people receiving income support such as the age pension, disability support pension, wife pension, bereavement allowance, mature age allowance, widow allowance, partner allowance or carer payment.

The payment is $514 a year for singles and $257 a year for each eligible member of a couple. It is paid in four instalments over a 12 month period to qualified income support payment recipients. Eligibility for Utilities Allowance is automatically assessed by Centrelink.[69]

8A.2 State concessions & other assistance

Water and sewerage concessions

In 2008-09, the water and sewerage concession provides the holders of eligible concession cards with:

- a rebate of 50 per cent off water and sewerage costs (up to a maximum of $189.70 per annum) or
- if a household is billed for only one water or sewerage service, the concession is capped at $94.85 per annum.[70]

Concessions are only available for the customer's principal place of residence, where the customer is responsible for the account.

Eligible customers must hold a Commonwealth concession card such as the Pensioner Concession Card, Health Care Card, Department of Veterans Affairs Pension Card or Gold Card. Customers can either present the concession card when paying the bill or contact their water business to have concession automatically deducted from their bill.

Utility Relief Grant Scheme (URGS)

The Utility Relief Grant Scheme provides assistance to low-income households suffering a financial crisis (within the past 12 months) who are unable to pay a

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69 See Centrelink website at www.centrelink.gov.au/internet/internet.nsf/payments/ utilities_allowance.htm

70 See Department of Human Services website at www.cyf.vic.gov.au/_data/assets/pdf_file/ 0020/255620/Water-concessions-2008-09-poster.pdf

utility account. Assistance is not normally given if a household has savings or income sufficient to pay the account (by an instalment plan).

To be eligible for URGS, applicants must satisfy a number of criteria:

- be a low-income household who either:
  - holds a current concession card or
  - is experiencing financial hardship (and is registered with their utility company's hardship program)
- reside at their principal place of residence
- be financially responsible for the payment of the bill and
- are unable to pay their debt and risk disconnection.

For non-concession cardholders, household income must be below the income cap determined by the Department of Human Services and the household must meet one of the following criteria:

- a significant increase in bills (such as that caused by a faulty appliance)
- a recent decrease in income (due, for example, to unemployment or illness)
- high unexpected expenses on essential items (such as funeral, repairs, or replacement of essential items)
- the cost of shelter exceeds 30 per cent of household income
- the cost of utility usage exceeds 10 per cent of household income.

The Department of Human Services administers the scheme and allocates grants. Households must apply in writing to the Department. Applicants are entitled to apply for the grant once every 2 years.[71]

Water Wise program

The Water Wise program is designed for domestic water users and assists customers in hardship. The program provides a free water usage audit and replacement of any inefficient water fittings identified in the audit. The value of replacement fittings is capped at $500 for low income water customers who have received a Utility Relief Grant related to their water bill.[72]

The water businesses manage the program in conjunction with the Department of Human Services. The water businesses are responsible for determining eligibility. Following the water audit, the water business will arrange for a licensed plumber to carry out suggested improvements. At the completion of the retrofit, the customer will be provided with water conservation information and a copy of the water audit report.

The new Water Wise program was introduced on 1 January 2009, replacing the Smart Homes Assistance Program. The main difference between Water Wise and Smart Homes programs is eligibility. Under Smart Homes, eligibility was limited to

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71 See Department of Human Services website at www.cyf.vic.gov.au/_data/assets/pdf_file/0005/315347/utility_relief_grant_scheme_guidelines.pdf

72 See Department of Human Services website at www.cyf.vic.gov.au/_data/assets/pdf_file/0019/314029/water_wise_brochure.pdf

owner-occupiers. Under the new scheme, tenants are also eligible (with written consent from the landlord) with eligibility not dependant on which water provider the customer is with.

To be eligible for the Water Wise program, customers must satisfy a number of criteria:

- hold a valid concession card (Pensioner Concession, Health Care Card, Department of Veterans Affairs Pension Card or Gold Card)
- be the applicant's principal place of residence
- be financially responsible for the payment of the water account
- have received a water URG within the last 12 months, or be currently participating in a water business' hardship program.

In 2007-08 there were 1100 approved water URG recipients within Victoria and around 6000 concession card holders (approximately 1 per cent of total card holders) registered with water businesses' hardship programs.

Home Wise Grant

The purpose of the Home Wise Appliance and Infrastructure Grant is to provide assistance to eligible concession card households by repairing or replacing essential water, gas or electrical appliances for households who could otherwise not afford to do so.[73]

In 2007-08 there was approximately 2729 customers approved for Home Wise grants. From July 2008 to February 2009 that number increased significantly to 13 907.

The Home Wise grant replaced the previous Capital Grant in July 2008. The main difference between the two grants is that eligible customers can obtain a Home Wise grant once every five years (or two grants every ten years) whereas the Capital Grant was once in a lifetime.

Appliances covered by the Home Wise scheme (relevant to water) are hot water services, washing machines, leaking water pipes, water tanks, toilets, and leaking gas pipes.

To be eligible for Home Wise, customers must satisfy a number of criteria:

- hold a valid concession card
- demonstrate no savings
- have an appliance that has failed or become faulty within the last 12 months
- own or be in the process of buying the property in the case of grants for fixed appliances.

The Department of Human Services administers the program and allocates the grants. Households must apply for a grant in writing. Customers do not have to have received a URG to be eligible for a Home Wise grant.

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[73] See Department of Human Services website at www.cyf.vic.gov.au/concessions.

Water Smart Homes and Gardens Rebate Scheme

The Water Smart Homes and Gardens Rebate Scheme provides domestic customers with a rebate off their water bill for purchasing water-saving devices and services. The scheme is administered by the water businesses on behalf of the Victorian Government in partnership with the Department of Sustainability.

Products that may be eligible for a rebate include:

- greywater permanent tank systems
- rainwater tank to toilet systems
- dual-flush toilets
- water efficient shower roses
- water conservation audits
- hot water recirculator
- a basket of water saving goods (such as rainwater diverters, waterless car cleaning products, shower timers, toilet flush interrupter devices, mulch, compost/mulch bin, and hose trigger nozzle).

Since 2003, more than 193 000 rebates have been approved. Customers must have reticulated water supply (for all tank related rebates) and an account with an urban water retailer to be eligible for the scheme.[74]

Water and Sewerage Hardship Relief Grant Scheme

The scheme is a once-off payment that assists eligible concession card households experiencing financial hardship with the costs of compulsory connection of their water and sewerage.

Applicants must demonstrate that the household is unable to pay for the plumbing costs of sewerage connection based on household income and regular committed expenditure. Assistance can only be provided for the applicant's principal place of residence and when the water authority has deemed connection compulsory. The businesses are responsible for determining eligibility and allocating the grants.[75]

Water and Sewerage Rebate Scheme

The Victorian Government funds a rebate of up to $260 a year to eligible community service organisations on the fixed service charge component of their water bill.

A rebate is available for not-for-profit organisations throughout Victoria that serve the community in the fields of education, hospitals or nursing care, religious workshops, charity, outdoor sporting or recreation activities, and war veterans' organisations.

The Water and Sewerage Rebate Scheme is administered by the water businesses with oversight by the Department of Sustainability and Environment. The State Revenue Office rules on the eligibility of organisations and predominant

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74 See Our Water Our Future website at www.ourwater.vic.gov.au/saving/home/rebates.

75 See Department of Human Services website at www.cyf.vic.gov.au/concessions/concessions/financial-assistance-and-emergency-relief.

use of properties based on applications submitted to and checked by the water businesses.

8A.3 Hardship programs

The Customer Service Code outlines what actions businesses are permitted to take in relation to billing, restrictions and legal action.

Under the Code, businesses must:

- provide alternative payment arrangements in accordance with a customer's capacity to pay
- offer to extend the due date for some or all of an amount owed
- observe minimum periods of notice before applying supply restrictions or pursuing legal action to recover outstanding debts
- not restrict the water supply of a customer or pursue legal action unless first taking additional steps to secure a payment arrangement and resolving any dispute over the outstanding amount
- have a hardship policy that details procedures for assisting residential customers in hardship.[76]

Additionally, the businesses must provide information and referral to government assistance programs (including URGS) and no-cost independent financial counsellors. Businesses must also provide information on how to reduce water usage and improve water efficiency and provide referrals to relevant government water efficiency programs (including the Smart Homes program).

During 2007-08, 0.7 per cent of Melbourne customers received hardship grants, up from 0.5 per cent in 2004-05.

[76] Essential Services Commission 2006, *Review of Water Businesses Hardship Policies*, December.

Table 8A.1 **Summary of assistance programs for water and sewerage customers**

	Purpose	*Amount*	*Eligibility*	*Frequency*	*Administered by*
Water and Sewerage Concessions	Provide holders of eligible concession cards with a reduction in their water bill	50 per cent off water and sewerage capped at $189.70 p.a.	Concession card holder	Per water bill	Water businesses
Commonwealth Government Utilities Allowance	Assist older people with the costs of services	$514 p.a. for singles and $257 p.a. for each member of a couple (+CPI)	Applicant must be of aged pension age (eligibility automatically assessed)	Four instalments over 12 month period	Centrelink
Utility Relief Grant Scheme (URGS)	Provide assistance to low-income households in a financial crises	Generally capped at 6 months of usage up to $500	Low-income household, concession card holder, registered in hardship program	Applicants entitled once every two years	Department of Human Services
Water Wise Program	Provide free audits and retrofits for low-income earners	Retrofit capped at $500	Concession card holder, previously received URG or on a hardship policy	One per property	Water businesses and Department of Human Services
Home Wise Grant	Replace essential faulty appliances	Total cost of the supply and installation of replacement appliance[a]	Concession card holder, owns property, no savings	Two grants within ten years	Department of Human Services
Water Smart Homes and Gardens Rebate Scheme	Encourage reduction in water consumption by providing rebates for water saving devices	Per case basis	Customer must have a reticulated water supply and an account with an urban water retailer	One per property[b]	Water businesses (on behalf on Department of Sustainability and Environment)
Water and Sewerage Hardship Relief	Assist households in financial hardship with cost of water and	Per case basis	Applicants must be unable to pay based on household income and	Once off	Water businesses

	Purpose	*Amount*	*Eligibility*	*Frequency*	*Administered by*
Grant Scheme	sewerage connection		expenditure		
Water and sewerage rebate Scheme	Subsidise fixed service charge of water bill for community service organisations	Capped at $260	Not-for-profit organisations	Once per year	Water businesses
Hardship Programs	Assist customers in hardship with meeting their water obligations	Per case basis	Customer in hardship[c]	Per case basis	Water businesses

a The quote submitted for a fixed appliance must be for a standard model at a competitive price. **b** Each eligible household is entitled to two water efficient showerhead rebates per property and a $30 rebate for ‘a basket of goods’ with a combined value or $100 or more once every calendar year. **c** Assessment of a customers eligibility under clause 5.4(a) (1) of the Code may differ among businesses due to different definitions of hardship.

