ESSENTIAL SERVICES COMMISSION

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2008 WATER PRICE REVIEW

REGIONAL AND RURAL BUSINESSES WATER PLANS 2008-2013 — DRAFT DECISION

MARCH 2008

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PREFACE

On 8 October 2007, 16 regional urban and rural water businesses submitted Water Plans to the Commission for assessment. These plans set out the prices that each of the businesses propose to charge for their water, sewerage and other related services for the five year period commencing 1 July 2008. The plans also include information about the strategies and initiatives that are proposed and the revenue needs of the businesses from 2007-08 to 2012-13.

The Commission is required to assess the Water Plans against principles set out in the Water Industry Regulatory Order (WIRO) and to decide whether to approve the prices proposed by the businesses or the manner in which those prices are to be calculated or otherwise determined. This is the third review of water prices undertaken by the Commission since it became the economic regulator of the Victorian water industry in 2004.

This Draft Decision sets out the Commission's views on whether to approve the prices proposed by the businesses in their Water Plans as satisfying the principles set out in the WIRO. The Draft Decision also outlines the Commission's reasons for non approval and suggested amendments or other actions that may result in the proposals being approved.

The Commission has also prepared separate documents that summarise each of the business's proposals and the nature of any suggested amendments. These are contained in Volume II of this Draft Decision.

In response to this Draft Decision, each business is required no later than 9 May 2008, to submit a revised schedule of tariffs giving effect to any required amendments set out in this Draft Decision and any other information required by the Commission.

Consultation with stakeholders is an important part of the Commission's decision making process. Customers and other interested parties are invited to comment on the adjustments outlined in this Draft Decision. This can be done either by sending written comments to the Commission or by expressing your views at various stakeholder meetings to be held around the State. The Commission will accept all submissions received up to 9 May 2008 and will make all submissions available on its website. Details of how to respond are provided on the following page.

Copies of this Draft Decision and the Water Plans submitted by each business are available on the Commission's website www.esc.vic.gov.au or by contacting the Commission on 1300 604 969.

Greg Wilson
Chairperson

HOW TO RESPOND TO THIS DRAFT DECISION

We encourage as many stakeholders as possible to provide comment on the 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 will hold information sessions in a number of regional centres in April. The information sessions are aimed at providing an opportunity for interested parties to understand the key features of the Draft Decision. Details of these meetings will be placed on the Commission's website.

Provide written comments or submissions

You can send a written submission or comments in response to the Draft Decision. Written comments are due by 9 May 2008.

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 you do not have access to the Internet, you can contact Commission staff to make alternative arrangements to view copies of the submissions.

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.

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EXECUTIVE SUMMARY

The Commission's task

In October 2008, 16 water businesses servicing rural and urban customers, submitted Water Plans to the Commission for assessment.[1] Melbourne Water also submitted a Water Plan for its waterways and drainage services.[2] These Water Plans set out the revenue and hence prices that each business sought to deliver water, sewerage and other related services for the five year regulatory period from 1 July 2008. The proposed average price increases ranged from 0.3 per cent per annum to 17.2 per cent per annum (excluding inflation).

The three metropolitan retailers and Melbourne Water (in the case of bulk water and sewerage services) were not required to submit Final Water Plans to the Commission as a part of this process. Interim price increases, determined by the Minister for Water for 2008-09, will be adopted for these businesses. The decisions made by the Commission with regard to new customer contributions, recycled water and miscellaneous charges as part of this price review process will apply to the metropolitan retailers and Melbourne Water.

The Commission is required to assess proposed prices and revenue against the principles set out in the Water Industry Regulatory Order (WIRO). Ultimately, the Commission must decide whether to approve the proposed prices or alternatively to specify the prices to apply if it is not satisfied that they were calculated or determined consistent with the regulatory requirements.

In assessing the businesses' Water Plans, the Commission has had regard to subsequent information provided by the businesses, the views and recommendations of consultants used by the Commission to assist it in assessing the businesses' forecasts, and information and issues presented.

The Commission's Draft Decision is that all businesses' pricing proposals need to be adjusted to reflect the Commission's view of the amount of revenue that is required by each business to deliver its proposed services and program of works. For most businesses the Commission's Draft Decision increases the amount of revenue that each business may recover compared to what they originally sought.

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1 The businesses subject to this review include Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Westernport Water, Western Water, FMIT, Goulburn-Murray Water and Southern Rural Water. The three metropolitan retailers were not required to submit final Water Plans to the Commission.

2 Melbourne Water submitted a final Water Plan for its waterways and drainage services in November 2007.

The Draft Decision does not set out the Commission's proposed adjustments for Melbourne Water's drainage and waterways proposals. Given the later date for submission of the Water Plan for these services the Commission is still in the process of reviewing Melbourne Water's proposals. The Commission proposes to release a separate Draft Decision for Melbourne Water setting out any proposed amendments by the end of April 2008.

The reasons for the Commission's Draft Decision are set out in Volume I. Volume II summarises each of the businesses' proposals and the Commission's amendments.

This is a Draft Decision and there is an opportunity for water businesses, customers, regulatory agencies and other stakeholders to influence the Commission's current thinking and the outcomes for customers before it makes its Final Decision on the prices to apply from 1 July 2008.

Dealing with uncertainty

Over the last few years, Victorian water businesses and their customers have been dealing with many challenges associated with prolonged drought conditions. Most customers in the State have been subject to water restrictions and a number of businesses have faced significant security of supply issues. In response to these security of supply issues a number of businesses are proposing to significantly augment their supply systems over the forthcoming regulatory period.

An issue for this price review is the continuing impact of the drought and the ability of businesses to adequately reflect its impact in their forecasts of expenditure and demand. The uncertainty arises because the forecasts used by the Commission to determine prices may end up varying significantly from actual performance.

Typically, the Commission does not adjust prices (once they have been approved) to reflect differences between actual and forecast costs of service provision or demand. Under this approach businesses are expected to manage any differences in costs and demand during the regulatory period. Businesses have an incentive to be efficient because they cannot adjust prices just because costs end up being more than forecast. To the extent that costs end up being lower (and/or demand ends up being higher) than forecast, the business retains the benefits during the regulatory period; similarly, where costs are higher than forecast (and/or demand ends up being lower), the business bears the loss. This was the approach adopted by the Commission for the first regulatory period.

Given the continued uncertainty associated with the impact of the drought and concerns raised by businesses the Commission is proposing that a more flexible approach be adopted for the forthcoming regulatory period. It has accepted that there is a need for mechanisms to adjust prices during the period to reflect differences between the forecasts used to determine prices and actual outcomes.

In the case of major capital projects that are known but not fully committed to, the risk is that if they are included in the forecasts and the project does not eventuate prices will be higher than they otherwise would be. Conversely if they are not included in the forecasts but go ahead and there is no adjustment mechanism, businesses carry the additional financing costs until the regulatory asset base is updated at the subsequent review of prices.

The Commission has identified a number of capital projects that will be subject to a pass through mechanism that will allow prices to be adjusted once the timing or cost is more certain. The costs associated with these projects have not been reflected in the respective business's revenue requirement. Once the project is more certain the business will be required to apply to the Commission to have prices adjusted to reflect the impact of the project. This pass through mechanism will only apply to those projects that have been identified by the Commission.

In the case of demand, the uncertainty arises because actual demand ends up being lower or higher than what was forecast. Without a mechanism to adjust prices to reflect actual demand the business bears the full impact of any difference. The impact of the continuing drought and restrictions has resulted in actual demand (and hence revenue) being significantly less than forecast for the first regulatory period. Some businesses have sought to recover this foregone revenue over the forthcoming regulatory period.

The Commission is proposing to deal with this demand uncertainty through a within period adjustment to reflect differences in actual demand and the forecasts used to set prices initially. The mechanism would allow the Commission or a business to seek to adjust prices during the regulatory period if actual demand ends up materially different to that forecast. This mechanism is intended to be symmetrical in that prices could be adjusted in cases where actual demand ends up being higher or lower than forecast.

The Commission is also proposing to continue with the mechanisms introduced in the first regulatory period for dealing with changes in legislative obligations and catastrophic events.

Key outcomes

The businesses are proposing a significant program of capital works over the regulatory period to improve security of supply through augmentation, improve quality and environmental outcomes through water and sewerage treatment, increase recycling and reuse, pipeline and improve rural channels, improve reliability and service new towns. The Commission's Draft Decision provides for the businesses to deliver 2.5 billion in capital expenditure over the regulatory period.

Each business has identified the top ten capital projects that will be delivered over the regulatory period (these are set out in Volume II). The largest capital project s committed to be delivered by each business for the forthcoming regulatory period are:

- Barwon Water — Melbourne Interconnection (water), Geelong Trunk Sewerage Strategy
- Central Highlands Water — Ballarat Sewer System Upgrade, Goldfields Pipeline Ballarat interconnection
- Coliban Water — completion of Goldfields Pipeline interconnection, expansion of Recycled Water Reuse and Third Pipe Supplies

- East Gippsland Water — Water supply strategy and treatment plants including Mitchell River Water Supply System
- Gippsland Water — completion of Water Factory, Loch Sport Servicing Project and Coongulla Waste System Project
- Goulburn Valley Water — Broadford Pipeline
- Lower Murray Water (Urban) — Koorlong waste water treatment plant (urban), Merbein Pipeline and Pump Station (rural)
- North East Water — Bright Porepunkah off-stream storage
- South Gippsland Water — Poowong/Loch Nyora Sewage Scheme
- Westernport Water— Raising of Candowie Reservoir
- Western Water — Melton outfall sewer
- Wannon — Hamilton Grampians interconnection pipeline
- FMIT — L South Sub Area Partial Replacement Program
- GWMWater — Wimerra Mallee Pipeline Project
- Goulburn Murray Water — Surface Water Management Program, Dam Safety Upgrades Program

The Commission will monitor the progress of each water business in delivering the outcomes promised. The businesses will have an opportunity through the annual performance report to explain to customers where and why projects have been delayed or replaced by other projects. It is important to note that the expenditure assumptions made by the Commission to determine prices do not represent amounts the businesses are required to spend or direct to particular activities or projects. Over the regulatory period, it is reasonable to expect that businesses may need to reprioritise or alter their capital programs in response to changing circumstances. The annual performance report will provide an opportunity for businesses to explain any changes as well as implications for any outcomes committed to in their Water Plans.

Consultation

Consultation with businesses, customers and other stakeholders plays an important role in the Commission's price review process. The Commission has used comments from customers and other stakeholders in submissions and meetings to help it form its position on the businesses' proposals. During this review process, it has extended to businesses an offer to meet with their customer committees to enable the Commission to gain a better understanding of how these committees operate and their role in developing the Water Plans. These meetings also provided another opportunity for customer representatives to provide comments to the Commission on the businesses' proposals and on the review process more generally.

Consultation between the businesses and their customers on Water Plans is also important, both for customers in understanding what businesses are proposing to deliver and the price implications and for the businesses in receiving feedback from customers on their preferences regarding outcomes, their willingness to pay and potential customer impacts.

In the 2005 and 2006 price reviews, the Commission raised some concerns about the extent and nature of business consultation with customers (and regulators). It noted that the businesses had not had sufficient time to develop the detail required to support some of their proposals and to consult effectively on them. Consequently, customers' ability to provide informed comments on the appropriateness of various proposals was limited. The Commission highlighted that there were opportunities to improve the comprehensiveness and effectiveness of the consultation undertaken during the 2008 price review process.

The Commission considers that businesses' consultation with their customers and other stakeholders has improved during the current review. However, there remains significant scope for further improvement. Several submissions by customers and other stakeholders commented that the level of consultation and transparency adopted by some businesses has not been adequate. In particular, some customers were concerned about their limited opportunity to be involved in the development of Water Plans and to influence the proposals submitted to the Commission. Customers were also concerned that they were not kept informed about the process and the businesses' proposals and, as a result, did not understand the businesses' proposed tariff strategies, cost allocation decisions (such as between residential and non-residential customers), or their justifications for major projects.

As noted in previous guidance, the Commission recognises that there is no one 'right' way to consult with customers and other stakeholders. Some businesses have established specific committees to consult on Water Plan issues while other businesses use established customer committees. Some of these committees develop specific proposals, such as tariff strategies, while others are more of a 'sounding board' for the business. The type and extent of consultation required will depend on the issues involved, the nature of the customer base and local circumstances. Whatever forms of consultation are adopted, it is important that businesses attempt to provide sufficient detail and explanation of their proposals, adequate time for customers to respond and suitable opportunities for all affected customers to participate.

Framework and approach

An overarching requirement of the assessment framework is to ensure that businesses have sufficient revenue to deliver services and meet their obligations over the regulatory period. In determining the level of revenue required, the Commission has made assumptions about key revenue components including:

- operating expenditure and
- the cost associated with financing past and future capital expenditure.

The Commission has arrived at its assumptions based on discussions with and information provided by the businesses, advice from consultants and its own analysis.

In assessing the businesses' proposals the Commission has also sought to clearly establish the service obligations and standards businesses are expected to deliver and whether the businesses' forecast demand assumptions are reasonable.

Having determined the revenue required by each business, the Commission has derived the average annual percentage change in prices that needs to occur (in addition to adjustments made to reflect inflation) for them to recover that revenue from their customers.

In addition to being satisfied that prices collectively raise the appropriate level of revenue the Commission is also required to assess the businesses' proposed tariff structures against a number of regulatory principles. In particular the Commission has considered whether prices provide appropriate signals about the costs of providing services and promote the sustainable use of Victoria's water resources.

Overview of draft decision outcomes

The businesses proposed average real price increases range from 0.3 per cent to 17.2 per cent per annum over the five year regulatory period. In total, this reflects forecast revenue across all businesses of around $4.2 billion for the five years commencing 1 July 2008.

The Commission has assessed the forecasts put forward by each of the businesses in relation to each of the revenue components and has also had regard to advice provided by its consultants in relation to the proposed expenditure and demand forecasts (discussed further below).

The Draft Decision is that all of the pricing proposals need to be adjusted to reflect the Commission's view of:

- the amount of revenue that is required by each business to deliver its proposed services and program of works and
- changes to tariff structures that are required to provide appropriate signals about costs of providing services, promote the sustainable use of Victoria's water resources and provide incentives for the business to operate efficiently.

For most businesses, the average annual price increases implied by this Draft Decision are higher than the businesses' own proposals. This can be largely attributable to a change in the assumptions regarding the weighted average cost of capital and therefore the cost of financing the businesses' proposed capital program. The Commission has updated the WACC to reflect current market conditions and hence the WACC used to derive the Draft Decision is higher than that used by the businesses to develop their Water Plan proposals.

The Commission also made downward adjustments to most businesses' forecasts of capital and operating expenditure. The Commission revised operating expenditure forecasts upwards for those businesses that had not made any allowance for real increases in energy and labour costs over the period and also to reflect advice from the Department of Sustainability and Environment (DSE) on the environmental contribution. In the case of capital expenditure the Commission revised the forecasts for some businesses upwards to reflect slippage of 2007-08 expenditure into the regulatory period, a more reasonable expenditure profile over the period and due to the reclassification of expenditure from operating to capital and from non-prescribed to prescribed.

The average annual price increases implied by the Commission's Draft Decision (after inflation) range from 1.1 per cent for Lower Murray Water rural services to 17.4 per cent for Gippsland Water (see table 1).

It is important to note that the average price increase reflects the amount that current prices need to increase to match the present value of the revenue requirement and implies a smoothed increase in prices over the period. Businesses may choose to price to the revenue requirement through a non smoothed price increase. For example, in its Water Plan Gippsland Water proposed to double prices over the period through a non smoothed price path, such that the average price increase was higher in the first two years and remained constant for the remaining years. Even though the Commission's Draft Decision implies a higher smoothed average increase than that implied by Gippsland Water's proposal, Gippsland Water could still propose prices that doubled by the end of the regulatory period. This could be done by either adjusting the price increase for the first two years of the period of by adjusting the average price for the remaining years

Table 1 **Total revenue and average annual real price increase**
Draft Decision compared to businesses proposals

	Businesses' proposals		*Draft decision*	
	Revenue requirement	*Average annual price change*	*Revenue requirement*	*Average annual price change*
	$ million	per cent	$ million	per cent
Urban businesses				
Barwon	686.50	10.6	702.51	11.5
Central Highlands	356.61	11.3[a]	355.59	10.9[a]
Coliban	380.43	13.1	376.93	12.8
East Gippsland	109.23	5.4	114.97	7.3
Gippsland	433.74	17.2[b]	437.96	17.4[b]
Goulburn Valley	242.49	5.9	256.60	8.3
GWMWater	224.27	5.9	233.08	7.3
Lower Murray (urban)	124.48	4.1	127.33	4.8
North East	210.31	8.4	213.46	8.5
South Gippsland	96.66	4.3	100.53	5.9
Wannon	236.86	6.1	233.89	5.9
Western	286.45	10.9	279.12	10.0
Westernport	71.22	4.7	74.59	5.6
Total urban	**3,459.26**		**3,506.56**	
Rural businesses				
FMIT	31.95	6.5	32.99	7.7
Goulburn-Murray	519.05	2.2	523.78	2.5
Lower Murray (rural)	72.30	0.3	73.98	1.1
Southern Rural	138.20	c	134.13	c
Total rural	**761.50**		**764.88**	
All businesses	**4,220.76**		**4,271.45**	

Note Average annual price increase compared to 2007-08 prices. It represents the amount that current prices need to increase to match the present value of the revenue requirement and implies a smoothed increase in prices over the period. **a** Proposed a non smoothed increase of 25 per cent in the first year of period followed by 5.5 per cent for each remaining year. By the end of the period prices are 55 per cent higher than at start of period compared to 71 per cent under a smoother approach. The same amount of revenue is recovered through prices under both approaches and customers pay the same in net present terms **b** Proposed a non smoothed of 23 per cent for each of the first and second years of the period followed by 10 per cent for each remaining year. At end of period prices are 100 per cent higher than at beginning of period compared to 121 per cent under a smoothed approach. The same amount of revenue is recovered through prices under both approaches and customers pay the same in net present terms. **c** Southern Rural Water did not provide the Commission with sufficient information to enable it to calculate the required average annual price change.

Table 2 **Average real household bills**
Urban businesses

	Average consumption	*2007-08 bill*	*2012-13 bill*	*Change (per cent)*
Barwon	216	691	1,189	72.0
Central Highlands	185	756	1172	55.0[a]
Coliban	210	586	1,069	82.5
East Gippsland	196	680	967	42.2
Gippsland	219	672	1,344	100.0[a]
Goulburn Valley	315	537	801	49.0
GWMWater	237	772	1,098	42.3
Lower Murray (urban)	552	635	802	26.2
North East	304	640	964	50.7
South Gippsland	152	769	1,024	33.1
Wannon	195	705	940	33.4
Western	232	711	1,143	60.7
Westernport	113	764	1,002	31.2

Note Average household bill implied by the smoothed average price increase required to meet the revenue requirement assumed by the Draft Decision. Actual impact on individual households will depend on extent to which businesses propose to adopt a non smoothed increase in prices, adjust prices for each service or tariff component, any changes to tariff structures and each customer's actual consumption pattern. [a] Reflects the business'' proposed outcome for prices by the end of the regulatory period. The business will need to adjust its proposed price path to meet the revenue requirement assumed by the Draft Decision.

It is important to recognise that the actual impact on individual customer bills will depend on a number of factors including the extent to which businesses propose to adopt a non smoothed increase in prices, adjust prices for each service or tariff component, any changes to tariff structures and each customer's actual consumption pattern.

The remainder of this Executive Summary highlights the key outcomes of the Commission's Draft Decision in relation to each of the key elements of the revenue requirement including operating and capital expenditure, return on existing and new assets and regulatory depreciation.

Revenue components (chapters 3 to 7)

As noted previously, the Commission has revised the businesses' proposals to reflect its assessment of the key components of the revenue requirement (see table 3).

Table 3 **Components of Draft Decision revenue requirement**
$ million in January 2007 prices

	Operating expenditure	*Return on existing assets*	*Return on new assets*	*Regulatory depreciation*	*First period adjustments*	*Annuity*	*Tax*	*Total*
Urban businesses								
Barwon Water	389.00	139.74	71.46	102.31	0.00	n.a	0.00	702.51
Central Highlands	230.83	61.99	24.30	38.47	0.00	n.a	0.00	355.59
Coliban	259.66	32.50	33.06	33.53	18.19	n.a	0.00	376.93
East Gippsland	63.14	20.01	11.30	20.52	0.00	n.a	0.00	114.97
Gippsland	264.59	93.68	29.13	50.55	0.00	n.a	0.00	437.96
Goulburn Valley	162.60	41.03	18.50	34.48	0.00	n.a	0.00	256.60
GWMWater	128.82	30.70	45.54	25.70	2.32	n.a	0.00	233.08
Lower Murray (urban)	83.03	16.76	10.81	16.73	0.00	n.a	0.00	127.33
North East	136.93	34.91	14.15	27.47	0.00	n.a	0.00	213.46
South Gippsland	62.39	17.79	6.35	13.99	0.00	n.a	0.00	100.53
Wannon	156.70	36.49	17.47	23.23	0.00	n.a	0.00	233.89
Western	188.02	43.30	19.82	22.52	0.00	n.a	5.46	279.12
Westernport	45.96	17.34	2.66	8.63	0.00	n.a	0.00	74.59
Total urban	**2,171.67**	**586.24**	**304.55**	**418.13**	**20.51**	**0.00**	**5.46**	**3,506.56**
Rural businesses								
FMIT	25.50	1.97	0.83	4.69	0.00	0.00	0.00	32.99
Goulburn-Murray	435.11	34.96	19.08	25.87	8.75	0.00	0.00	523.78
Lower Murray (rural)	59.77	3.50	5.84	4.87	0.00	0.00	0.00	73.98
Southern Rural	85.55	6.04	9.83	13.33	10.65	8.72	0.00	134.13
Total rural	**605.93**	**46.48**	**35.58**	**48.77**	**19.40**	**8.72**	**0.00**	**764.88**
All businesses	**2,777.61**	**632.73**	**340.13**	**466.90**	**39.90**	**8.72**	**5.46**	**4,271.45**

n.a. Not applicable.

Expenditure forecasts

In assessing the businesses' proposed expenditure forecasts the Commission has had regard to advice provided by Sinclair Knight Merz (SKM) (urban businesses) and Cardno–Atkins (rural businesses, Lower Murray Water and GWMWater).

The businesses' proposed operating expenditure has been assessed against a benchmark level based on the last year of actual data, being 2006-07 adjusted for growth and expected productivity improvements. Where proposed operating expenditure was greater than this benchmark, businesses were asked to demonstrate that the increases were associated with a reasonable increase in business as usual expenditure or new expenditure associated with additional obligations, functions and service levels.

Where the proposed increases in expenditure have been assessed as being reasonable, the Commission has used this expenditure for the purposes of approving prices for the regulatory period.

The Commission has made adjustments for a number of businesses to reflect assumptions about

- electricity costs and greenhouse gas abatements
- labour costs and staffing levels
- additional productivity adjustments
- bulk water expenditure
- licence fees and environmental contribution and
- other adjustments (including for non-prescribed services).

For most businesses the Commission's adjustments result in forecast operating expenditure being lower than that proposed (see table 4)

Chapter 4 provides an overview of the businesses' proposals and the Commission's approach. The detailed adjustments for each business are set out in Volume II.