9 BULK WATER AND SEWERAGE

The Water Industry Regulatory Order (the WIRO) defines storage operator and bulk water services as services provided by a regulated business in connection with supplying water to another business. Melbourne Water provides storage operator and bulk water services to City West Water, South East Water, Yarra Valley Water, Gippsland Water and Western Water. Bulk sewerage services are defined by the WIRO as a service provided by Melbourne Water in connection with the conveyance, treatment and disposal of wastewater for a regulated entity. Melbourne Water provides bulk sewerage services to the three metropolitan retailers.

9.1 Overview of Melbourne Water's proposed bulk charges

In its Water Plan, Melbourne Water described its method for calculating its bulk water and bulk sewerage service charges to be paid by each retailer. Bulk charges are calculated using the following approach:

- The revenue required to provide each service is calculated.
- The share of revenue required from each retailer is determined according to its use of Melbourne Water's systems.
- Usage charges are based on the long run marginal cost of providing the services.
- Residual costs are recovered from retailers as fixed service charges according to their share of use of Melbourne Water's systems.

9.1.1 Bulk water

Melbourne Water's bulk water charges consist of a fixed service charge for each retailer and usage charges for each ML of water stored and delivered to the retailers. It also charges separately for the headworks and transfer components of its bulk water service.

In its Water Plan, Melbourne Water generally proposed to retain the existing structure for bulk water tariffs over the next regulatory period, subject to a number of changes to the balance between fixed and variable bulk water charges in 2009-10. It has proposed to introduce uniform usage charges for headworks to reflect the common security of supply provided to the retailers and Western Water. The exception is Gippsland Water, which will be charged lower usage charges for headworks to reflect the untreated and less reliable supply it receives from Tarago reservoir. Usage charges for the transfer component are proposed to remain differentiated to reflect the different cost of delivering water to each retailer. Melbourne Water's proposed charges are set out in table 9.1.

Table 9.1 **Bulk water charges proposed by Melbourne Water** ($ January 2009)

	2008-09	*2009-10*
City West Water [a]		
Service charge (headworks) $/month	42 098	1 693 557
Service charge (transfer) $/month	23 847	461 904
Usage charge (headworks) $/ML	181.37	460.00
Usage charge (transfer) $/ML	469.03	133.00
South East Water		
Service charge (headworks) $/month	1 766 414	2 302 747
Service charge (transfer) $/month	1 000 617	859 212
Usage charge (headworks) $/ML	181.37	460.00
Usage charge (transfer) $/ML	146.14	113.00
Yarra Valley Water		
Service charge (headworks) $/month	2 170 051	2 568 244
Service charge (transfer) $/month	1 229 264	1 225 112
Usage charge (headworks) $/ML	181.37	460.00
Usage charge (transfer) $/ML	111.77	90.00
Western Water		
Service charge (headworks) $/month	42 106	159 329
Service charge (transfer) $/month	23 851	79 987
Usage charge (headworks) $/ML	123.06	460.00
Usage charge (transfer) $/ML	510.10 [b]	89.00
Gippsland Water		
Service charge (headworks) $/month	1 198	95
Service charge (transfer) $/month	359	669
Usage charge (headworks) $/ML	43.82	95.00

[a] In 2008-09 City West Water's service charges were lower than those paid by South East Water and Yarra Valley Water because its variable charges were higher, leaving a smaller residual amount to be recovered through the service charges. [b] Transfer usage charge is currently $352.18/ML for the first 5 000 ML per annum.

Melbourne Water has also revised its method for allocating fixed costs. Consistent with the recommendations in the Victorian Competition and Efficiency

Commission's (VCEC) report on the metropolitan water sector[77] and the Commission's advice in the 2005 water price review final decision that the allocation method should be updated, it proposes to allocate sunk costs according to 2004-05 volumes and future costs according to future demands. Restructuring of bulk charges is proposed to be implemented in 2009-10, with uniform price increases for each tariff component over the remaining years of the regulatory period. Melbourne Water provided estimates of long run marginal cost in support of its pricing proposals for bulk water.

9.1.2 Bulk sewerage

Melbourne Water's bulk sewerage charges consist of service charges for each retailer and a range of usage charges for sewer volumes and pollutant loads. Volumetric charges currently apply to the total sewage volume and total volume of non-major trade waste load received. Major trade waste usage charges are currently applied to each tonne of the following pollutants received from the retailers: biological oxygen demand, suspended solids, total nitrogen and total dissolved solids. Bulk sewerage usage charges are further differentiated between the Eastern and Western Treatment Plants to reflect the different costs incurred in each location.

Melbourne Water has generally proposed to retain the existing structure for its bulk sewerage tariffs over the next regulatory period. However, it has proposed to apply separate service charges for the Eastern and Western systems to provide a clear signal about the costs of each system. It also proposes to vary the basis for applying usage charges in 2009-10.

It has proposed to introduce a single volume charge for bulk sewerage, replacing the separate charges for sewage volume and non-major trade waste load volume charges. The volumetric charge will continue to be differentiated between the Eastern Treatment Plant and the Western Treatment Plant. Melbourne Water has indicated that combining the current volumetric tariffs into a single charge will make it easier to understand while remaining cost reflective.

Further, Melbourne Water has proposed to vary the basis on which two of its major trade waste usage charges are applied. First, the usage charge on total nitrogen will be replaced by a charge on total kjeldahl nitrogen. It noted that total kjeldahl nitrogen more accurately reflects the drivers of future costs associated with meeting nitrogen discharge requirements and can be measured with greater accuracy. This approach also appeared to be supported by the retailers when it was raised during the 2005 price review.

Second, Melbourne Water has proposed to increase its current salt price over the regulatory period in order to meet the Environment Protection Authority (EPA) requirement that untreated sewage received at the Western Treatment Plant does not exceed a median concentration of 1000 milligrams per litre by 2009. It proposes to almost double the charge in 2009-10 as the first step in a longer term

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[77] Victorian Competition and Efficiency Commission 2008, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector*, final report, February.

phasing-in of the proposed increase. In addition, it has proposed to apply the charge to inorganic total dissolved solids instead of total dissolved solids. This change in the method of charging is intended to address the issue of double counting between total dissolved solids and biological oxygen demand and to create more meaningful price signals to industry.[78] Melbourne Water's proposed bulk sewerage charges are set out in table 9.2.

As with bulk water, Melbourne Water has revised its method for allocating fixed sewerage costs. It has proposed to allocate sunk costs according to 2004-05 volumes and future costs according to future demands, in accordance with VCEC's recommendations. It has also proposed that the restructuring of bulk sewerage charges take place in 2009-10 followed by uniform price increases for each tariff component over the remaining years of the regulatory period. Melbourne Water provided estimates of long run marginal cost in support of its pricing proposals for bulk sewerage.

9.2 Responses to issues paper

In response to the issues paper, the Commission received submissions from Qenos and the Australian Industry Group raising concerns about Melbourne Water's bulk water and sewerage charges. In particular, their submissions focussed on Melbourne Water's proposal for higher salt charges and the question of whether it should be passed on to industry by the retailers.

In its submission, Qenos stated that industry has voluntarily worked to reduce total dissolved solids in waste water but, as this can only be done to an extent, it suggested that the salt charge is a penalty rather than a price signal.

Australian Industry Group expressed similar concerns at the public forum adding that increasing the salt price will put unfair pressure on large industrial sites. It suggested that a salt charge with tariff increases as proposed by Melbourne Water may lead to a price shock for businesses.

Qenos also questioned the justification for applying a salt charge. It noted the Government's policy for maximising recycled water usage, but also argued that the Altona area has previously been promoted as being 'saline discharge friendly' and that it is therefore unfair to start penalising industry now.

Qenos also argued that, where recycled water use results in potable water substitution, benefits accrue to all potable water customers. In this case, it argued that recycled water should be provided at a discount rate to provide incentives to maximise use (with any revenue shortfalls being borne by the overall customer base). It also argued that where the recycled water customer does not have access to potable water (and no potable water substitution is possible), the costs should be paid in full by the end user, thereby eliminating the need for a salt charge (or at least the increase).

78 City West Water, South East Water and Yarra Valley Water did not propose to change their trade waste tariffs in response to Melbourne Water. The retailer's trade waste proposals are discussed in chapter 12.

Qenos further indicated that the salinity level of wastewater entering the Western Treatment Plant is also caused by residential customers and groundwater infiltration and that it would be unfair if industry bore the impact of the higher salt charges.

Table 9.2 **Bulk sewerage tariffs proposed by Melbourne Water** ($ January 2009)

	2008-09	*2009-10*
Service charges $ / month		
City West	3 604 739	-
South East	4 530 943	-
Yarra Valley	6 330 217	-
City West (Western System)	-	3 541 826
South East (Western System)	-	685 064
South East (Eastern System)	-	4 692 249
Yarra Valley (Western System)	-	1 906 083
Yarra Valley (Eastern System)	-	3 998 400
Usage charges (Western System)		
Volume $/ML	76.92	177.00
Non-major trade waste load $/ML	60.81	-
Biological oxygen demand $/tonne	38.57	10.00
Suspended solids $/tonne	6.84	2.00
Total nitrogen $/tonne	782.69	-
Total kjeldahl nitrogen $/tonne	-	167.00
Total dissolved solids $/tonne	12.02	-
Inorganic total dissolved solids $/tonne	-	24.00
Usage charges (Eastern System)		
Volume $/ML	142.24	284.00
Non-major trade waste load $/ML	210.79	-
Biological oxygen demand $/tonne	295.11	342.00
Suspended solids $/tonne	259.17	189.00
Total nitrogen $/tonne	575.43	-
Total kjeldahl nitrogen $/tonne	-	707.00
Total dissolved solids $/tonne	12.02	-
Inorganic total dissolved solids $/tonne	-	24.00

9.3 Draft decision

The Commission has considered Melbourne Water's proposed bulk water and sewerage charges in relation to a number of factors, which are discussed separately below.

Cost allocation between retailers

In its issues paper (December 2008), the Commission noted that it would review Melbourne Water's allocation of costs between the retailers. The Commission considers that Melbourne Water's proposal to adopt VCEC's recommended cost allocation methodology is appropriate. This approach requires that all sunk costs are allocated between the retailers according to 2004-05 volumes and future costs are allocated according to forecast demands.