The Commission's Draft Decision provides for 2.52 billion in proposed capital expenditure over the period compared to 2.54 forecast by the businesses. It is worth noting that the businesses' proposed capital expenditure programs are dominated by a small number of significant projects.

The Commission has generally accepted the adjustments suggested by its consultants. It has accepted the proposed capital forecasts for GWMWater and East Gippsland Water and has made minor adjustments to Barwon Water and Western Water. It has significantly increased the forecasts for FMIT to reflect update its forecasts to reflect current prices . The Commission has made minor adjustments to the remaining businesses' forecasts mainly to reflect assumptions about the timing of expenditure rather than the quantum. These adjustments typically reflect:

- revisions of capital works programs following consultation among the businesses, the consultants and other regulatory agencies
- lack of justification for projects to be undertaken in the forthcoming regulatory period and
- adjustments due to expected slippage and/or potential for deferral.

Chapter 5 provides an overview of the businesses' proposals and the Commission's approach. The detailed adjustments for each business are set out in Volume II.

Table 4 **Total expenditure –draft decision compared to business proposals**
$ million in January 2007 prices

	Operating expenditure			*Capital expenditure*		
	Proposed	*Draft Decision*	*Difference*	*Proposed*	*Draft Decision*	*Difference*
	$ million	$ million	per cent	$ million	$ million	per cent
Urban businesses						
Barwon	396.19	389.00	-1.8	563.10	562.99	0.0
Central Highlands	228.09	230.83	1.2	140.32	158.77	13.2
Coliban	262.32	259.66	-1.0	214.10	191.43	-10.6
East Gippsland	62.72	63.14	0.7	56.17	56.17	0.0
Gippsland	275.90	264.59	-4.1	251.27	240.20	-4.4
Goulburn Valley	160.31	162.60	1.4	112.90	113.71	0.7
GWMWater	127.87	128.81	0.7	341.35	341.47	0.0
Lower Murray (urban)	85.25	83.03	-2.6	57.40	64.86	13.0
North East	140.07	136.93	-2.2	99.55	102.68	3.1
South Gippsland	61.28	62.39	1.8	47.90	53.99	12.7
Wannon	169.00	156.70	-7.3	110.09	116.76	6.1
Western	207.25	188.02	-9.3	128.59	129.49	0.7
Westernport	44.94	45.96	2.3	29.65	29.45	-0.7
Total urban	**2,221.20**	**2,171.66**	**-2.2**	**2,152.40**	**2161.97**	**0.4**
Rural businesses						
FMIT	26.12	25.50	-2.3	2.53	5.54	119.1
Goulburn-Murray	438.77	435.11	-0.8	204.49	196.03	-4.1
Lower Murray (rural)	57.92	59.77	3.2	61.26	39.17	-36.1
Southern Rural	85.66	85.55	-0.1	117.09	116.49	-0.5
Total rural	**608.47**	**605.93**	**-0.4**	**385.36**	**357.22**	**-7.3**
All businesses	**2,829.67**	**2,777.60**	**-1.8**	**2,537.76**	**2,519.20**	**-0.7**

Financing capital investments

Capital expenditure is typically funded through prices charged over the life of the assets. Specifically it is recovered through a rate of return that reflects the opportunity cost of capital employed in the business as well as the return of the capital invested on those assets through regulatory depreciation.

These capital financing costs are applied to both the value of existing assets and new capital expenditure to be undertaken during the period. The Commission has updated the regulatory asset base (RAB) for each business to reflect actual expenditure and disposals for the first regulatory period. It has also adjusted the

RAB to reflect its view of the capital expenditure required by the businesses for the forthcoming regulatory period.

For the Draft Decision the Commission has adopted a weighted average cost of capital (WACC) of 6.1. This is higher than the WACC of 5.1 adopted by most businesses (consistent with guidance from the Commission) in their Water Plans. The difference largely reflects the impact of an increase in the risk-free rate and debt margin based on current market information. The Commission has also made adjustments to its assumptions about the equity beta and the debt margin. The Commission will recalculate the WACC for the Final Decision to reflect current market conditions.

In terms of regulatory depreciation, the Commission has accepted the businesses' proposals. Where necessary it has varied regulatory depreciation allowances to reflect adjustments made to the businesses' capital expenditure forecasts. The Commission has also raised concerns about the variability in estimates of useful lives adopted by the businesses.

Demand forecasts

Forecasts of customer growth, water deliveries (in the case of rural services) and consumption of water, sewerage and other prescribed services are important factors influencing future expenditure and also affect the prices that businesses will need to charge to recover their revenue requirement. The Commission engaged PricewaterhouseCoopers (PwC) to assist in the detailed review and assessment of the businesses' demand forecasts.

The Commission has generally accepted the adjustments to demand forecasts proposed by PwC. A number of businesses have adjusted their proposed demand forecasts in response to the consultant's review. PwC accepted the demand forecasts proposed by a number of businesses and has made significant adjustments for some businesses. These adjustments reflect assumptions about the impact of:

- population growth and demographic changes
- future rainfall levels, water inflows and climate change
- restriction levels applying to water consumption
- of price and tariff structure changes on water consumption and
- water conservation measures adopted during the regulatory period.

Structure of prices (chapters 8 to 14)

The Commission has assessed the basis on which the businesses propose to structure their tariffs in order to recover the required revenue over the regulatory period. The structure of tariffs and the level at which charges are set provide important signals to customers about the costs of providing services and also the incentives to use resources more efficiently.

The Commission is required to assess the businesses' proposed tariff structures against a number of principles outlined in the WIRO. These principles broadly relate to cost reflectivity and signalling, customer understanding and the interests of customers.

In its final report for the tariff structure inquiry,[3] the Commission recognised that there is no one 'single best tariff' and that a range of different tariff structures will be consistent with the WIRO principles. The Commission also recognised the importance of cost reflectively in sending signals about sustainable water use. However, it questioned the appropriateness of perfectly allocating costs if those costs are sunk and have little impact on present and future consumption decisions. Where proposed tariff structure changes do not improve signals the Commission is likely to be more concerned about potential customer impacts and any measures to mitigate those impacts.

In assessing the businesses' tariff structure proposals the Commission has focussed on proposals that significantly increase price levels for individual tariff components or introduce new structures. It has considered the businesses' proposals in the context of the following broad factors:

- the overall level of, and change in, prices
- the prevailing demand/supply balance
- each business' total revenue requirement for the regulatory period
- any other proposed tariff structure reforms
- the combined customer impacts from all proposed tariff structure changes
- the general price changes proposed for the regulatory period and
- feedback from stakeholder consultation.

For a number of businesses the Commission considers that it requires further information or justification before it can approve the proposed tariffs. In response to the Draft Decision these businesses are required to provide additional information in further support of those tariffs or propose amended tariff structures that would alleviate the Commission's concerns.

A number of submissions have raised concerns about the allocation of costs between residential and non-residential customers. In most cases charges for large non-residential customers have been negotiated on a case by case basis and are reflected in long term contracts.

Few businesses have provided detailed information on existing contracts for the provision of services to non-residential customers. Without this information the Commission is unable to assess how costs have been allocated between residential and non-residential customers. However, any contracts that were renewed or entered into during the first regulatory period should be consistent with the pricing principles for non-scheduled charges set out in the Determination. Similarly, any contracts that are renewed or entered into over the forthcoming regulatory period will also need to be consistent with those principles. The

3 In September 2007, the Commission was asked by the Minister for Finance to conduct an inquiry into tariff structures for the Victorian water industry. The Commission's final report to the Minister and other related material can be found on its website.

Commission will monitor compliance with these pricing principles and is proposing to include an assessment of compliance of contracts with the pricing principles as part of its annual audit process.

A number of businesses have also proposed significant price increases for particular services or tariff components over the regulatory period. These proposed tariffs changes are likely to result in significant impacts for particular customer groups. Whilst these proposals may be justified in terms of sending appropriate signals to customers, the Commission questions whether there is scope to minimise the impact on customers by phasing the proposed changes in over the period. Any change in tariff proposals to minimise customer impacts for a particular customer or customer group may result in adverse outcomes for other customers. In response to the Draft Decision businesses proposing significant increases for particular services or tariff components should consider what phasing-in arrangements would adequately address customer impacts in the context of potential impacts on other customers.

Retail water and sewerage

Retail water and sewerage charges levied by the regional urban water businesses on residential and non-residential customers account for most of their revenue. All of the businesses are proposing to continue with two part tariffs for residential and non-residential customers. A number of businesses are proposing to introduce inclining block tariffs for water over the regulatory period and some, such as Western Water and Lower Murray Water are proposing changes to existing inclining block tariffs. Most of the businesses are also proposing to increase the proportion of revenue collected from the variable charge. This has been justified on the basis of achieving demand reduction targets and providing customers with greater control over their bills.

For most businesses the Commission is generally satisfied that the tariff proposals are consistent with the WIRO principles. It has some concerns about the level of third tier charges proposed by some businesses but considers that they appear warranted on the basis of balancing demand and supply. It is also concerned that Lower Murray Water's seasonal inclining block tariff may not accurately reflect the costs of providing services or provide appropriate signals to customers for the sustainable use of water. The Commission is seeking further justification from Lower Murray Water including information on conservation objectives and the relationship to price patterns on the temporary market.

In the case of sewerage tariffs most businesses proposed levying a fixed charge for residential customers and a two part tariff for non-residential customers. The Commission is generally satisfied that the businesses' proposed sewerage tariffs are consistent with the WIRO principles.

Recycled water

Most businesses propose to provide recycled water to third parties over the regulatory period. These businesses are proposing to undertake a number of recycling projects over the regulatory period. These projects are often justified on the basis of improving the demand supply balance (through substitution with potable water) and environmental outcomes.

There are a number of factors that will determine the price 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 most recycled water sales by the non-metropolitan businesses are made under contract to non-residential users, including for golf courses, bowling clubs and other sporting grounds, school grounds, local government parks and gardens and agricultural irrigation. These charges are currently regulated through a set of pricing principles established by the Commission as part of the 2005 Urban Water Price Review.

Since that review, businesses have been given the power to mandate recycled water zones.[4] Given that businesses are now able to compel certain customers to take up recycled water services, the principles outlined in the 2005 review may no longer be appropriate. In particular, the principle allowing businesses to maximise revenue from recycled water services should no longer be applied. Therefore the Commission is proposing that the principles be amended to ensure that recycled water prices are set so as 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 balance of supply and demand) and
- include a variable component.

In their Water Plans, the majority of water businesses proposed to continue to use pricing principles to determine charges on a case-by-case basis for large unique or non-residential customers. However, a number of businesses have not amended the proposed pricing principles to reflect the removal of the requirement to maximise revenue. Other businesses failed to indicate how they would set recycled water prices over the regulatory period. In response to the Draft Decision these businesses are required to reflect the Commission's proposed pricing principles.

In addition, the Commission considers that prices for recycled water services provided through third pipe systems to residential customers should be subject to the annual price approval process. Only Western Water currently supplies recycled water to residential customers through reticulated third pipe systems. Coliban Water and Westernport Water are proposing to develop the capacity to provide reticulated recycled water during the regulatory period.

For developments completed during the regulatory period, pricing principles should be applied to determine the prices charged for recycled water provided in these

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4 From 9 October 2006, clause 56 of the Victoria Planning Provisions allows water businesses to mandate third pipe systems for the provision of recycled water for identified areas to assist in balancing supply and demand.

new developments. These prices will then be added to the tariff schedule and become subject to the annual price approval process.

Trade waste

Trade waste involves the discharge of waste other than normal domestic sewage into the sewerage system. Customers seeking to discharge trade waste into the sewerage system must obtain the consent of the relevant water business. Trade waste charges typically comprise fixed one-off and annual fees and variable charges based on volume and strength of trade waste discharge. Businesses are also able to levy non-scheduled prices that are consistent with a set of principles determined by the Commission as part of the 2005 Urban Water Price Review.

The businesses are not proposing significant changes to the structure of their trade waste charges for the forthcoming regulatory period. Most businesses have set out full details of their scheduled trade waste tariffs for the regulatory period. The Commission proposes to approve the tariffs proposed by these businesses. Where businesses did not provide full details of their proposed tariffs they are required to do so in response to this Draft Decision.

Most businesses have indicated that they will continue to adopt the pricing principles determined by the Commission for the first regulatory period for those customers for whom scheduled prices do not apply. Those businesses that have not reflected the Commission’s pricing principles in their proposed tariff schedules will be required to do so in response to this Draft Decision.

Issues related to the assessment of proposed trade waste charges are discussed in chapter 11 of this Volume.

New customer contributions

In certain circumstances new customers may be required to make an upfront contribution to the costs of connecting to a water business’s existing water, sewerage and recycled water networks. Existing non-serviced property owners are also required to make upfront contributions for the cost of connection. Water businesses can also levy a new customer contribution that will recover the financing costs associated with bringing forward the provision of shared distribution assets.

In their Water Plans, the majority of businesses noted their support for the Victorian Water Industry Association proposal for levying new customer contributions based on water use and efficiency. The Victorian Water Industry Association proposal is to base the scheduled charge for new customer contributions on the potential impact on future water demand of the new development, generally by using lot size as a determinant. Essentially there would be three levels of contribution:

- a minimum $550 per lot per service for water, sewerage and dual pipe recycled water (total $1,650 per lot) for developments designed to have minimum impacts on future water demand
- $1,100 per lot per service for water, sewerage and dual pipe recycled water (total $3,300 per lot) for water sensitive urban developments which will require further investment in infrastructure within a six year period

- $2,200 per lot per service for water, sewerage and dual pipe recycled water (total $6,600 per lot) — for developments designed in such a way that properties will create demand for water resources over and above high-density, water efficient homes.

The Commission is proposing to approve the Victorian Water Industry Association proposal on the basis that the proposed scheduled charges provide customers with price signals promoting sustainable water use. The Commission's proposed approval is subject to an adjustment clarifying that recycled water services, due to their unique nature, will not be subject to a scheduled charge but rather will be regulated by the Commission's proposed pricing principles for recycled water and assessed on a case-by-case basis.

Given the Commission's experience in regulating new customer contribution charges over the first regulatory it considers that there may be scope to further simplify and improve the approach to determining non-scheduled charges. Therefore it is seeking further comment from stakeholders on a number of proposed amendments.

Rural services

Rural services are mostly supplied by Victoria's three dedicated rural water businesses (Goulburn-Murray Water, Southern Rural Water and First Mildura Irrigation Trust) and two rural urban water businesses (Lower Murray Water and GWMWater). Coliban Water and Wannon Water also supply services to a small number of rural customers.

For the 2006 Rural Water Price Review, the Commission's role was limited to approving the total revenue that the rural businesses could recover over the regulatory period. In other words, while it was responsible for approving the average price level for rural services, the Commission did not have power regulate individual rural tariff components. For this price review the Commission is responsible for assessing proposed rural tariff structures against the WIRO principles.

The rural businesses have generally proposed to continue their existing tariff structures and to apply price increases to individual tariff components that are close to the average increase for their business. In assessing proposed tariffs the Commission has focussed on proposals to significantly change tariff levels for particular components and to introduce new tariff structures. Where there are disproportionately large increases (or decreases) in individual tariff components that are likely to impact a particular customer group or groups, the Commission must be satisfied that the price changes are driven by changes in cost and that customer impacts have been adequately considered.

Due to the uncertainty around the scope and funding arrangements of the Food Bowl Modernisation Project, the Commission is proposing to only approve prices for Goulburn-Murray Water's gravity irrigation and drainage services provided in gravity irrigation districts for 2008-09. Prices for the remainder of the regulatory period will be determined once the scope of the Foodbowl Modernisation Project and funding arrangements are clarified. The Commission is intending to approve prices for the remainder of the services for the five year period subject to Goulburn-

Murray Water providing further detail on some of its proposals in response to the Draft Decision.

Southern Rural Water did not provide information on individual tariffs in its Water Plan, but has indicated that it will propose such unbundled tariffs in response to this Draft Decision.

There is also some uncertainty around proposals for the Macalister Irrigations district and the Werribee Irrigation District (WID) Recycled Water Scheme. Prices for the WID Recycled Water Scheme will be dependant on a number of factors, not least of all the pricing arrangements for Melbourne Water. The Government's deferral of the pricing arrangements has meant that Melbourne Water's prices are not part of this price review. Therefore the Commission is proposing to only approve prices for Southern Rural Water for the first year of the regulatory period. Prices for the remainder or the period will be determined once the scope and funding arrangements for the Macalister and Werribee districts have been clarified. In responding to this Draft Decision with unbundled tariffs for 2008-09. Southern Rural Water should consider the tariff structure issues raised by the Commission.

Southern Rural Water, Goulburn-Murray Water and GWMWater are also required to provide the Commission with further detail on their proposed bulk water tariffs.

Service levels to be delivered (chapter 2)

Underpinning the businesses' required revenue (and prices) are the service standards and other related outcomes that are to be delivered over the regulatory period. As part of this review the Commission has sought to ensure that the businesses have clearly specified the service targets that they propose to deliver over the forthcoming regulatory period.

The Commission monitors and publicly reports the businesses' actual performance on an annual basis through its performance report. The report also provides the businesses with an opportunity to explain to customers any variation between actual performance and the targets and what actions they are taking to address any performance shortfalls.

Core service standards

The Commission is responsible for regulating service standards and conditions of supply. It can do this through approving standards set out in a business's Water Plan, by specifying standards through a Code or both. The Commission's approach to regulating service standards involves

- monitoring of compliance with rural and urban Customer Service Codes
- providing flexibility for businesses to propose their own service standard targets and
- requiring each business to develop a Customer Charter that informs customers about the services that it offers, the respective rights and responsibilities of customers and the business and the service standards that the business is committed to delivering.

As a part of this price review, each of the businesses was required to propose targets for an established core set of service standards for each year of the regulatory period. In assessing the businesses' proposed targets the Commission's primary concern was to ensure that customers would continue to receive service levels that are consistent with actual performance over the first regulatory period. In doing so the Commission is proposing to:

- accept proposed targets that are consistent with actual performance over the first regulatory period
- accept variation to proposed targets from actual performance where a reasonable explanation has been provided and
- suggest targets be revised to be consistent with actual performance where a reasonable explanation for the variation has not been provided.

In their Water Plans, most urban businesses proposed targets that were consistent with actual performance over the first regulatory period. For some businesses this represented a deviation from the targets approved by the Commission for the first regulatory period. Typically, these businesses had not previously been collecting the relevant performance data or with improved monitoring and reporting systems recognised that the targets set for the first regulatory period were based on inaccurate data.

A number of businesses also cited the continuing impact of the drought as the basis for proposing deviations from actual performance over the first regulatory period.

The Commission sought further information and clarification from all of the urban businesses to better understand their service standard proposals. In response the majority of businesses revised their proposed targets to better reflect actual performance or provided sufficient explanation for any deviations. On this basis, the Commission is proposing to approve the service standard targets proposed by the urban businesses. Chapter 2 of this Volume of the Draft Decision provides an overview of the Commission's approach and the businesses' proposals. Volume II sets out the service standard targets that the Commission is proposing to approve for each business and provides an indication of where businesses revised their proposed targets following further clarification.

This was the first time that the rural water businesses were required to propose targets for the core set of service standards. The Commission consulted on the core set as part of the 2006 Rural Water Price Review.

The Commission is proposing to approve most of the service standard targets proposed but is seeking further information from Goulburn-Murray Water, GWMWater and Lower Murray Water.

Additional targets

In their Water Plans the businesses identified a number of initiatives or programs that they intend to deliver over the forthcoming regulatory period. Often these programs or initiatives reflect obligations imposed on the businesses by other regulators (for example, the Environment Protection Authority) or the Minister for Water (through the Statement of Obligations). These initiatives or programs are typically significant drivers of expenditure and the Commission considers it important that the businesses commit to associated outcomes or targets to be delivered over the period.

Most businesses have proposed outcome based targets and the Commission is generally satisfied, but is seeking further information from some businesses. The targets committed to by each business are set out in Volume II.

Guaranteed service levels

Monitoring and publicly reporting performance against approved targets is one way of encouraging businesses to meet service targets. Financial arrangements can also be out in place to strengthen those incentives.

Guaranteed service level (GSL) schemes require businesses to provide a rebate to customers who receive a level of service that is much worse than the performance experience by most customers. The underlying objective of GSLs is to provide an incentive to the business to address the incidence of inferior performance rather than to provide some form of compensation to the customer. However, the rebate provided to the customer implicitly acknowledges that the worst served customers should not be paying the same as customers receiving average or better service levels.

The three metropolitan retailers, Barwon Water and Central Highlands Water already have GSLs in place and Wannon Water and Western Water are proposing to introduce GSL schemes for the second regulatory period. This means that over 90 per cent of Victoria's residential population will have access to GSLs.

A number of businesses continue to question the value of introducing GSL schemes. They argue that there is little customer support for GSLs, that there is a lack of reliable data and that the costs of introducing a scheme will outweigh any benefits.

The Commission's experience with the gas and electricity industries and the experience of those water businesses with GSLs already in place would suggest otherwise. There is strong evidence to suggest that where businesses have introduced GSLs they have been an effective management tool in identifying poor performance and focussing staff and resources on improving performance. There is also little evidence to suggest that the establishment and ongoing costs for GSL schemes are significant. Therefore the Commission is proposing that it continue to consult with businesses to allow for the implementation of a GSL scheme by all urban businesses over the next 12 to 24 months.

In assessing the GSL schemes proposed by businesses for the second regulatory period the Commission has considered whether the

- payment levels are reasonable
- businesses has an existing obligation to meet the target reflected in the GSL
- GSL event reflects an aspect of service likely to be of concern to customers and
- GSL event is readily measurable such that automatic payments can be made.

In relation to the four businesses that have proposed GSLs the Commission has suggested amendments to payment levels and GSL events. These adjustments are discussed in more detail in chapter 2 of this Volume. The detailed adjustments for each business are set out in Volume II.

1 INTRODUCTION

1.1 The 2008 water price review

The Commission has received final Water Plans from the 16 Victorian water businesses providing rural and regional urban services.[5] The Commission is also required to approve prices for Melbourne Water's waterways and drainage services. These plans set out the revenue and hence prices that each business believes it needs to deliver water, sewerage and other related services for the five year regulatory period from 1 July 2008.

On 14 August 2007, the Government announced that a review into the structure of the retail water industry in Melbourne would be undertaken by the Victorian Competition and Efficiency Commission (VCEC). It also indicated that it would implement a 14.8 per cent real increase in water prices for Melbourne's three metropolitan retailers from 1 July 2008 for one year, with existing tariff structures to remain. The Government's announcement effectively deferred the Commission's price review process for the three metropolitan retailers and Melbourne Water's bulk water and sewerage services.

The Department of Sustainability and Environment (DSE) has since indicated that the Water Industry Regulatory Order (WIRO) will be amended to prescribe a 14.8 per cent interim increase for the three metropolitan retailers and an appropriate interim increase for Melbourne Water following consideration of VCEC's final report to the Minister. The Commission has also been advised that any decisions it makes with regard to new customer contributions, recycled water and miscellaneous charges as part of this price review process will apply to the metropolitan retailers and Melbourne Water.

This is the Commission's third independent review of water prices. The Commission has previously completed a review of prices for the then 17 urban metropolitan and regional businesses (June 2005) and for the five businesses providing rural services (June 2006).