While it endorses this methodology, the Commission has had difficulty in assessing how Melbourne Water has implemented the VCEC approach and how it is reflected in the proposed prices. The Commission has calculated the revenue shares for each retailer for 2008-09 and each year of the regulatory period. The proportions of revenue recovered from each retailer are not proposed to change materially over the regulatory period. Further, the retailers have not raised any concerns about Melbourne Water's cost allocations.

As such, the Commission's initial view is that the cost allocation methodology used by Melbourne Water is likely to be appropriate. The Commission will seek further details from Melbourne Water between the draft and final decisions on how it has incorporated VCEC's recommendations to verify that the cost allocation methodology is appropriate.

The Commission has also assessed the proposed prices against the service-specific costs for bulk water and bulk sewerage. It is satisfied that the bulk water and bulk sewerage prices respectively recover the costs of providing bulk water and bulk sewerage.

Fixed and variable charges

Melbourne Water proposed to change the balance between fixed and variable charges in 2009-10 and this has resulted in some significant changes to a number of individual tariff components. In support of its proposals, Melbourne Water provided models of long run marginal cost (LRMC) for all of its proposed variable charges.

The Commission has reviewed the LRMC models submitted by Melbourne Water and has had difficulty undertaking a thorough assessment. The estimates appear to have been calculated according to the approach recommended by the Commission, and the demand forecasts used in the models are generally consistent with the forecasts used elsewhere in its pricing calculations.[79] However, the models also include some information that is difficult to verify, including expenditure that relates specifically to the relevant service component and detailed

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[79] See Essential Services Commission 2005, *Estimating Long Run Marginal Cost – Implications for the Victorian Water Industry*, September.

optimised capital programs under different scenarios. Further, the LRMC estimates are also sensitive to a number of elements, such as the weighted average cost of capital and assumed increments in demand.

The Commission notes that despite a number of significant changes in individual tariff components, the collective impact of the pricing proposals is small.[80] For example, the proportion of revenue collected from fixed and variable charges will not change materially over the regulatory period. A higher proportion of revenue will be generated by bulk water charges (57.3 per cent from 2009-10 compared to 48.6 per cent in 2008-09) compared to bulk sewerage charges, which is reasonable considering the increased expenditure on water supply augmentation.

There has been some change in the proposed balance between fixed and variable charges for the individual businesses. However, under Melbourne Water's method for calculating prices (see section 9.1) the revenue required from each retailer is determined first. Changes in a variable charge for an individual retailer will not change the amount of revenue collected from that retailer, as adjustments will be made to fixed charges. The retailers have not raised any concerns regarding the balance between Melbourne Water's fixed and variable charges. The Commission's initial view is that the balance between Melbourne Water's fixed and variable charges is appropriate.

Amendments to tariff structures

The Commission has assessed the proposed changes to Melbourne Water's bulk water and bulk sewerage tariff structures.

The Commission proposes to approve Melbourne Water's proposal to introduce uniform water headworks charges for each retailer and Western Water. It considers that a uniform headworks usage charge for bulk water is appropriate for all retailers to reflect the common security of supply benefits being provided (except Gippsland Water, which receives an untreated and less reliable supply and will face a lower price).

Regarding bulk sewerage, the Commission proposes to approve the introduction of a single volumetric sewerage tariff (replacing the separate charges for sewage volume and non-major trade waste load volume charges), with the volumetric charge being differentiated between the Eastern Treatment Plant and the Western Treatment Plant. The Commission considers that this tariff will be more easily understood and is satisfied that it will remain cost reflective. The Commission also proposes to approve separate bulk sewerage service charges for the Eastern and Western systems.

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80 For example, the headworks service charge for City West Water is proposed to increase from $42 098 per month in 2008-09 to $1 693 557 per month in 2009-10 (see table 9.1). The low service charge in 2008-09 resulted from higher variable charges for City West Water and a smaller residual to be recovered from the service charge. Despite the large increase in the service charge, adjustments to other charges (including bulk sewerage charges) mean that the proportion of Melbourne Water's costs borne by City West Water will not change significantly.

The Commission also proposes to approve Melbourne Water's proposed change in a major trade waste pollutant load parameter from total nitrogen to total kjeldahl nitrogen. The Commission considers the reasons behind the change (that is, better reflection of the costs of treating nitrogen and ammonia discharges) to be reasonable and the change appears to have the support of the retailers.

Salt charges

The Commission's previous position on salt charges (and related matters) is that a salt charge should be paid by the polluter in cases where there are EPA obligations on salt discharge by the water business and there are explicit costs associated with removing salt from the wastewater. In cases where there is no EPA obligation and salt is removed to enable recycling, the recycled water customer should bear the cost of removing the salt. However, in cases where recycling results in potable water substitution, the cost of removing the salt should be borne by the broader customer base as the benefits of increased potable water availability accrue to all customers.

In assessing Melbourne Water's proposal to apply higher charges for salt, the Commission has had regard to the explicit EPA licence requirements. In particular, it has noted that the requirements relate to the salinity of the influent that Melbourne Water receives rather than Melbourne Water's discharges. Melbourne Water does not currently remove salt from wastewater.

As discussed in section 9.1.2, the EPA requires that untreated sewage received at the Western Treatment Plant not exceed a median concentration of 1000 milligrams per litre by 2009.[81] Melbourne Water proposes to meet this requirement by basing the charge on inorganic total dissolved solids (ITDS) and doubling the charge in 2009-10.

The change to ITDS appears to be a more effective method of targeting salinity than the current approach and eliminates issues of double counting.

Considering that the salinity level of the wastewater Melbourne Water receives depends on the behaviour of the retailers and customers, the Commission considers that a price signal is the most effective means of satisfying the EPA requirement. The price signal can work either directly through reductions in salt discharge by final customers (which requires the price to be passed on by the retailers) or indirectly by providing incentives to retailers to reduce salt by non-price means, such as working with industry to reduce salt loads. Introducing a price signal would reduce or eliminate any future cost impacts should Melbourne Water begin to remove salt from wastewater in future.

The Commission proposes to approve the change in the trade waste load parameter for Melbourne Water from total dissolved solids to ITDS. The Commission also endorses a long term price signal to industry to reduce salt

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81 The Commission understands that the EPA licence limit was changed recently from the previous target of 1250 milligrams per litre.

discharges in order to meet the EPA requirement. The Commission notes that there are some practical difficulties in implementing this strategy in the short to medium term.

First, the Commission is concerned about the inconsistency in trade waste pricing between Melbourne Water and the retailers. The Commission prefers that an integrated approach be adopted by Melbourne Water and the retailers (see chapter 12 for further discussion).

Second, the Commission is concerned that a significant level of salt in waste received by the Western Treatment Plant comes from residential sewage and groundwater infiltration, as noted in the submission by Qenos. The Commission is particularly concerned about the disproportionate impact on industry when other customers also contribute to the level of salinity in the wastewater. It is not clear from Melbourne Water's proposal whether it intends the price signal to be targeted at industry only or at all customers responsible for discharging salt.

Third, while a price signal for salt may be desirable, it has the potential for adverse customer impacts if the higher charge is introduced too quickly. This issue has been identified by the retailers, who have not proposed to pass on the higher salt charges to customers. While the retailers proposed to absorb the higher salt charge, the Commission is concerned that the doubling of the charge in 2009-10, with uniform increases of 21.9 per cent per annum for the remaining years of the regulatory period does not represent an appropriate phasing-in of the proposed price increase.

The Commission therefore proposes not to approve the level of Melbourne Water's ITDS charges in 2009-10. In response to this draft decision, Melbourne Water is required to address the Commission's concerns raised in this section and propose a more gradual increase in the charge over the regulatory period.

Price path

From 2010-11 to 2012-13, Melbourne Water proposed a smooth price path. The Commission considers that the difference between revenue collected and revenue required to recover costs each year would be too large in 2010-11 and 2012-13 under a smooth price path. The Commission proposes to approve a price path that more closely matches Melbourne Water's revenue requirement for each year. Table 9.3 shows the indicative price path assumed by the Commission in calculating bulk charges over the period.

Table 9.3 **Indicative annual price increases (2008-13)**
Melbourne Water (per cent)

	2009-10	*2010-11*	*2011-12*	*2012-13*	*Average*
Melbourne Water	21.3	11.3	30.7	21.3	20.3

Melbourne Water should, in response to this draft decision, propose a price path for 2010-11 to 2012-13 that more closely matches Melbourne Water's revenue requirement for each year than that proposed in its Water Plan.

Draft decision

The Commission proposes to approve Melbourne Water's proposal to introduce uniform headworks usage charges for bulk water.

The Commission proposes to approve Melbourne Water's proposals to introduce a single volumetric charge for bulk sewerage and apply separate bulk sewerage service charges for the Eastern Treatment Plant and Western Treatment Plant.

The Commission proposes to approve Melbourne Water's proposed change in major trade waste parameters from total nitrogen to total kjeldahl nitrogen and from total dissolved solids to inorganic total dissolved solids.

The Commission proposes not to approve the level of Melbourne Water's inorganic total dissolved solids charge for 2009-10. In response to this draft decision, Melbourne Water should propose a more gradual increase in the charge over the regulatory period.

The Commission proposes to approve all other elements of Melbourne Water's proposed bulk water and sewerage tariffs, subject to verifying its methodology for allocating costs between retailers.

In response to this draft decision, the Commission requires Melbourne Water to propose a price path for 2010-11 to 2012-13 that more closely matches expected revenue to its revenue requirements in each year .

10 RETAIL WATER AND SEWERAGE SERVICES

Retail water and sewerage services are provided by City West Water, South East Water and Yarra Valley Water to residential and non-residential customers within the greater metropolitan Melbourne area.

This chapter sets out the businesses' proposed retail water and sewerage tariffs, stakeholder submissions and responses to the issues paper, the Commission's assessment of whether the proposals satisfy the regulatory principles in the Water Industry Regulatory Order (WIRO), and the Commission's draft decision on the businesses' proposed tariffs.

The WIRO specifies the principles against which the Commission is required to assess prices (see chapter 8).

10.1 Overview of proposed retail water and sewerage charges

The metropolitan businesses have proposed to maintain a two part tariff structure for the 2009-2013 regulatory period, comprising a fixed component and a usage component related to metered water and sewerage use. The retail businesses propose to maintain an inclining block structure for water, where customers are charged a higher price per kilolitre (kL) as their consumption increases above a level that is generally regarded as non-discretionary. These tariff structures were introduced to provide incentives to moderate discretionary water use. The inclining block tariffs for each retailer consist of three levels with thresholds at 160 kL and 320 kL a year respectively for the second and third tier usage charges. The retailers have two-part tariffs in place for non-residential water services with a single usage charge.