The Commission is required to assess the Water Plans against certain principles outlined in the WIRO. On the basis of this assessment, the Commission must decide whether to approve or specify prices or the manner in which prices are to

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[5] The businesses subject to this review include Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Westernport Water, Western Water, FMIT, Goulburn-Murray Water and Southern Rural Water. Melbourne Water submitted a final Water Plan for its waterways and drainage services in November 2007. The three metropolitan retailers were not required to submit final Water Plans to the Commission.

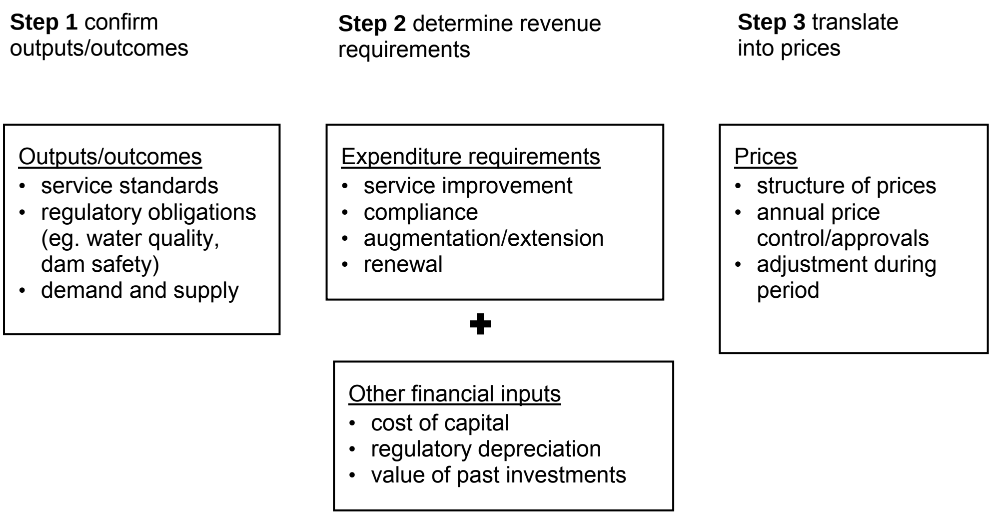
be determined for the services provided by these businesses over the regulatory period. In deciding whether to approve a business's proposed prices, the Commission must be satisfied that they provide the business with sufficient revenue over the regulatory period to meet its obligations and deliver the level of service required by customers.

The Commission is required to assess the detailed assumptions underpinning the businesses' proposed revenue requirements for the regulatory period. The businesses' expenditure forecasts must reflect efficient costs of supply and the program of work proposed by each business must be deliverable over the period. The businesses' forecasts of demand and supply (which affect both expenditure and prices) must also be reasonable and reflect the best available information. Customer service standards proposed by each business must also be clear, appropriate and reflect the needs and interests of customers.

The Commission must also be satisfied that prices provide appropriate signals about the costs of providing services and incentives for sustainable water use and take into account the interests of customers.

The Commission's approach to assessing proposed prices is characterised by three steps (see figure 1.1). The first step involves establishing the service standards and other outcomes that a business proposes to deliver over the regulatory period. This includes expectations about the water delivery and supply factors that are likely to underpin the delivery of services. 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) and the DSE and customer preferences for service improvements.

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



Step two involves the Commission assessing each of the key revenue components and proposals against the WIRO principles. The Commission's assumptions are used only to assess whether prices will result in the business earning sufficient revenue to deliver services. They 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.

The third step in the process involves determining the prices needed to meet that revenue requirement.

1.2 Legislative framework and role of the Commission

In carrying out its role, the Commission is primarily guided by the regulatory framework set out in the *Essential Services Commission Act 2001* and the *Water Industry Act 1994*. The more detailed framework is set out in the WIRO made by the Governor in Council under the Water Industry Act 1994.[6]

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 protect 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.

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

The WIRO requires the Commission to approve or specify the price arrangements to apply to each of the water businesses for the 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 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 WIRO. 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.

In deciding whether to approve the proposed prices, the Commission must be satisfied that they provide the business with sufficient revenue over the regulatory period to deliver their regulated services. The revenue must be sufficient to allow the business to recover:

- operational, maintenance and administrative costs
- expenditure on renewing and rehabilitating existing assets
- a rate of return on past investments as at 1 July 2004 that are valued at an amount or in a manner determined by the Minister for Water or the costs associated with any debt incurred to finance recent expenditure in a manner determined by the Minister and
- a rate of return on investments made after 1 July 2004.

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 and
- customers or potential customers are readily able to understand the prices charged or the manner in which they are to be calculated or determined.

1.3 The Commission's consultation process

The Commission began its consultation in late 2006 on the proposed regulatory framework and approach to approving prices to apply from 1 July 2008. Its consultation process included:

- Guidance on Water Plans (September 2006) — high level guidance on the structure and content of Water Plans for the second regulatory period.
- A framework and approach consultation paper (December 2006) — identified a number of key issues related to the application of the regulatory framework, process and approach that the Commission will take in assessing Water Plans for the second regulatory period.
- Meetings with businesses (January 2007) — to discuss issues raised in the framework and approach paper.

- A guidance paper (March 2007) — further guidance to businesses on the issues raised in response to the framework and approach paper.
- Comments to businesses on the draft Water Plans (September 2007) — further guidance focussed on whether there was sufficient clarity, information and justification of businesses' proposals to enable formal assessment.
- An issues paper (December 2007) — an overview of the businesses' proposals and key issues on which the Commission proposed to consult during the review.
- Meetings with customer committee representatives for a number of businesses (January, February and March 2007) — to understand their involvement in developing the Water Plan and issues specific to their business.
- Continued liaison with water businesses throughout the price review process — to seek further information and clarification of their proposals.
- Engagement of independent consultants — to assist with the Commission in assessing the businesses' expenditure and demand forecasts.

1.4 The structure of this draft decision

This Draft Decision is structured in two Volumes. Volume I provides an overview of the Commission's approach and assessment of the businesses' proposals. It also provides an overview of the suggested actions or amendments that businesses will need to take or make where the Commission proposes to not approve a business's proposal. As outlined in figure 1.1 the first step in assessing proposed prices is to clearly establish the service standards and other related outcomes that are to be delivered, including expectations about the key water delivery and demand factors that are likely to underpin the delivery of services.

Chapter 2 sets out the Commission's assessment of the key outcomes and service levels underpinning the businesses' proposed price levels over the forthcoming regulatory period.

Chapters 3 to 7 set out the Commission's views on the revenue required by each water business to deliver services and meet its obligations. The revenue requirement is used to set the prices that will apply over the regulatory period. The Commission's view on the businesses' expenditure forecasts are set out in chapters 4 (operating expenditure) and chapter 5 (capital expenditure). Issues related to financing capital investments are discussed in chapter 6 and the Commission's assessment of the businesses' proposed demand forecasts is set out in chapter 7.

Chapters 8 to 15 discuss issues related to the businesses' proposed tariff structures and how prices will be adjusted during the regulatory period. Retail water and sewerage tariffs are discussed in chapter 9, recycled water in chapter 10, trade waste charges in chapter 11, new customer contributions in chapter 12, rural services in chapter 13 and miscellaneous charges in chapter 14. Chapter 15 outlines how prices will be adjusted during the period, including the form of price control and other mechanisms for dealing with uncertainty.

Volume II of this Draft Decision summarises each of the businesses' proposals and any suggested amendments.

2 KEY OUTCOMES AND SERVICE LEVELS

2.1 Introduction

Service standards, major projects and other related outcomes underpin the businesses' expenditure proposals for the regulatory period and thus proposed prices. Performance against defined service standards and targets also provides a basis for assessing the extent to which additional expenditure is required to maintain or improve existing services and the extent to which seemingly efficient cost gains might have been achieved at the expense of service standards to customers. Customer views and preferences on whether the proposed service standard targets are appropriate, and whether customers are willing to pay for improved services are key considerations in assessing the appropriateness of the proposals.

Section 2.2 of this chapter provides an overview of the major outcomes that Victorian consumers can expect to benefit from in the forthcoming regulatory period. Proposals would see unprecedented activity across the Victorian industry, with a record number of major projects set to begin as businesses endeavour to improve security of supply, enhance treatment processes and accommodate growth.

An overview of proposed service standard targets is presented in sections 2.3 (urban businesses) and 2.5 (rural businesses) including proposed targets that businesses have committed to for additional services. The Commission's assessment of those proposals is also detailed in this section.

Section 2.4 sets out the businesses' proposals for Guaranteed Service Level (GSL) schemes. The ultimate objective of a GSL scheme is to act as an incentive for businesses to address the incidence of inferior service performance for the worst affected customers. While GSL schemes recognise that customers who receive poor service should not have to pay the same as customers who receive average or better levels of service, the schemes are not designed to explicitly compensate those customers for poor performance.

Volume II of this Draft Decision contains a more detailed overview of each business's proposals for major projects, service standards and GSL schemes. The volume sets out changes from the current regulatory period in terms of service standards and GSLs. It also specifies whether the Commission proposes to approve standards or requires businesses to make revisions.

2.2 Major projects

Overall, the Victorian urban water industry (metropolitan businesses included) has proposed capital expenditure of $7.8 billion over the next regulatory period (in addition to the $3.1 billion earmarked for desalination). This is a significant increase in expenditure over the current regulatory period. The key drivers of the increased capital expenditure proposed, discussed in more detail below, include augmentation and improving security of supply, improving water quality through water and sewerage treatment, water recycling and reuse, pipelining and upgrading rural channels, increasing reliability of customer service levels and the servicing of new towns.

Augmentation and improving security of supply is the most prominent of the key drivers of capital expenditure increases across Victoria in the forthcoming regulatory period. Security of supply is crucial to the ongoing prosperity of Victoria and underpins the State's ability to grow. As a result of a number of these projects the Victorian community will benefit from improved water security. Additionally, commercial businesses, industrial users and farmers require security of supply to allow forward planning, informed investment decisions and essentially to remain viable.

In performing its functions, the primary objective of the Commission is to protect the long term interests of Victorian consumers with regard to the price, quality and reliability of essential services.[7] The Commission is acutely aware that increases, such as those proposed for capital expenditure, will translate to substantial price increases for many Victorians if implemented. The Commission must balance the businesses' requirement to earn sufficient revenue to allow sustainable operation, while having regard to the impact that price increases will have on customers, particularly low-income and vulnerable customers.

The Commission has undertaken an extensive review to determine whether businesses' forecasts of expenditure to deliver the proposed capital program are appropriate and reasonable. This assessment, detailed in chapter 6, also considers the advice provided by its consultants.

Each business was required to identify the top ten capital projects to be delivered over the regulatory period. The Commission will continue to monitor the progress of each water business in delivering the outcomes promised. A key feature of this monitoring will be the Commission's Annual Performance Report to ensure transparency and accountability.

The Performance Report will detail the businesses' actual expenditure compared with proposed expenditure against the timelines proposed in Water Plans. Businesses will be required to explain to customers any reasons for non delivery (examples may include contractor delays or reprioritisation of works). Moreover, the Commission will also use this information in considering whether adjustments to the regulatory asset base should be made at the time the assets come into service rather than when the expenditure is incurred. This would have the effect of delaying income for the project until it came online, effectively shifting the risk from customers to the water business. Refer to section chapter 5 for a further discussion of this approach.

Chapter 6 provides a more detailed discussion and analysis of the major projects proposed. The top ten projects for each business are set out in Volume II. The largest regional urban capital projects committed to by the urban businesses:

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[7] The Essential Services Commission Act 2001, section 8.

- Barwon Water – Melbourne Interconnection (water), Geelong Trunk Sewerage Strategy
- Central Highlands Water – Ballarat Sewer System Upgrade, Goldfields Pipeline Ballarat interconnection
- Coliban Water – completion of Goldfields Pipeline interconnection, expansion of Recycled Water Reuse and Third Pipe Supplies
- East Gippsland Water – Water supply strategy and treatment plants including Mitchell River Water Supply System
- Gippsland Water – completion of Water Factory, Loch Sport Servicing Project and Coongulla Waste System Project
- Goulburn Valley Water – Broadford Pipeline
- Lower Murray Water (Urban) – Koorlong waste water treatment plant
- North East Water – Bright Porepunkah off-stream storage
- South Gippsland Water – Poowong/Loch Nyora Sewage Scheme
- Westernport Water – Raising of Candowie Reservoir
- Western Water – Melton outfall sewer
- Wannon Water – Hamilton Grampians interconnection pipeline

The largest rural capital projects for the rural businesses include:

- FMIT – L South Sub Area Partial Replacement Program
- GWMWater – Wimerra Mallee Pipeline Project
- Goulburn Murray Water – Surface Water Management Program, Dam Safety Upgrades Program
- Lower Murray Water (Rural) – Merbein Pipeline and Pump Station

One of the challenges facing planners in improving security of supply is climate change. The Intergovernmental Panel on Climate Change in its Forth Assessment Report 2007 concluded that climate change has accelerated over the last fifty years. It is expected that climate change will result in increased temperatures in Victoria, with an overall reduction in precipitation levels coupled with increased variability. Based on recent records of inflows to the Murray River and Melbourne's storages, the Department of Sustainability and Environment suggest that Victoria may have already experienced a step-change in its climate.[8]

In its tenth year, the current drought has seen the driest years on record for Victoria. With significantly reduced inflows water in storage reservoirs are at the lowest levels ever recorded,[9] which has led to some of the longest standing restrictions on water imposed on Victorian customers.

Some of the projects proposed to augment and improve security of supply include the Goldfields Superpipe connecting Bendigo and Ballarat to the Goulburn River, the Wimmera Mallee Pipeline system and the new Victorian Water Grid projects.

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[8] Our Water Our Future: The Next Stage of the Government's Water Plan, Department of Sustainability and Environment, Melbourne, June 2007.

[9] Ibid.

This last project includes the following programs: the Hamilton-Grampians Interconnector, the Melbourne-Geelong Interconnector, as well as state wide projects such as the Sugarloaf and the desalination plant link to Melbourne.

Also promoting security of supply is the general move by Victorian water businesses to increase water recycling and reuse in the forthcoming period. Recycled water can be substituted for raw water or potable water for some uses. For example, recycled water can be used for beneficial environmental flows, minimising the impact on receiving waterways. This, it is proposed, will aid businesses in meeting the obligations of the Environmental Protection Authority and the Victorian State Government. Recycled water is thus an important alternative source of supply.

Another key driver of capital expenditure over the regulatory period is improving water quality through enhanced water and sewerage treatment to ensure that health related standards are met. This external obligation is placed on businesses by the Department of Human Services. These projects may improve the aesthetic quality of water including taste, odour and turbidity. Businesses that are improving sewerage treatment are doing so to fulfil environmental discharge requirements, which are regulated by the Environmental Protection Authority. Examples of these projects include upgrades to the Koorlong Waste Water Treatment Plant (Lower Murray Water) and the Mitchell River Water Supply System (East Gippsland Water).

Plans for pipelining and upgrading rural channels have contributed significantly to the proposed increase in capital expenditure for many businesses across the State. These projects aim to improve the efficiency of water systems by reducing water losses from open channels, which can be as high as 50 per cent due to evaporation and leakage. The main projects include the Food Bowl Modernisation Project (Goulburn-Murray Water) and the Wimerra Mallee Pipeline Project (GWMWater).

The anticipated water savings to be produced from these projects are substantial. The Food Bowl Modernisation Project for example, will recover an estimated 225GL of ‘lost’ water by 2012. With savings as large as these, security of supply will be significantly enhanced for the respective areas benefiting customers and the environment.

Closely linked to security of supply is reliability of services. Businesses are proposing to improve reliability of customer service levels in the forthcoming regulatory period, leading to increased proposed capital expenditure. Proposed programs to quickly identify, repair and reduce the incidence of bursts and blockages aim to improve service reliability and reduce water loss. Such programs will in turn reduce the impact of these events on customers.

Finally, many of the businesses are proposing to provide reticulated drinking water and sewerage services to small towns, replacing the use of septic tanks and tank water.

2.3 Service standards

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

The Commission's approach to regulating the standards and conditions of supply for retail water, sewerage and recycled water services to rural and urban customers is as follows:

- Monitoring of compliance with rural and urban Customer Service Codes which impose a consistent overarching framework for the delivery of these services to customers. The Codes set out service level requirements and standards for key matters and include certain protections for customers.[10]
- Provide flexibility for the businesses to propose their own service levels or targets, rather than require all businesses to meet a consistent performance standard. This flexibility is intended to reflect the different operating environments faced by each business and allow customers to express their preferences for the level of service for which they are prepared to pay. Each business is required to express its standards or targets on the basis of common definitions. The Commission then monitors the performance of each business against its own standards or targets through the Commission's annual performance monitoring framework.
- Require each business to develop a Customer Charter that informs customers about the services that it offers, the respective rights and responsibilities of the business and its customers, and the service standards that the business proposes to deliver over the regulatory period. The Charter must cover certain minimum information requirements set by the Customer Service Code. Each business's service standards are reflected in the respective Customer Charter. There are a number of rural customer charters that have not yet been approved.

Each of the regional urban and rural water businesses was required to propose performance targets that they expect to achieve over the regulatory period for a core set of service standards. As this is the second regulatory period for both urban and rural businesses, the Commission would expect businesses to propose service levels commensurate with the delivery of existing services over the first regulatory period, unless customers had clearly expressed preferences for improvements (or reductions) in service levels. Most rural water businesses are proposing service standard targets for the first time as they were not required to do so in the first period.

Given the variability of performance from year to year (where, for example, climatic conditions have affected reliability levels), the targets proposed for each year are not binding 'absolutes'. Rather, businesses' average three year performance should be no worse than that of the previous three years. Businesses continue to have the opportunity (through the annual performance report) to explain the reasons for performance variation from the targets that have been approved and what actions they may be taking to address any performance shortfalls. Further, as in the first regulatory period, businesses not meeting the approved service

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[10] Both the Urban and Rural Customer Service Codes include requirements relating to service provision, charging for services, complaint and dispute handling procedures, billing, payment and collection processes, the quality and reliability of services provided, works and maintenance programs, information provision to customers and approved guaranteed service level schemes.

standard targets will not be faced with financial consequences unless they link their performance to a guaranteed service level payment (see section 2.4).

Over and above the core set of service standards, both urban and rural water businesses were free to nominate additional service standards and outputs that reflect business specific services and localised issues.

In addition the Commission asked all rural and urban businesses to provide targets for a number of initiatives that businesses propose to implement over the regulatory period that are linked to and are significant drivers of expenditure proposals set out in the Water Plans. Such programs include (but are not limited to) greenhouse gas abatement, recycled water, biosolids reuse, sewer backlog connections/small town connections, relevant environmental discharge indicators and drinking water quality indicators on the basis that these external obligations affect most businesses and are significant cost drivers. The targets provide a basis for assessing the extent to which additional expenditure is required. In most cases businesses provided outcome targets for these initiatives.

2.3.1 Approach to assessing urban service standards

The Commission consulted on the core set of service standards for the regional urban water businesses during the first regulatory period. The core set encompasses service standards that are likely to be of greatest concern to customers (see table 2.1). Some of the core service standards are also required service standards under the Customer Service Code.

Setting service standard targets provides an important reference point for monitoring the businesses' performance over the regulatory period. The targets may also inform future decisions regarding incentive mechanisms that may encourage the businesses to deliver both efficient and reliable services.

Table 2.1 **Core urban service standards**

Retail water
Number of unplanned water supply interruptions (per 100 kilometres)
Average time taken to attend bursts and leaks (minutes)
Unplanned water supply interruptions restored within [X] hours (per cent)
Planned water supply interruptions restored within [X] hours (per cent)
Average unplanned customer minutes off water supply (minutes)
Average planned customer minutes off water supply (minutes)
Average frequency of unplanned water supply interruptions (number)
Average frequency of planned water supply interruptions (number)
Average duration of unplanned water supply interruptions (minutes)
Average duration of planned water supply interruptions (minutes)
Number of customers experiencing [X] unplanned water supply interruptions in the year
Unaccounted for water (per cent)
Minimum flow rates at 20 millimetres (mm), 25 mm, 32 mm, 40 mm, 50 mm
Retail sewerage
Number of sewerage blockages (per 100 kilometres)
Average time to attend sewer spills and blockages (minutes)
Average time to rectify a sewer blockage (minutes)
Spills contained within [X] hours (per cent)
Customers receiving [X] sewer blockages in the year (number)
Retail customer service
Complaints to EWOV (per 1 000 customers)
Telephone calls answered within 30 seconds (per cent)

The Commission's primary focus is to ensure the proposed targets provide customers with a level of service that is at least as good as the actual three year average achieved over the first regulatory period. It has also assessed whether the proposed targets have been set in accordance with the definitions in its performance reporting framework.

The Commission has used the following criteria to assess proposed standards:

- It has generally accepted a business's proposed targets where they are based on the historical three year average.
- It has generally accepted a variation in a business's service standard targets from the historical three year average where the business provided a reasonable explanation. For example, some businesses are proposing a higher planned frequency of water supply interruptions because these businesses will undertake increased works (such as mains cleaning) in the forthcoming period as the drought eases.
- The Commission sought further information on, or clarification of, some of the service standard data provided in the Water Plans and information templates. In

some instances, businesses revised data for some of the standards following clarification of definitions and the Commission's analysis.

2.3.2 Overview of proposed urban service standards

Businesses were asked to propose targets for each standard to apply over the regulatory period. Beyond the core set of service standards, businesses could nominate additional service standards and outputs that reflect business specific services and localised issues (such as sewer odour or aesthetic water quality standards).

Businesses were also required to:

- propose service standards and targets that are no worse, on average, than the current service levels (the average over the past three years). Where the new proposed target deviates from the average performance of the first regulatory period, businesses are required to provide clear justification, providing discussion of cost implications (where the cost implication is significant) and evidence of customer consultation.
- consult with their customers on the appropriateness of proposed targets for the coming regulatory period and
- consult with other regulators such as DHS and the EPA regarding any proposed service standards and outcomes for water quality and environmental issues, and any water conservation and recycling targets set by DSE.

In reviewing the businesses' Water Plans the Commission has made the following observations:

- A number of businesses proposed targets for standards in the first regulatory period based on forecasts or unreliable or faulty information as data on the full set of core service standards was not collected at the time. As a result, these businesses have proposed new targets in the second regulatory period based on actual performance.
- A small number of businesses proposed to roll over the targets that were approved in the previous regulatory period, even where they did not reflect the three year average performance. The Commission sought clarification from the businesses in these instances. In most cases, businesses have revised targets to reflect the historical average and in the remaining cases businesses provided sufficient explanation for the proposed target.
- All businesses provided evidence of customer consultation and many investigated customers' willingness to pay for service standards using various techniques. The Commission observed that most businesses consulted with customers on the following issues): whether proposed services levels are appropriate given historical performance; performance relative to that of other businesses; customer complaints issues; possible introduction of inclining block tariffs and the cost implications of improvements or reductions in service standard performance. The Commission was generally satisfied that proposed service levels are reflective of community expectations.

As part of their Water Plans, most of the urban businesses proposed service targets consistent with the average actual performance achieved over the first regulatory period and as such, the Commission proposes to approve these targets.

Where proposals deviated from the three year average without sufficient explanation, the Commission sought further information as to the reason why.