Two-part tariffs are also in place for sewerage services. The variable component of the sewerage tariff is based on an estimate of the volume of wastewater discharged into the sewer system. This estimate is calculated as a function of metered water use and takes into account other relevant factors (such as property type, customer type and time of year) that affect the proportion of water discharged into the sewer.

The Minister for Water has previously indicated that the Government has an expectation that average water bills will not more than double in real terms over the five year period to July 2013.[82] As an interim measure, uniform price increases of 14.8 per cent were approved for City West Water, South East Water and Yarra Valley Water for 2008-09.

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82 Minster for Water, '*Water industry efficient and price constraints on track*', Media Release 3 July 2008.

Table 10.1 **Retail water and sewerage charges proposed by the retailers (2008-09 to 2012-13)**
($ 1 January 2009 prices)

	City West Water		*South East Water*		*Yarra Valley Water*	
	2008-09	*2012-13*	*2008-09*	*2012-13*	*2008-09*	*2012-13*
Residential charges:						
Water volumetric						
1st tier	1.02	1.67	1.01	1.71	1.02	1.73
2nd tier	1.20	1.96	1.22	2.08	1.20	2.03
3rd tier	1.78	2.89	1.97	3.36	1.77	3.00
Water fixed	126.52	206.05	56.96	96.93	75.54	128.42
Sewerage volumetric	1.34	2.18	1.26	2.14	1.32	2.24
Sewerage fixed	134.59	219.15	192.67	327.86	184.54	313.72
Non-residential charges:						
Water volumetric	1.14	1.85	1.22	2.08	1.10	1.87
Water fixed	184.27	300.06	56.96	96.93	122.62	208.45
Sewerage volumetric	1.30	2.12	1.26	2.14	1.28	2.18
Sewerage fixed	237.67	387.01	228.81	389.36	287.18	488.21

Note: All prices are rounded to 2 decimal places.

In response to the Government's pricing expectation, the retailers all proposed prices that would result in bills less than doubling over the five-period from 2007-08 to 2012-13.

The three retail businesses have proposed to increase all tariffs equally to meet their respective revenue requirements while ensuring compliance with their interpretation of the Government's pricing expectation. Businesses appear to have interpreted the expectation that average bills will no more than double over five years to mean that no individual bill will more than double over the period.

Consequently, the businesses proposed to retain their current tariff structures for retail water and sewerage services by increasing all tariffs uniformly in each year of the regulatory period to ensure no customer's bill would more than double over the five years to 2012-13. The retailers' pricing proposals therefore imply that the proportion of revenue collected from water and sewerage tariffs respectively would be maintained. The retail water and sewerage tariffs proposed by the retailers are set out in table 10.1. City West Water's prices increase by 63 per cent over the four-year regulatory period, with South East Water's and Yarra Valley Water's prices increasing by 70 per cent and 72 per cent respectively over the period.[83]

83 The total price increases for the five-year period to 2012-13 implied by the businesses' proposed prices and this draft decision are discussed in section 8.2.3 in chapter 8.

The three metropolitan businesses stated that they would review their existing tariff structures during the coming regulatory period. They suggested that any tariff restructure was likely to be implemented after 2013 to allow time for customers to adjust to the price increases. City West Water and Yarra Valley Water, however, indicated that they may apply to the Commission to make changes within the period if there was a compelling case for change. South East Water explicitly noted that tariff restructuring in the short term is problematic as it would result in differential price movements between customer groups, potentially causing it not to comply with its interpretation of the Government's pricing expectation.

Sewage disposal factors

The only change to existing tariff structures proposed by the retail businesses was Yarra Valley Water's proposal to change the seasonal indices used to determine a household's sewage discharge factor to reflect the level of water restrictions in place. The current indices are based on pre-restriction patterns of water use. The proposed change would reflect lower outdoor usage and thus a higher proportion of water being returned to the sewer at times of water restrictions. Under Yarra Valley Water's proposal, revenue from sewerage services will be maintained over the period as the sewage discharge factor is adjusted based on the seasonal indices proposed.

Both City West Water and South East Water have proposed to maintain their current methods for estimating the rate of household sewage discharge. South East Water acknowledged that its seasonal indices for estimating sewage volumes are not fully reflective of its customer discharge patterns.[84] However, it does not propose to change the indices because some customers' bills would more than double, which it considered would conflict with the Government's pricing expectation. It indicated that it would put forward reform proposals at the end of the regulatory period.

10.2 Responses to issues paper

The Commission has received a number of submissions related to retail water and sewerage prices. Stakeholder comments were also received at the Commission's public hearing held in March 2009.

Variable water charges compared with fixed water charges

Submissions generally supported the maintenance of a two part tariff structure for residential customers with an inclining block tariff for usage charges. A number of submissions strongly supported a greater emphasis on water usage charges to reward water conservation and to allow customers greater control over their bills.

The Consumer Utilities Advocacy Centre (CUAC) and Consumer Action Law Centre (CALC) advocated lower fixed charges for households stating that, although many (particularly low income) consumers have very little price elasticity in terms of water use, there is more capability to control aspects of their bill based on

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84 South East Water 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 9 February.

consumption rather than fixed costs. Submissions from customers and the Environment Protection Authority (EPA) also supported greater emphasis on usage charges and reduced fixed costs.[85] CUAC and CALC also recommended higher fixed charges for non-residential customers.

The Victorian Council of Social Services (VCOSS) suggested that augmentation costs should be applied to the volumetric water charge rather than the fixed cost or sewerage service charges.[86] VCOSS also called for reform of the tariff structure to provide for a free or low cost allocation of essential water, while recognising that it may increase the proposed price rises for some classes of consumers. VCOSS stated that cost reflectivity in tariffs must be balanced against equity and sustainability concerns.

The Ethnic Communities' Council of Victoria (ECCV) expressed concern that any tariff restructure should not disproportionately affect larger households as many families from culturally and linguistically diverse communities belong to this group.[87]

Timing of a tariff restructure

The issues paper asked for stakeholder feedback on the timing of a tariff restructure. A number of submissions called for an immediate tariff restructure on the basis that prices should be cost reflective to allow consumers to make efficient choices based on relative prices and also to allow a greater degree of control over household bills. In the 2005 urban price review, customers indicated a strong preference in submissions that variable charges should be higher, relative to fixed costs, to give them more control over their bills.

CUAC and CALC expressed their concern that any allowance to restructure tariffs within the period should not result in water businesses increasing the prices associated with the first tier or reduce the first tier threshold.[88]

Sewage disposal factors

A customer submission to the issues paper expressed concern that the current sewage disposal factors do not reflect actual household sewage flows. The customer recommended that sewage disposal factors should be based on the number of people utilising the sewerage system.

Other issues

Customers have raised concerns that they are being penalised for voluntarily conserving water as reduced demand has reduced revenue received, ultimately

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85 EPA Victoria 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 6 March.

86 The Victorian Council of Social Services 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 9 February.

87 The Ethnic Communities' Council of Victoria 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 3 February.

88 Consumer Action Law Centre and Consumer Utilities Advocacy Centre 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 12 February.

resulting in higher prices. ECCV also pointed to the need to clarify the mixed messages within the community about the link between reduced consumption and proposed water price increases, which may undermine incentives to conserve water.

There have been a significant number of other submissions related to affordability, customer impacts and equity concerns. These are considered in detail in chapter 8.

10.3 Draft decision

Having reviewed the retail businesses' Water Plans and considered stakeholder submissions, the Commission is not satisfied that the proposed retail water and sewerage tariffs for the forthcoming period reflect costs and send appropriate signals to customers.

The Commission recognises that restructuring during a period of rapid price rises could result in some customers experiencing larger bill increases than other customers, depending on their consumption patterns. But delaying a tariff restructure until the following period simply postpones an inevitable rebalancing towards a more efficient allocation of costs to services.

One potential consequence of delaying the required price rebalancing is that, after increasing significantly in the coming regulatory period, prices for some services might have to fall in the next regulatory period so that they can be brought back into line with costs. Such price changes would send confusing signals to customers.

Another implication of delaying the tariff restructure is that, were an access regime for water and sewerage infrastructure services to be put in place, access seekers could undercut the water businesses in providing services if there was a significant discrepancy between the actual cost of providing the service and the prices charged by the metropolitan businesses.[89] The possibility of this occurring is particularly relevant for sewerage services under the retailers' current proposals.

Assessment of proposed prices

Under the WIRO, prices must be cost reflective to provide appropriate signals to customers. However, the retail businesses did not provide estimates of long term marginal costs in their Water Plans and have not demonstrated how the proposed prices reflect underlying costs.

In relation to water services, the Commission understands that the cost profile for each of the businesses will change markedly over the forthcoming regulatory period. Many of the water projects, most notably for water augmentation, are characterised by large operating costs. This would suggest that water usage charges should increase by more than water fixed charges.

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89 At the request of the Minister for Finance, the Commission is undertaking an inquiry into an access regime for water and sewerage infrastructure services. An issues paper and other relevant information on the inquiry is available on the Commission's website, www.esc.vic.gov.au.

The Commission considers that water usage charges in the order of $1 to $2 per kL appear justified on the basis of previous estimates of long run marginal cost (LRMC).[90] The introduction of desalinised water may result in revised estimates of LRMC above this range.

In relation to sewerage services, the proposed price increases for this regulatory period are largely driven by higher costs of providing water as compared with providing sewerage services. In Melbourne, sewerage services typically exhibit much lower operating costs than water and they are increasing at a much slower rate than water costs over the period. The Commission's analysis shows that the average aggregate cost of providing potable water is forecast to be around 50 per cent greater than the cost attributable to sewerage services over the regulatory period.

Furthermore, previous estimates of LRMC for sewerage services are much lower than the sewage disposal tariffs proposed by the retail businesses.

As such, it appears that the proposed prices (with the exception of water usage charges) for these services are inconsistent with the requirements of the WIRO since they do not reflect the costs of providing those services. With the exception of water usage charges, the Commission therefore proposes to not approve the proposed retail water and sewerage tariffs.

Businesses are required to respond to this draft decision with pricing proposals that better reflect the underlying costs of providing retail water and sewerage services.

Tariff restructuring

The Commission understands that, because of time constraints, businesses will not be able to undertake a comprehensive tariff review before the Commission's final decision. However, the Commission believes that businesses can begin to move towards more cost reflective pricing during the regulatory period.