A number of businesses have proposed departures from previous targets (both upwards and downwards) citing more robust and accurate historical data as being the basis for these changes. Typically, these businesses either did not collect all relevant data until the first regulatory period (GWMWater, Barwon Water and Goulburn Valley Water) or with improved systems and reporting recognised that targets in the first regulatory period were set on the basis of faulty data (Coliban Water, North East Water, South Gippsland Water and Wannon Water).

Where businesses proposed to improve service standards, the Commission previously indicated that they should clearly identify the efficient costs associated with those improvements, and the consultation process undertaken to determine customers' service preferences, expectations and willingness to pay for service improvements.

A number of businesses cited the drought as a reason to further reduce or maintain targets relating to the frequency and duration of water and sewer interruptions and customer complaints while in some of these cases, the historic average supported improving the target. A number of businesses on the other hand indicated the expected easing of the drought as the reason for some standards improving over the forthcoming regulatory period.

Water conservation is of significant concern to customers statewide, many of whom have been subject to long standing water restrictions and now face Permanent Water Saving Rules.[11] There is a community expectation that the water businesses, many of whom are proposing to heavily invest in improving security of supply, will continue to improve the efficiency of water delivery systems. Nine of the thirteen urban water businesses are proposing reduced levels of unaccounted for water over the next regulatory period.

Overall, the majority of businesses revised their targets (where they originally deviated from the three year average) to better reflect the actual three year average and in the remaining cases businesses provided sufficient explanation for the deviation. On this basis, the Commission proposes to approve all service standard targets proposed by the businesses with the exception of those highlighted set out in section 2.3.4. Volume II provides a table of the approved service standards for each of the businesses with an indication of which standards were revised by the businesses following clarification.

2.3.3 Overview of proposed additional service standards

Beyond the core set of service standards, businesses could nominate additional service standards and outputs that reflect business specific services and localised issues (such as sewer odour, aesthetic water quality standards and other indicators of customer service). Urban water businesses that have proposed additional service standards in the forthcoming regulatory period for these types of

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[11] All water businesses are required to develop and introduce Permanent Water Saving Rules pursuant of Action 5.4 of the Our Water Our Future action plan (Department of Sustainability and Environment).

issues include Barwon Water, East Gippsland Water, Goulburn Valley Water and Western Water.

The water businesses are subject to a number of obligations imposed by other agencies including DHS, DSE and EPA. Such obligations include (but are not limited to) greenhouse gas emission abatement, beneficial reuse of biosolids, water reuse, sewer backlog and small town sewerage schemes. These obligations are often significant drivers of expenditure and the Commission has asked businesses to commit to relevant outcomes as additional service standards for the forthcoming regulatory period. The targets for each business are set out in Volume II.

There is substantial variance in businesses' interpretation of the level of their responsibility for achieving sustainability objectives, particularly for reducing CO_2 emissions.

Five businesses (Central Highlands Water, Gippsland Water, North East Water, South Gippsland Water and Westernport Water) did not put forward targets for greenhouse gas emissions for the period. The targets proposed by the remaining businesses vary considerably (see table 2.2)

Table 2.2 **Greenhouse gas emissions and abatement targets**
per cent

	Change from 2006-07 to 2012-13
Barwon Water	12.3
Central Highlands Water	no target proposed
Coliban Water	15
East Gippsland Water	4.1
Gippsland Water	no target proposed
Goulburn Valley Water	5.3[a]
GWMWater	15.0[b]
Lower Murray Water	[c]
North East Water	no target proposed
South Gippsland Water	no target proposed
Wannon Water	11.6[d]
Western Water	36.5
Westernport Water	no target proposed

Note The base year for the abatement target is 2006-07 (emissions result from 2006-07 Performance Report). [a] GWMWater's total CO2 emissions are projected to increase 252 per cent as a result of the Wimmera Mallee Pipeline coming online. GWMWater is aiming to reduce CO2 emissions resulting specifically from energy consumption by 15 per cent for each year of the regulatory period through the purchase of green power and other offsets. [b] Goulburn Valley Water has already achieved a significant reduction in total CO2 emissions (43.8 per cent) between 2004-05 and 2006-07. [c] Lower Murray Water's total CO2 emissions are projected to increase 18.7 per cent during the regulatory period although it has allocated expenditure to switch to green energy. [d] Based on performance reporting data.

Eight businesses are committing to beneficially reusing 100 per cent of biosolids produced over the regulatory period. Western Water 's target fluctuates between 86 per cent to 100 per cent throughout the period. Westernport Water and South Gippsland Water are proposing to increase gradually to targets of 20 per cent and 5 per cent, respectively. Lower Murray Water and North East Water have proposed targets of 0 per cent.

On average, regional urban businesses are proposing to recycle 47 per cent of wastewater by the end of the regulatory period, with three businesses (East Gippsland Water, GWMWater and Western Water) proposing to achieve 100 per cent recycling. Eight businesses proposed targets of less than 40 per cent and Lower Murray Water was the only business to put forward a target of 0 per cent.

2.3.4 Assessment of Service Standards

As previously indicated, there were a number of service standard targets for which the Commission sought clarification from businesses as the targets deviated from the three year average performance without sufficient explanation provided in the Water Plans.

Overall, the majority of businesses revised targets to better reflect the actual three year average and in the most of the remaining cases businesses provided sufficient explanation for the deviation. For some businesses this simply required clarification of definitions and measures (particularly with respect to EWOV complaints and average customer minutes off water supply) resulting in businesses amending their original targets.

The Commission has sought further information from Gippsland Water and Lower Murray Water on their targets for average duration of unplanned water supply interruptions and average time to rectify a sewer blockage respectively.

Gippsland Water originally proposed to maintain a target of 118.7 minutes for average duration of unplanned water supply interruptions. This is 21 per cent above the three year average (98.4 minutes). Gippsland Water cited the new occupation health and safety requirements as the reason for the proposed increase. Following a request for further information, Gippsland Water revised the target to 115 minutes, still a 17 per cent increase over the three year average.

In response to the Commission's request Gippsland Water indicated that before any work commences to restore water services, a 12 page Job Safety Analysis (JSA) must be completed, a process that is estimated to take between 18-20 minutes. The revised target for this indicator is based on the simple addition of the three year average and the average time taken to complete a new JSA (19 minutes).

The Commission notes that Gippsland Water's actual performance for this indicator is lower than most businesses and that 115 minutes is amongst the highest proposed for this measure. A target of 110 minutes may be more realistic for this standard. In response to the Draft Decision, Gippsland Water should indicate why a target of 110 minutes would not be reasonable.

In the case of Lower Murray Water, the Commission sought further information on the proposed target for average time to rectify a sewer blockage. The target proposed for this indicator is 10 per cent higher than the 2005-06 result (the only result reported so far). In its Water Plan, Lower Murray Water indicated that the implementation of the Road Management Act would adversely affect this service standard. No other business has raised this as issue and it is not clear to the Commission how the Road Management Act would adversely impact on this service standard. Lower Murray Water has subsequently indicated that this is not the sole driver of the increased target but did not provide any further detail.

In response to the Draft Decision, Lower Murray Water should provide further information on the drivers for the proposed increase and explain how and why these drivers will adversely affect this standard.

The Commission proposes to approve the remaining service standard targets put forward by the businesses. Volume II provides a table of the approved service standards for each of the businesses with an indication of which standards were revised by the businesses following clarification.

The Commission has revised Coliban Water's proposed target for average planned frequency of water supply interruptions. The Commission considers the target originally proposed (0.01) to be too low. It has consulted with Coliban Water and to revised the target to 0.1, making it consistent with what other businesses are proposing. The Commission believes this to be a more realistic target because as the drought eases planned works will increase for mains cleaning and other maintenance activities. For the same reasons the target for average planned customer minutes off supply was also increased from the proposed 2.61 minutes to 29 minutes.

The Commission has proposed to approve some targets that appear inconsistent with the three year average performance. These are discussed in detail in Volume II.

Additional Service Standards

The Commission identified a number of inconsistencies between proposed operating expenditure and the additional service standards proposed by businesses. There are a number of instances where businesses either did not set targets where they should have been based on expenditure allocation or inappropriate targets were proposed. The Commission sought further information from businesses in these cases.

In most cases the businesses proposed an appropriate target for the standard. In some cases it was found that a target was not yet necessary for that business and for the remainder of instances further clarification has been sought.

The Commission is proposing to accept most additional service standards put forward by businesses. Volume II provides a table of the approved additional service standards for each of the businesses with an indication of targets that were revised by the businesses following clarification and targets for which further information is still required

For further information on proposed expenditure to meet additional service standards, see chapter 4.

Draft Decision

The Commission has considered the information provided by businesses explaining the respective deviations from the three year average level of performance and is satisfied that they are adequate except for those highlighted below. On this basis the Commission is proposing to approve the service standards targets proposed by the businesses with the exception of:

Gippsland Water

Average duration of unplanned water supply interruptions

The proposed target of 115 minutes represents a 17 per cent increase over the three year average. Gippsland Water has indicated that the increase reflects the need to complete a job safety analysis consistent with occupational health and safety requirements. The proposed target is amongst the highest proposed by the businesses and the Commission considers that a target of 110 minutes may be more reasonable.

In response to the Draft Decision, Gippsland Water should indicate why a target of 110 minutes would not be reasonable.

Lower Murray Water

Average time to rectify a sewer blockage (minutes)

Lower Murray Water has proposed increasing the target for this standard compare to actual performance in 2005-06 (the only year for which performance data is available). Lower Murray Water has cited the Road Management Act as being a key driver of the proposed increase and has indicated that there are other drivers, but provided no information on the nature of those drivers.

In response to the Draft Decision, Lower Murray Water should provide further information about other drivers of the proposed increase and how and why these drivers (including the implementation of the Road Management Act) will adversely affect this standard.

2.4 Guaranteed service levels (GSLs)

Guaranteed service level (GSL) schemes have proven to be an effective approach for businesses to identify their worst served customers while at the same time providing businesses with incentives to deliver acceptable service standards to all customers.

GSL schemes require businesses to identify GSL events and automatically provide a rebate to the affected customer. This provides businesses with incentives to improve service levels for the worst served customers. It also aids the businesses in identifying the worst served customers and the specific areas in which the business needs to improve service.

The service standards proposed by the businesses are targets that the businesses aim to achieve. These standards, however, generally reflect the average performance expected across all customers and do not reflect the extent to which some customers may experience worse than average performance. It is important that the businesses have an incentive to meet those targets and that any incentives to improve efficiency are balanced against the requirement to deliver proposed service standards to all customers.

In assessing the businesses' GSL proposals, the Commission has made the following observations:

- The businesses provided little evidence of comprehensive and balanced customer consultation on the merits of GSL schemes. However, those businesses and industries that already have GSLs provided some evidence that they are an effective incentive mechanism
- Some businesses indicated that they remain unconvinced about the merits of introducing a GSL scheme because the costs of introducing such a scheme would outweigh the benefits. These businesses have not provided evidence of investigation, consultation and costs.
- Some businesses have indicated that they will monitor the experience of those businesses that proposed a scheme and will consult further with their customers.

Four regional urban businesses (Barwon Water, Central Highlands Water, Western Water and Wannon Water) propose to apply a GSL scheme during the regulatory period. The majority of regional urban businesses including Coliban Water, South Gippsland Water, Goulburn Valley Water, East Gippsland Water, Gippsland Water and North East Water, continue to question the value of introducing a GSL scheme. Furthermore, none of the rural businesses; Lower Murray Water, FMIT, Goulburn Murray Water, Southern Rural Water and GWMWater; are proposing GSL schemes.

For the rural sector, the Commission considers that there is benefit for businesses in establishing a GSL scheme. However, given that a performance reporting and monitoring framework is still to be established for this sector and the general lack of reliable historical data, the Commission proposes to review the need and appropriateness of a GSL scheme for rural services in preparation for the next price review.