While the water usage charges proposed by the businesses (set out in table 10.1) appear reasonable, the Commission expects that sewage disposal prices should increase at a much slower rate over the coming period. Fixed charges (for water and sewerage) should increase at the rate required to meet each business' revenue requirement.

This approach will lead to water usage charges making up a higher proportion of household bills while sewerage usage charges will make up a lower proportion. This will provide customers with greater control over household bills and provide incentives to use water sustainably. Furthermore, the Commission considers such price changes to be more cost reflective than current proposals.

Additionally, businesses can still meet the Government's expectation that average bills no more than double over the regulatory period. Based on the revenue requirement determined for each of the businesses (see chapter 3), the Commission would support average price increases as set out in table 10.2.

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[90] Essential Services Commission 2007, *Water Tariff Structures Review*, December.

Table 10.2 **Draft decision - proposed average price increases over the period**
($ 1 January 2009 prices)

	Average annual price increase (per cent)	*Total four year increase 2009-10 to 2012-13[a] (per cent)*
City West Water	10.5	48
South East Water	12.3	53
Yarra Valley Water	13.1	60

Notes: Figures do not include Melbourne Water drainage and waterways charges or Parks Victoria charges. **a** Prices for the three retail businesses increased by 14.8 per cent in 2008-09.

Under this approach, households will not be worse off compared with the businesses' proposals. For example, increasing the sewage disposal charge by a lower rate than the water usage charge will mean that tenants will receive less than a doubling of prices.

The Commission will consider proposals from the retailers in response to the draft decision to adjust the balance between water fixed and sewerage fixed charges.

The Commission encourages businesses to continue to review their tariff structures during the coming regulatory period. This would ensure that, in the following regulatory period, businesses would be able to put forward pricing proposals that move prices closer to reflecting the costs of providing services.

Sewage disposal factors

The Commission proposes to approve Yarra Valley Water's proposed amendment to its seasonal sewerage discharge indices to reflect the level of water restrictions in place at the time. This change will better reflect actual household sewage flows. (This is discussed in more detail in chapter 7.) City West Water and South East Water are encouraged to consider adopting a similar approach in response to the draft decision.

Draft decision

The Commission proposes not to approve the businesses' proposal to increase all tariffs at the same rate for the forthcoming period on the basis that it is inconsistent with the requirements of the WIRO.

Businesses are required to respond to this draft decision with pricing proposals that reflect the underlying costs of providing each of the individual services. For example, it is the Commission's expectation that water usage prices will increase at a faster rate than both fixed charges (for water and sewerage) and sewerage usage prices.

The Commission proposes to approve Yarra Valley Water's proposed amendment to its seasonal sewage discharge indices to reflect the level of water restrictions in place at the time. The Commission suggests that City West Water and South East Water consider adopting a similar approach for the forthcoming regulatory period.

11 RECYCLED WATER

Melbourne Water and the metropolitan businesses are subject to water recycling targets, which are included in their Statements of Obligations. With the businesses having met the 2010 targets by 2006-07, the Victorian Government announced new targets to substitute 6.2 billion litres of recycled water for potable water by 2015 and 10 billion litres by 2030.The metropolitan businesses contribute to these targets in partnership with Melbourne Water.

A number of factors determine the prices that water businesses are able to charge recycled water customers, including: the price and availability of alternative water supplies; the scope to use or substitute recycled water for other water supplies in relevant applications; and Government policies on recycled water use. Currently, major influences on the market for recycled water are the ongoing drought and limited availability of potable water supplies, concerns about improving environmental impacts and water flows, and the increasing price of alternative water sources (including potable water).

11.1 Commission's approach to assessing recycled water tariffs

Recycled water prices are regulated through a combination of scheduled prices and pricing principles. In the 2008 water price review final decision for regional and rural water businesses, the Commission approved a uniform set of principles for calculating recycled water prices for each business. [91] These principles, which were also applied to the metropolitan businesses in 2008-09, require prices to:

- have regard to the price of any substitutes and customers' willingness to pay
- cover the full cost of providing the service (with the exception of services related to specified obligations or maintaining the balance of supply and demand) and
- include a variable component.

These principles apply in cases where recycled water services are provided to large non-residential or unique customers, where it is appropriate to set prices on a case-by-case basis to reflect each customer's circumstances.

Prices charged for third pipe recycled water services must be reflected in the businesses' proposed tariff schedules and are subject to the annual price approval process.[92] For developments completed during the regulatory period, pricing

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[91] Essential Services Commission 2008, *2008 Water Price Review: Regional and Rural Businesses' Water Plans 2008-2013*, *Melbourne Water's Drainage and Waterways Water Plan 2008-2013 — Final Decision*, June.

[92] See Essential Services Commission 2006, *Framework and Approach Paper*, December, and Essential Services Commission 2007, *Water Price Review Guidance*

principles should be applied to determine the prices charged for recycled water provided in these new developments. These prices should then be added to the tariff schedule and become subject to the annual price approval process. The principles applied should be consistent with those applied in determining prices for large non-residential and unique customers and the WIRO pricing principles.

Where businesses are required to undertake Government-specified recycled water projects or meet specified water targets, revenue shortfalls may occur, particularly where all opportunities to pursue commercial recycling projects have been exhausted.

In the case of the metropolitan water businesses, the Victorian Government specified new targets, which are to be met collectively, to substitute 6.2 billion litres of recycled water for potable water by 2015 and 10 billion litres by 2030. In response, businesses have proposed a number of recycled water projects that are aimed at meeting the specified targets. Further, the Government has allowed businesses scope to mandate third pipe reticulated recycled water systems in new developments in order to meet those targets.

These recycled water projects are expected to substitute recycled water for potable water, thereby improving the availability and security of potable water supplies. In such cases, the beneficiaries of these projects are water customers in general and it may be appropriate to recover any revenue shortfall in providing recycled water from the general customer base through variable water charges.

In cases where a water business does not propose to recover the full costs of providing recycled water, it must clearly identify the revenue shortfall and must demonstrate to the Commission that:

- it has assessed the costs and benefits of pursuing the recycled water project
- it has clearly identified the basis on which any revenue shortfall is to be recovered
- if the revenue shortfall is to be recovered from non-recycled water customers
  - the project is required by ‘specified obligations’ or
  - there has been consultation with the affected customers about their willingness to pay for the benefits of increased recycling.

In setting prices for recycled water, businesses also need to satisfy the regulatory principles specified in the WIRO (listed in chapter 8). In particular, businesses need to ensure that they have addressed any significant customer impacts and that customers are aware of, and can readily understand, the tariff structure for recycled water. Businesses should also consider whether recycled water could create incentives for inappropriate substitution of recycled water for potable water.

Paper, March for further information. These papers are available on the Commission’s website www.esc.vic.gov.au.

11.2 Overview of businesses' proposals

All of the retail businesses have proposed to continue setting non-scheduled recycled water prices according to the pricing principles approved by the Commission in the 2008 price review.

Melbourne Water provides bulk recycled water from both the Eastern and Western Treatment Plants. The recycled water service provided by Melbourne Water differs in quality and security of supply between customers. Services are provided under supply agreements, with prices calculated in accordance with the approved pricing principles. Melbourne Water has proposed to maintain its current approach to pricing recycled water in accordance with the pricing principles approved by the Commission in the 2008 price review.

Scheduled third pipe recycled water charges

City West Water, South East Water and Yarra Valley Water currently have two-part tariffs for third pipe residential recycled water services. South East Water and Yarra Valley Water charge a $20 fixed charge for recycled water and City West Water charges $26.22. The three retailers propose to set the recycled water usage charge at the respective business' first tier potable water usage charge.

For City West Water's non-residential recycled water customers, there is no fixed service charge and the scheduled non-residential recycled water usage charge is set at 75 per cent of the potable water usage charge. Yarra Valley Water's non-residential customers pay the same scheduled charges as their residential customers. None of South East Water's non-residential customers are currently on scheduled charges.

The three retailers have all proposed to continue to adopt the Commission's approach to recycled water pricing. Each business has proposed to increase all scheduled recycled water prices at the same rate as charges for all other services.

Werribee Irrigation District

For the Werribee Irrigation District (WID), Melbourne Water initially planned to set prices to be more cost reflective once the current supply agreements with Southern Rural Water expire in June 2009. Since the Commission's issues paper was released (raising concerns about this proposal), Melbourne Water has reached an agreement with Southern Rural Water to extend the current supply agreements for irrigators for a further two years, until June 2011.[93]

After 2011, Melbourne Water proposes to transition WID customers to cost reflective pricing for recycled water in order to improve the pricing signals in relation to cost and resource use. It indicated that the bulk recycled water price will need to more than double to be fully cost reflective.

Melbourne Water plans to phase in the required price increases to assist in managing customer impacts. It anticipates that Southern Rural Water will involve Melbourne Water in its customer consultation process to assist it in developing

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[93] Melbourne Water 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 18 February, pp. 4–6.

appropriate transition arrangements for moving to more cost reflective prices. Melbourne Water expects Southern Rural Water's *Western Irrigation Futures Study* to be available from this time to inform ongoing customer and pricing discussions. The study is expected to be completed in 2010.

For any recycled water provided above contracted volumes, Melbourne Water proposes to charge prices sufficient to recover its full cost of provision.

11.3 Responses to issues paper

Submissions relating to retail recycled water pricing were received from a number of peak bodies, businesses, customers and customer groups.

Scheduled third pipe recycled water charges

Several customer submissions argued that recycled water should continue to be heavily subsidised by the metropolitan potable water customer base. There were also submissions calling for increased subsidisation in the forthcoming regulatory period to provide further incentives for recycled water use.

Qenos argued that, where recycled water use substitutes for potable water use and thereby improves the availability and security of potable water supply, recycled water should be provided at a discounted rate to encourage its use.[94]

The Sandhurst Club advocated a freeze on recycled water prices at current levels.[95] Since recycled water is of lower quality than potable water, the Sandhurst Club argued that the recycled water price should not be the same as the first tier charge for potable water as they are not direct substitutes. Further, a higher price for recycled water would provide households with little incentive to connect to recycled water when water restrictions are eased.

At the public hearing, the retail water businesses explained that there already exists a significant degree of cross subsidy built into the price of recycled water. They indicated that the costs associated with delivering recycled water are approximately twice that recovered from recycled water customers. They argued that low income groups would suffer from increases in potable water prices to increase the subsidy for recycled water.

The Sandhurst Club also questioned whether the sewage discharge factors used by the water businesses to calculate sewage volumes were appropriate for customers in third pipe residential developments. It stated that the sewage discharge factor was applied to total water use including recycled water use. It argued that the factor should be lowered for recycled water customers to reflect the fact that most residential recycled water use is outside the home and is not discharged into the sewer.

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94 Qenos 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13* 6 February, pp. 2–3.

95 Sandhurst Community (in consultation with Hunt Club) 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13,* 1 February.

The Committee for Ballarat called for a pricing regime that would establish Victoria-wide prices for recycled water, with prices differentiated according to the grade of water quality.[96]

11.4 Draft decision

The Commission proposes to approve the current pricing principles approved in the 2008 price review final decision for setting prices for large non-residential or unique customers and for third pipe developments completed during the regulatory period.

Scheduled third pipe recycled water charges

The Commission has carefully considered customer arguments to set the price for recycled water delivered through mandated third pipe developments.

In the context of the current water restrictions, households with access to recycled water receive significant benefits from being able to use recycled water for outdoor uses that are restricted for customers without access to recycled water. In addition, in the absence of water restrictions, households (without access to recycled water) that use water for outdoor uses would generally use sufficient water to fall into the second tier of the usage charges for potable water. In light of these considerations, the Commission has concluded that it is reasonable to set the recycled water usage charge equal to the first tier usage charge for potable water.

However, the Commission acknowledges the Sandhurst Club's concern that proposed prices for recycled water will provide households with little incentive to connect to the service once potable water restrictions are eased. With a number of major augmentation projects coming into operation during the period and water restrictions expected to ease, customers may become less willing to pay for recycled water because of its lower quality than potable water.

The Commission will require businesses to develop a pricing strategy to be implemented when water restrictions are eased that will ensure customers have sufficient incentive to use recycled water.

In regard to sewage discharge factors for residential recycled water customers, the Commission requires the retailers, in response to this draft decision, to clearly set out in their 'Application of Prices' schedules the sewage discharge factors to be applied to recycled water customers and explain how sewage volumes are estimated from metered potable and recycled water use.

In regard to the suggestion that a uniform price be set for recycled water across Victoria, the Commission notes that the costs associated with treating and delivering recycled water to customers differ according to location, demand, and the sewerage profile of the area. Setting a uniform price for recycled water across Victoria would not be cost-reflective and would therefore not comply with the WIRO pricing principles.

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[96] The Committee for Ballarat 2009, ***Submission to the Metropolitan Melbourne Water Price Review 2009-13***, 9 February, p. 7

Werribee Irrigation District

The Commission proposes that Melbourne Water's charges to Southern Rural Water for providing recycled water to the Werribee Irrigation District continue to be calculated according to the existing pricing principles. The Commission will consult with Melbourne Water and Southern Rural Water closer to 2011 if more cost reflective pricing for recycled water to the Werribee Irrigation District after this time is proposed. The Commission will seek to ensure that any price increases are introduced gradually to minimise price shocks for customers.

The Commission considers that Melbourne Water's proposal to charge a price for recycled water supplied above contracted volumes that recovers the full cost of providing it is consistent with the pricing principles.

Draft decision

The Commission proposes to approve the pricing principles proposed by the businesses.

It proposes to approve the recycled water tariffs proposed by the metropolitan water businesses for third pipe customers as they are consistent with the Commission's pricing principles.

The Commission will require businesses to develop a pricing strategy to be implemented when water restrictions are eased that will ensure customers have sufficient incentive to use recycled water.

In response to this draft decision, each retailer will be required to provide the Commission its 'Application of Prices' schedule. The schedule should include a clear explanation of the sewage discharge factors applied to recycled water customers and the water volumes to which they are applied.

12 TRADE WASTE

Trade waste is waste, other than normal domestic sewage, that is discharged into the sewerage system by industrial and commercial customers. Trade waste charges are applied by each of the metropolitan retailers.

The charges are generally set as part of a defined schedule of tariffs that identify charges for a range of parameters including fixed charges, volume, and other key cost drivers such as biochemical oxygen demand (BOD) and suspended solids (SS). Where trade waste services are unique in nature (for example, due to discharge strength or volume), prices may be set on a case-by-case basis with reference to pricing principles included in a business' Determination.

12.1 Commission's approach to assessing trade waste tariffs

The Commission's approach to trade waste pricing is that prices must provide appropriate signals to trade waste customers about the relative merits of discharging to the sewerage system compared to alternatives such as waste minimisation and on-site treatment.

In general, cost reflective pricing will strengthen incentives for efficient and sustainable water use and waste discharge, including providing appropriate incentives for investments in changing production methods or extending on-site treatment to reduce trade waste to efficient and sustainable levels.

In the 2008 price review, the Commission approved, for the regional businesses, scheduled trade waste charges for standard types of trade waste and a set of principles for determining trade waste charges where a customer's trade waste volume or strength is unique and a separately calculated price is appropriate. These principles are:

- Volumetric and load based charges should, to the extent practicable, reflect the long run marginal cost of trade waste transfer, treatment and disposal.
- The total revenue received from each customer should be greater than the cost that would be avoided from ceasing to serve that customer, and (subject to meeting avoidable cost) less than the stand alone cost of providing the service to the customer in the most efficient manner.
- The methodology used to allocate common and fixed costs to that customer should be clearly articulated and be consistent with any guidance provided by the Commission.
- Charges should reflect reasonable assumptions regarding the volume and strength of trade waste produced by that customer.
- Depreciation rates and rates of return used to determine charges should be consistent with those adopted by the Commission in its final decision.

- Customers should be provided with full details of the manner in which charges have been calculated.
- Where applying these principles results in significant changes to charges or tariff structures, arrangements for phasing in the changes may be considered and any transitional arrangements should be clearly articulated.

The Department of Sustainability and Environment (DSE) is currently conducting a review of trade waste management. In the 2008 water price review the Commission decided that if any significant changes to trade waste charges or their calculation method are recommended during the regulatory period, businesses would be able to restructure their tariffs under the hybrid form of price control (set out in chapter 14).

12.2 Overview of proposed trade waste charges

City West Water, South East Water and Yarra Valley Water have all proposed to maintain their current trade waste tariff structures and to use the same pricing principles for calculating non-scheduled trade waste charges. Further, the retailers proposed to increase all scheduled trade waste charges in proportion with increases in retail water and sewerage prices.

City West Water's trade waste charges consist of a series of fixed trade waste agreement and application charges, and usage charges applied to discharge volumes and the amount of pollutant load discharged (biological oxygen demand, suspended solids, total kjeldahl nitrogen and total dissolved solids). It also applies a number of trade waste charges relating to food waste.

South East Water's and Yarra Valley Water's trade waste charges also consist of fixed trade waste agreement and application charges, usage charges (volume, biological oxygen demand, suspended solids, and nitrogen) and fixed food waste charges. South East Water also has a separate charge for sulphur discharge while Yarra Valley Water has a charge for total dissolved solids.

Details on the pricing structures and current scheduled trade waste charges are in the retailers' approved price schedules.[97]

12.3 Responses to issues paper

Melbourne Water suggested that its salt charges be passed on to trade waste customers by the retailers to enable clear and consistent price signals. It also noted that it would be important to understand the non-price initiatives of the retailers to reduce salt loads if the charge is not passed on. The Commission sought feedback on whether the retailers should pass through Melbourne Water's proposed increase in its salt charges.

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[97] The retailers' price schedules can be accessed through the Commission's website at www.esc.vic.gov.au.

Qenos and the Australian Industry Group raised concerns about the introduction of salt charges and the impact on industrial customers.

Yarra Valley Water indicated that it would not change its trade waste pricing structures because it does not have demand forecasts to allow it to understand the impact of introducing a salt charge on customers. It proposed to pass through the costs in the following regulatory period after customer impacts were assessed and customers were consulted.

South East Water noted that it has not previously adopted a salt (total dissolved solids) charge as it was not considered to be significant enough to drive customer behaviour. It further indicated a preference for reviewing the structure of trade waste tariffs, including the basis for charging for salt, once Melbourne Water's trade waste load parameters have been established. It also noted that some customers' bills would more than double in real terms by 2012-13 if a charge on inorganic total dissolved solids (ITDS) was introduced. South East Water also indicated that it would vary its nitrogen charge to total kjeldahl nitrogen if the corresponding charge for Melbourne Water is approved.

12.4 Draft decision

Since the retailers' trade waste costs are largely driven by Melbourne Water's bulk sewerage charges, the Commission considers it appropriate that retail trade waste prices reflect Melbourne Water bulk sewerage charges. Currently all three retailers have charges for discharge volumes, biological oxygen demand and suspended solids. City West Water and Yarra Valley Water also have charges for total kjeldahl nitrogen while South East Water proposes to introduce this charge if it is approved for Melbourne Water.

However, the approach by the retailers differs from that of Melbourne Water in that City West Water and Yarra Valley Water have not proposed to change their charge on total dissolved solids to ITDS. South East Water does not propose to apply either charge over the regulatory period.

The Commission is concerned about the lack of an integrated approach to trade waste pricing between Melbourne Water and the retailers, particularly in regard to salt charges. In order to ensure consistency of approach, the Commission considers it appropriate for City West Water and Yarra Valley Water to change their total dissolved solids charge to ITDS and for South East Water to introduce an ITDS charge.

While recognising it is not feasible to introduce this charge from 2009-10, the Commission considers there is scope to do so within the regulatory period. The timing of this change will depend on the availability of information required to implement this change, including assessing customer impacts. There seems to be some uncertainty about the level and quality of information that is currently available. For example, Yarra Valley Water cited the lack of customer data on ITDS for not proposing to introduce the charge during the regulatory period but Melbourne Water stated in its Water Plan that there is industry-wide data available for ITDS.

As part of this draft decision, the Commission proposes to approve the retailers' trade waste prices for 2009-10. It also proposes to provide notional approval for trade waste prices for the remaining years of the regulatory period but to require the retailers to review and amend their trade waste tariffs under the hybrid form of price control.

In response to this draft decision, the retailers are required to identify when amendments to trade waste tariffs, including the introduction of ITDS, will be feasible within the regulatory period. In doing so, and to encourage an integrated approach to the issue, the retailers should consult with each other and Melbourne Water. The retailers should also start collecting the information required to assess the customer impacts of varying its trade waste charges, in particular regarding the ITDS charge.

The Commission is also mindful of the customer impacts that could be caused by rapid increases in the ITDS charge and is concerned that some customers may be disproportionately affected. The Commission would therefore support a gradual introduction of higher ITDS charges. Further, it would expect retailers to completely pass through Melbourne Water's ITDS charge to trade waste customers by the end of the regulatory period.

Consistent with the 2008 water price review, the Commission proposes to require retailers to restructure their tariffs under the hybrid form of price control if any significant changes are recommended as part of the DSE trade waste review during the regulatory period. It also proposes to approve the existing pricing principles for calculating non-scheduled trade waste prices.

Draft decision

The Commission proposes to approve the existing pricing principles for calculating non-scheduled trade waste prices for the regulatory period.

The Commission proposes to approve the retailers' proposed scheduled trade waste tariffs for 2009-10 and to provide notional approval for trade waste prices for the remaining years of the regulatory period.

The Commission proposes to require the retailers to review and amend their trade waste tariffs during the regulatory period. The amendments should include introducing charges for inorganic total dissolved solids (ITDS).

In response to this draft decision, the retailers are required to identify when, during the regulatory period, a review of trade waste tariffs will be undertaken.

Retailers are to start collecting the information required to assess the customer impacts of varying its trade waste charges, in particular regarding inorganic total dissolved solids (ITDS).

13 OTHER SERVICES

This chapter discusses new customer contributions and miscellaneous charges.

13.1 New customer contributions

New customers and property developers typically pay upfront contributions to the metropolitan water businesses when they connect to their water and sewerage networks. Existing customers are also required to make upfront contributions if they connect to additional services. One of the Commission's responsibilities is to approve these upfront contributions, known as new customer contributions, or specify the method by which they are calculated.

13.1.1 Current arrangements

In the 2008 water price review final decision for regional and rural water businesses, the Commission approved a combination of scheduled new customer contributions and pricing principles for determining how the costs of new infrastructure to service new developments are to be allocated between the customer and the water business.[98] These arrangements are currently in place for the metropolitan retailers for 2008-09.

The current scheduled new customer contributions for water, recycled water and sewerage are determined according to the following categories:

- Category 1: $550 per lot per service for water, sewerage and third pipe recycled water for developments that are designed to have minimal impact on future water resource demands and that can be catered for without additional investment to upgrade the medium-term distribution capacity. These developments are typically a lot with an area no greater than 450 square metres.
- Category 2: $1100 per lot per service for water, sewerage and third pipe recycled water for urban developments that will require further investment in infrastructure. These developments are typically traditional Greenfield urban developments with lot sizes between 450 square metres and 1350 square metres.
- Category 3: $2200 per lot per service for water, sewerage and third pipe recycled water for developments designed in such a way that properties will create demand for water resources over and above high-density developments and that will require further investment in infrastructure. These developments are typically Greenfield developments with lot sizes exceeding 1350 square metres, for

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98 For further discussion, see Essential Services Commission 2008, *2008 Water Price Review – Final Decision,* June, chapter 12. The scheduled charges and pricing principles for new customer contributions are set out in each water business' price Determination, available on the Commission's website at www.esc.vic.gov.au.

example, lots with potentially large outside water use that will influence near term investment in infrastructure decisions.

Developments also connecting to recycled water are subject to a 50 per cent reduction in the applicable scheduled charge for water. The scheduled per lot contributions are increased each year in line with inflation and apply equally to new residential and non-residential customers.

The key features of the current pricing principles for new customer contributions are:

- New customers are generally responsible for providing assets that are to be installed specifically to service their property or development (reticulation assets).
- Water businesses are responsible for assets that are generally provided to service more than one development (shared distribution assets).
- The main determinant of whether an asset is a reticulation asset or a shared distribution asset is pipe size. Water mains that are 150 mm or less in diameter or sewer mains that are 225 mm or less in diameter and assets associated with pipes of this size (pump stations, for example) are generally considered to be reticulation assets, although there may be cases where the size thresholds are not appropriate.
- In cases where a developer is required to provide reticulation assets that exceed the requirements of their development in a material respect, the developer can only be required to contribute to the costs of the reticulation assets an amount that reflects the requirements of their development. The balance of the costs of the reticulation assets may be recovered via contributions from subsequent customers connecting to the reticulation assets in question.
- Water businesses may recover a contribution from developers for the provision of shared distribution assets if the assets do not form part of a logically sequenced network expansion and could not reasonably be expected to be required by the business within a short to medium term planning horizon.
- A non-scheduled contribution equivalent to 40 per cent of the cost of the shared assets applies if the assets could reasonably be expected to have been required by the business within a long term planning horizon.
- A non-scheduled contribution equivalent to 70 per cent of the cost of the shared assets applies if the assets could not reasonably be expected to have been required by the business within a long term planning horizon.
- Where a water business seeks to recover a non-scheduled contribution for shared distribution assets, it must inform the developer of its right to appeal any non-scheduled charge to the Commission.

Melbourne Water applies drainage developer charges to new customers located in defined drainage development schemes. In its final decision on the 2008 price review, the Commission approved pricing principles for drainage developer charges for the 2008-2013 period. These principles are not subject to this review.[99]

13.1.2 Overview of businesses' proposals

City West Water proposed to adopt the approach to setting new customer contributions as approved by the Commission in the 2008 water price review. South East Water and Yarra Valley Water generally proposed to adopt the Commission's approach with some minor variations.

South East Water proposed a separate methodology for determining bring forward costs for works in defined sewerage backlog areas. It noted that there are clearly defined plans for sewerage backlog works, which have been developed in consultation with stakeholders. It proposed that the financing costs of bringing forward construction of sewer backlog works be based on the specific timeframes contained in these plans, rather than the discrete bring forward categories under the current arrangements. South East Water also noted that, on advice from the Department of Sustainability and Environment, it proposes to maintain its nominal charge of $500 for backlog customers connecting to the network.

Yarra Valley Water proposed that the scheduled new customer contribution for water should not be reduced by 50 per cent where the property also connects to recycled water. It indicated that new customer contributions are notional amounts that do not reflect the cost to the water businesses to extend the networks and result in funding shortfalls that are borne by the general customer base. It also noted that reductions in potable water use by customers do not equate to an equivalent reduction in pipe size as water assets must meet fire fighting requirements. It further argued that a reduction in pipe size does not equate to an equivalent reduction in cost as excavation and other costs do not change.

Yarra Valley Water also proposed that there be no sharing of the costs of reticulation assets between developers in cases where a developer is required to provide reticulation assets that exceed the requirements of its development in a material respect. It argued that this approach represents an administration burden for little gain. It further argued that this approach does not send appropriate cost signals as it overstates the incremental cost of connection and is not likely to promote efficient decisions.

13.1.3 Draft decision

The Commission did not receive any comments or submissions about new customer contributions in response to the issues paper.

The Commission notes that it approved a standard set of scheduled charges and pricing principles for new customer contributions in the 2008 water price review. It also noted that variations to the current approach for the metropolitan retailers would result in an inconsistency between metropolitan and regional Victoria, but

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[99] See Essential Services Commission 2008, *2008 Water Price Review – Final Decision*, June and Essential Services Commission 2008, *2008 Water Price Review, Melbourne Water Drainage and Waterways Water Plan 2008-13 — Draft Decision*, May.

that it would consider the variations proposed in light of any business specific issues that the proposed variations are intended to address.

The Commission proposes to approve South East Water's proposal for additional pricing principles for calculating new customer contributions in sewerage backlog areas. Specifically, it proposes to approve the following formula for calculating non-scheduled charges in these areas:

$$NCC = 1 - \left[\frac{1}{(1+r)^n} \right]$$

where:

NCC is the non-scheduled new customer contribution, expressed as a percentage and applied to final construction costs

r is the implied pre-tax weighted average cost of capital as approved by the Commission and

n is the number of years the backlog sewerage works have been brought forward.

This formula was adopted during the 2005-08 regulatory period for calculating non-scheduled charges for all developments where shared assets were constructed ahead of schedule. While it was difficult to determine a specific bring forward timeframe for many developments, this method worked effectively in sewerage backlog areas as the timeframes for the construction of works are clearly defined. Further, the Commission considers that this approach is likely to result in more appropriate and cost reflective charges in sewer backlog areas than the discrete bring forward categories for other developments. As South East Water and Yarra Valley Water both have sewerage backlog areas, the Commission proposes to approve the additional pricing principles for both businesses.

The Commission proposes not to approve the variations proposed by Yarra Valley Water to the current arrangements.

In regard to discounting the contribution for potable water for properties that also connect to recycled water, the Commission notes that the scheduled new customer contributions are notional charges and are not intended to recover the full cost of providing the infrastructure. As such, there is no requirement for the discount to exactly reflect the reduction in costs from installing both recycled and potable water. For administrative simplicity and consistency with regional urban water businesses, the Commission proposes to continue the 50 per cent discount on the potable water contribution for properties that also connect to recycled water.

In regard to the sharing of costs of reticulation assets, the Commission included additional pricing principles in each regional water business' price Determination as part of the 2008 water price review. The pricing principles state that:

> *If a developer is required to provide reticulation assets that exceed the requirements of their development in a material respect, the developer can only be required to contribute to the costs of the reticulation assets an amount that reflects the requirements of their*

development. The balance of the costs of the reticulation assets in such a case is to be recovered from future developers.

These principles were added for situations where a single developer is required to provide significant amounts of reticulation sized assets which are likely to also be used by other developers. In these cases, the developer constructing the assets will only receive a portion of the benefits from the assets.

The distinction between reticulation and shared distribution assets appeared to be effective in most cases in the previous regulatory period. However, it also created a number of examples where the 'first' developer was disadvantaged by having to fund reticulation assets that would also significantly benefit other developers, who were not required to contribute to the costs.

While noting that the additional pricing principles deviate somewhat from a strictly incremental cost approach, the Commission considers that they allow for more equitable sharing of costs between developers. Further, the Commission expects that sharing of reticulation costs would only occur when a strict distinction between reticulation and shared distribution assets results in material misallocation of costs (as described above) between benefitting developers. The Commission therefore does not expect that the administrative costs of these pricing principles would be material.

All other aspects of City West Water's, South East Water's and Yarra Valley Water's proposals for new customer contributions are consistent with the current arrangements, which were approved in the 2008 water price review. The Commission therefore proposes to approve all other aspects of the retailers' proposals for new customer contributions.

Draft decision

The Commission proposes to approve the scheduled charges and pricing principles for calculating new customer contributions that are currently in place for the metropolitan retailers.

The Commission proposes to approve additional pricing principles for South East Water and Yarra Valley Water for calculating non-scheduled new customer contributions in sewerage backlog areas. The Commission proposes that these charges be calculated according to the following formula:

$$NCC = 1 - \left[\frac{1}{(1+r)^n} \right]$$

where:

NCC is the non-scheduled new customer contribution, expressed as a percentage and applied to final construction costs

r is the implied pre-tax weighted average cost of capital as approved by the Commission and

n is the number of years the backlog sewerage works have been brought forward.

The Commission proposes not to approve the variations proposed by Yarra Valley Water regarding discounts on potable water contributions for recycled water customers and sharing of reticulation costs between developers.

13.2 Miscellaneous charges

In addition to water and sewerage services, the metropolitan retailers also provide other ‘miscellaneous’ services that are supplied in connection with these core services. Examples of miscellaneous services include new connections and tappings, special meter reads, property information statements and applications to build over easements. Like water and sewerage services, miscellaneous services are prescribed services under the WIRO and are subject to price regulation by the Commission.

13.2.1 Current arrangements

The Commission has previously highlighted the practical difficulties in regulating miscellaneous charges. These include the large number of services provided by some businesses, differences in terminology between businesses, the relatively small amount of revenue generated from miscellaneous services and the ability to assess the cost basis of miscellaneous charges.[100]

[100] For further discussion see Essential Services Commission 2008, *2008 Water Price Review, Regional and Rural Water Businesses’ Water Plans 2008-13 – Draft Decision*, March, chapter 14 and Essential Services Commission 2008, *2008 Water Price Review, Regional and Rural Water Businesses’ Water Plans 2008-13, Melbourne Water’s Drainage and Waterways Water Plan – Final Decision*, June, chapter 14.

In the 2008 water price review, the Commission introduced new arrangements for regulating miscellaneous charges for regional urban businesses. Each business was required to nominate a set of ‘core’ of miscellaneous services, which would consist of the business’ most important miscellaneous services and would generate a significant proportion of miscellaneous revenue. Prices, and a brief description of each core miscellaneous service, were approved for each business. These prices are subject to individual price caps for the current regulatory period, with any single year increase in miscellaneous charges capped at the average annual increase for the business’ core services to avoid any disproportionate customer impacts. Prices for other ‘non-core’ miscellaneous services are set in accordance with pricing principles related to actual cost.

As part of the 2008 price review, the Commission approved prices for core miscellaneous services proposed by the retailers for 2008-09 and pricing principles for calculating prices of non-core miscellaneous services.

13.2.2 Overview of businesses’ proposals

In their Water Plans, the three metropolitan retailers proposed prices and pricing principles for miscellaneous services that are consistent with the current arrangements.

City West Water, South East Water and Yarra Valley Water have all proposed to retain their core sets of miscellaneous services from 2008-09 for the next regulatory period.[101] They have indicated that proposed prices for miscellaneous services are generally based on the cost of providing the relevant service. Where a miscellaneous charge had previously been set below the cost of providing the service and a transition to cost reflective pricing has been proposed, the retailers have proposed to cap any single year price increase to the annual average price increase for the business’ core services. [102]

Melbourne Water does not have any major miscellaneous services related to its bulk services. It proposes that any new miscellaneous service introduced during the regulatory period be set in accordance with the current pricing principles, which require that the prices reflect the cost of providing the service. Melbourne Water has a number of miscellaneous charges related to waterways and drainage, which have already been approved for the forthcoming regulatory period as part of the 2008 water price review.

13.2.3 Draft decision

The Commission did not receive any submissions on miscellaneous charges from stakeholders in response to the issues paper.

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[101] The retailers’ current core miscellaneous services are listed in the each business’ tariff schedule, which can be accessed on the Commission’s website www.esc.vic.gov.au.

[102] See the relevant business’ Water Plan, available on the Commission’s website at www.esc.vic.gov.au, for details on proposed miscellaneous charges (City West Water: pp. 69-61, South East Water: pp. 103-104, Yarra Valley Water: pp. 86-88).

The Commission has reviewed the proposed miscellaneous charges for each retailer and considers all aspects of their proposals to be consistent with the current arrangements, which were approved in the 2008 water price review. As such, the Commission proposes to approve the miscellaneous charges proposed by the retailers.

The Commission also proposes to approve pricing principles for Melbourne Water to calculate any new miscellaneous charges related to its bulk water and sewerage services over the regulatory period.

Draft decision

The Commission proposes to approve the miscellaneous charges proposed by the metropolitan businesses.

14 ADJUSTING PRICES

In the final decision on the 2008 price review, the Commission approved two mechanisms to assist the regional businesses in managing uncertainty over the regulatory period:

- a hybrid form of price control (for the regional urban businesses) that combines individual price caps with scope for businesses to adjust their tariff strategies (and/or rebalance prices) at the time of the annual price review, and
- an uncertain and unforeseen events mechanism that sets out a process for applying for a price adjustment, either during or at the end of the regulatory period, to take account of events that were uncertain or unforeseen at the time of the price review process, such as major capital projects that were uncertain in timing or cost, significant differences between actual and forecast demand levels, changes in legislative and other Government-imposed obligations, and catastrophic events (such as fire, earthquake or act of terrorism).

In supplementary guidance provided to the businesses in September 2008, the Commission suggested that these same mechanisms would be appropriate for the metropolitan businesses since they will also have to deal with a higher than normal level of uncertainty over the coming regulatory period.

14.1 Overview of the businesses' proposals

City West Water, South East Water and Melbourne Water have all proposed a hybrid form of price control, as approved for the regional urban businesses in the 2008 price review. Yarra Valley Water proposed a revenue cap for services where costs do not vary with volumes and a pass-through mechanism for services where costs vary with volumes, such as bulk water charges.

All businesses supported a mechanism for within-period or end-of-period price adjustments to take account of uncertain and unforeseen events, such as those identified in the final decision on the 2008 price review. Melbourne Water proposed a threshold of one per cent of revenues while Yarra Valley Water proposed a threshold based on a one per cent or greater annual adjustment to prices (with a maximum price adjustment of four per cent in any one year).[103] South East Water suggested that the Commission specify the degree of divergence from original estimates required before an application for an adjustment could be made.

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[103] A threshold based on a one per cent adjustment to prices would be equivalent to a threshold of around 10 per cent of revenues. The threshold approved by the Commission for the 2005-08 regulatory period was 2.5 per cent of revenues.

14.2 Responses to issues paper

The Commission noted, in its issues paper, that it did not set a threshold for applications under the uncertain and unforeseen events mechanism in its final decision on the 2008 price review for the regional urban businesses. The metropolitan businesses have asked the Commission to reconsider its decision not to set a threshold in this price review.

Melbourne Water also proposed, in its response to the issues paper, that:

> *an annual review of demand is necessary to determine whether there are material variations between actual demands and the estimates used by the Commission in its final decision.*[104]

South East Water proposed that the Commission should automatically re-open the retailers' price determinations in the event that the Commission considers an application by Melbourne Water for an adjustment under the mechanism.

14.3 Draft decision

The Commission proposes to approve a hybrid form of price control for the four metropolitan businesses that combines individual price caps with scope for businesses to apply during the period to adjust their tariff strategies (and/or rebalance prices) at the time of the annual price review. It considers that the hybrid form of price control is more appropriate in the current circumstances than the revenue cap and pass-through mechanism proposed by Yarra Valley Water in balancing the needs of businesses for revenue certainty and customers for price certainty.

The Commission also proposes to approve an uncertain and unforeseen events mechanism that sets out a process for applying for a price adjustment to take account of events that were uncertain or unforeseen at the time of the final decision. As provided for in the Commission's final decision on the 2008 review, the Commission will only consider applications that relate to events that do not fall within the businesses' control and cannot therefore be effectively managed by the businesses. This provides an incentive for the businesses to manage their costs where it is possible for them to do so.

In response to the businesses' submissions, the Commission has reconsidered whether a threshold should be set for applications by the metropolitan businesses under this mechanism.

The Commission maintains the view that defining materiality thresholds would reduce businesses' and the Commission's flexibility to make appropriate adjustments for uncertain and unforeseen events. Since a number of aspects of the businesses' activities are subject to a relatively high degree of uncertainty, it considers that variations from the assumptions used in determining prices should be considered in totality, rather than taking account of each change separately. In

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104 Melbourne Water 2009, *Submission to the Metropolitan Melbourne Water Price Review 2009-13*, 18 February.

some cases, positive and negative changes may offset each other, resulting in little impact on businesses' costs or revenues overall and requiring no price adjustment. In other cases, a number of small changes (that would individually fall below a materiality threshold) may add up to a significant impact, either in one year or taken together over a series of years during the regulatory period.

In terms of the timing of any price adjustment, a within-period price adjustment may be approved in some cases. In other cases, adjustments may be deferred until the end of the regulatory period, particularly when there is a possibility that variations in later years' costs and/or demand levels may offset differences from assumed levels in the particular year in question.

The Commission has also taken into account potential impacts on customers. It considers that retaining flexibility to take account of all relevant factors in deciding whether or not, and when, to make any price adjustments under the mechanism would assist in avoiding unnecessary volatility in prices and promote greater certainty for customers.

After weighing up all of these factors, the Commission proposes not to set a threshold for applying for a price adjustment under the uncertain and unforeseen events mechanism. However, to assist the businesses in deciding whether and when to make an application under the mechanism, the Commission notes that, in making their decisions, the businesses should consider:

- the net impact on costs or revenue of all changes that have occurred during the period under consideration and whether the net effect is significant, and
- whether offsetting changes in costs or demand in later years of the regulatory period are possible and, if so, the likelihood of such changes.

The Commission will monitor demand and costs on an ongoing basis during the regulatory period to check whether circumstances have changed sufficiently to require a review under the mechanism. In doing so, the Commission will also monitor whether any adjustments to Melbourne Water's bulk water or sewerage charges would justify a review of the retail businesses' costs and prices. The Commission proposes, as for the regional businesses, that reviews under the uncertain and unforeseen events mechanism could be requested by the businesses or initiated by the Commission.

Draft decision

The Commission proposes to approve individual price caps for City West Water, South East Water, Yarra Valley Water, and for Melbourne Water in respect of its bulk water and sewerage services.

The Commission proposes to introduce a hybrid form of price control (individual price cap with tariff basket). Each business may apply during the period to adjust its prices or tariff strategy at the time of the annual price approval process. Businesses proposing to adjust their tariff strategies would have to demonstrate to the Commission that they have clearly articulated their new tariff strategy (or explained how the proposed price changes are consistent with their existing tariff strategy), undertaken appropriate customer consultation and addressed customer impacts. The Commission may then approve amended individual price caps consistent with the new tariff strategy for the remainder of the regulatory period.

The Commission proposes to approve an uncertain and unforeseen events mechanism that sets out a process for applying for a price adjustment, either during or at the end of the regulatory period, to take account of events that were uncertain or unforeseen at the time of the price review process, such as major capital projects that were uncertain in timing or cost, significant differences between actual and forecast demand levels, changes in legislative and other Government-imposed obligations, and catastrophic events (such as fire, earthquake or act of terrorism).