2.4.1 The merits of having a GSL scheme — Commission's approach

The Commission's experience with water businesses that have GSL schemes in place and in other industries (such as electricity) suggests that worst served customers have benefited from improved performance where such schemes have been introduced. This was also acknowledged by Central Highlands Water which has had a GSL scheme in place since the adoption of its original Customer Charter in 1997. Its Water Plan affirms that the proposed scheme provides customers with a guaranteed minimum level of service in addition to an incentive for the business to improve operating performance.

The three metropolitan retailers proposed to extend their GSL schemes for the next regulatory period, confirming their support for GSLs as an incentive mechanism. The proposals to extend the scheme differed, including increasing the value of rebates, extending GSLs to non residential customers and expanding the services guaranteed.

All businesses were encouraged to propose their own GSL schemes and those proposed differ somewhat from business to business (for example in the standards that they guarantee).

In its submission to the Issues Paper, the Energy and Water Ombudsman (Victoria) expressed its disappointment that only two regional urban water businesses have proposed to introduce GSL schemes in addition to the two existing schemes.

> *It seems clear that there is a difference of opinion between the ESC and the remaining water companies as to the cost of introducing such schemes. Those companies which are questioning the value of such schemes should be asked to provide costings for them and the basis of that costing should be subject to careful scrutiny.*

The Consumer Utilities Advocacy Centre (CUAC) applauded those businesses introducing and continuing to offer GSL schemes, but also expressed their disappointment at the lack of wider adoption by the water businesses.

> *We are disappointed that there remains resistance from water companies to establishing GSL schemes, which have proved to be a driver of improved performance in the metropolitan water authorities.*

The Commission notes the points made by both EWOV and CUAC and recognises the importance of weighing up the costs and benefits of introducing a GSL scheme. As indicated previously, the Commission has monitored the GSL relevant data provided by businesses as part of their annual performance reporting requirement and will continue to do so.

In general, the one-off system improvement cost coupled with the operating cost of the scheme translates to a total cost of between $1 and $2 per customer over the five year regulatory period.[12] The Commission is of the opinion that this cost is negligible relative to other service improving projects and relative to the service improving incentives it provides. Furthermore, the number of payouts should be on a downward trend, reducing payout costs.

The Commission is concerned that the benefits and costs of GSL schemes may not have been adequately communicated by businesses to customers through their consultation processes. Gippsland Water in their Water Plan indicated that while its customer committees almost unanimously supported the introduction of a GSL scheme, a survey was conducted to establish wider support. The results of the survey suggest to the Commission that customers were not informed about the purpose that GSL schemes serve or of the potential impact on their household bill.[13]

> *GSL's were acknowledged as being a way of keeping Gippsland Water efficient and honest in meeting the standards set. It wasn't*

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[12] This figure is sensitive to the number of customers in a service area.

[13] Gippsland Water, Water Plan 2008 – 2013 pp. 59-60.

the rebate that mattered as much to people, but the fact that Gippsland Water were doing what they stated they would do.[14]

Coliban Water has said GSLs are funded through higher charges to customers and therefore defeat the purpose. The business goes further to suggest that the amount paid to customers would not be meaningful and the cost would outweigh the benefit.

The Commission recognises the importance of GSL payment levels being meaningful both to the customer and to the business and emphasises that a GSL payment is not intended to act primarily as compensation to the customer. An automated GSL payment simultaneously recognises the customer who receives below average service with a rebate to their bill, while providing a financial signal to the business regarding its provision of below average levels of service. GSL schemes also provide a mechanism for businesses to publicly acknowledge that service levels for some customers are significantly worse than average.

The Commission notes that a number of businesses (including Lower Murray Water, Gippsland Water, Coliban Water, Goulburn Valley Water) have said that customers would prefer the problem to be 'fixed' instead of receiving a compensation payment. Lower Murray Water indicated that both their customer committees do not support GSLs as they prefer the business to focus on delivering and maintaining service standards. The Commission points out that the two outcomes are not mutually exclusive.. In fact, because the systems to identify GSL events are automated, a GSL scheme simultaneously promotes the businesses' ability to identify and more quickly rectify systemic problems.

In the Commission's view, it may be more useful to consider these issues from the perspective of the customer receiving worse than average service. Should a customer who receives a level of service significantly below average be required to pay the same amount as an otherwise identical customer who receives full service?

[14] Gippsland Water, Water Plan 2008 – 2013, p. 82.

Table 2.3 **Services of primary concern for those receiving below average levels of service**

	Customers receiving >5 unplanned water interruptions per year (No.)			*Unplanned water supply customer-interruptions not restored in 5 hours (No.)*			*Number of Sewer spills in a house*		
	2005	*2006*	*2007*	*2005*	*2006*	*2007*	*2005*	*2006*	*2007*
Barwon	n.p.	0	22	0	459	1085	n.p.	7	12
Central Highlands	17	0	2	n.p.	56	14	n.p.	0	0
Coliban	14	0	1	n.p.	139	254	n.p.	11	8
East Gippsland	0	0	0	n.p.	2	0	n.p.	2	0
Gippsland	0	0	0	0	20	0	n.p.	0	0
Goulburn Valley	0	86	0	n.p.	244	320	n.p.	4	1
GWMWater	n.p.	0	0	0	263	23	n.p.	2	0
Lower Murray	0	0	30	n.p.	0	463	n.p.	1	2
North East	131	15	0	n.p.	30	90	n.p.	0	2
South Gippsland	0	0	0	0	0	44	n.p.	1	1
Wannon[a]	n.p.	n.p.	n.p.	n.p.	n.p.	10	n.p.	n.p.	2
Westernport[b]	n.p.	n.p.	n.p.	0	572	36	n.p.	1	0
Western	0	0	0	0	177	91	n.p.	3	0

[a] Historical data for some indicators of the merged businesses of Wannon Water were found to be unreliable. [b] Westernport Water will not report against the full set of indicators until the end of 2008-09.

For the forthcoming regulatory period, over 90 per cent of the Victorian community will be provided with a guaranteed minimum level of service. In the Commission's view there does not appear to be an adequate argument for not providing the remaining 10 per cent with access to a GSL scheme. Most of the arguments put forward by the businesses relate primarily to implementation issues.

All businesses providing urban services will be required to continue to report their performance against a consistent set of GSL events as part of the annual performance reporting requirement. The Commission will continue to closely monitor the progress of businesses in this area and proposes to report this as part of the Annual Performance Report. Over the next twelve months the Commission will be better placed, with three full years of audited data, to assess the need for a consistent set of GSLs to be implemented by all urban water businesses.

This will allow sufficient time for the Commission to work closely with the businesses to ensure that the prerequisite conditions for the implementation of a GSL scheme are met. These include robust historical performance information, a legitimate estimation of the benefits and costs, customer support, and the consideration of equity for those worst served in the community.

2.4.2 Commission's approach to assessing proposed GSL schemes

In deciding whether to approve the GSL schemes proposed, the Commission will need to decide whether the GSL events and payments are appropriate (and have been clearly defined) and whether certain exclusions should apply where a payment would not be warranted.

In assessing the proposed GSL event, the Commission has sought to determine whether:

- businesses have an existing obligation to meet the target proposed as a GSL (for example there may be an existing obligation under current legislation or in the Customer Charter).
- the proposed GSL event reflects aspects of service likely to be of key concern to customers
- the proposed GSL event is readily measurable such that payments can be made automatically.

The proposed payment levels for each of the GSL rebates must be meaningful to customers who have received significantly below average levels of service. It must also provide an incentive to businesses to avoid the cost associated with the GSL event.

For businesses with existing GSL schemes, the Commission approved an exclusion for the first regulatory period that relieved the businesses of the need to make a credit to a customer's account for failure to meet a guaranteed service level if an event is caused by, or is the responsibility, of the customer or a third party. In their Water Plans, the businesses have been asked to outline the likely cost of proposed GSL schemes over the regulatory period, including the forecast payments (based on historical performance) and any implementation costs (see table 2.5).

The forecasts provided by those businesses proposing GSLs suggest that there is unlikely to be a material impact on prices. Nevertheless, the Commission will assess the businesses' estimated costs compared with their actual historical performance for the proposed GSL measures and efficient costs of administering the scheme.

2.4.3 Overview of proposed GSLs

In the forthcoming regulatory period, over 90 per cent of Victoria's residential population will be provided with guaranteed minimum levels of service.[15] Central Highlands Water and Barwon Water both have existing GSL schemes in place. As part of their Water Plans two regional businesses, Western Water and Wannon Water, have proposed GSL schemes for the first time.

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[15] This includes the customers of the metropolitan water businesses.

The most common GSLs proposed by businesses (including the metropolitan businesses) are for “Exceeding a certain number of sewerage service interruptions within a 12 month period”, “More than 5 unplanned supply interruptions in a 12 month period” and “Sewage spills not contained within a specified amount of time of notification”.

Central Highlands Water has proposed no changes to its existing GSL scheme, which attracts payments of $25. By contrast, Barwon Water is proposing to lift GSL payments from $50 to $65 in line with proposed tariff increases.

In its Water Plan, Wannon Water has indicated its intent to offer GSL payments to customers affected by the following events: receiving more than 5 unplanned supply interruptions in a 12 month period and sewage spills not contained within 5 hours. It is proposed that these events attract a payment of $50 and $500 respectively.

Western Water has proposed a suite of five GSL payments for the following events: Leaking water service not fixed within five business days of notification ($25); failure to give notice of planned water supply interruptions ($25); planned interruptions during peak hours ($25); planned water supply interruption longer than notification given ($25); exceeding three sewerage service interruptions within a 12 month period ($25) and sewage spills within a house not contained within 1 hour of notification ($100).

Table 2.4 **Proposed GSLs**

	Central Highlands	*Barwon*	*Wannon*	*Western*
Water				
More than 5 unplanned supply interruptions in a 12 month period	$25	$65[a]	$50[b] **N**	
Unplanned water supply interruptions not restored within 5 hours of notification	$25			
Planned water supply interruptions not restored within 5 hours				
Leaking water service not fixed within 5 business days of notification	$25			
Failure to give notice of planned water supply interruptions				$25[c] **N**
Planned interruptions during peak hours (5 – 9 am and 5 – 11 pm)				$25 **N**
Planned water supply interruption longer than notification given.				$25 **N**
Sewerage				
Exceeding three sewerage service interruptions within a 12 month period	$25	$65[b]		$25[b] **N**
Interruptions to sewer service not rectified within specified amount of time of notification	$25			
Sewage spills on private property not contained within a specified amount of time of notification			$500 **N**	$100[e] **N**

Note Shading indicates a proposed change to an existing GSL. **N** New GSL. [a] Proposed increased payment from $50 to $65 in line with proposed tariffs. [b] Rolling 12 month period. [c] Did not specify a timeframe.

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2.4.4 Assessment of GSL schemes

The Commission generally proposes to approve the GSL schemes and payments proposed by the businesses. However, the Commission has suggested a number of revisions to the proposed GSLs (see table 2.5).

Table 2.5 **Suggested revisions to proposed GSL schemes**

	GSL	*Payment*	*Revision*
Western	Failure to give notice of planned water supply interruptions	$25	Remove
	Sewage spills within a house not contained within 1 hour of notification.	$100	increase payment to $500
	All GSLs (except Sewage spills within a house not contained within 1 hour of notification).	$25	increase payment to $50
	Adopt the following exclusion.		where an event is caused by, or is the responsibility, of the customer or a third party
Central Highlands	All GSLs.	$25	increase payment to $50

It is important that GSL payments are meaningful because the schemes must act as an incentive for businesses to improve services for those worst served. While proposed price increases will see average household bills grow substantially over the forthcoming period, businesses must also ensure that payment levels continue to be meaningful to customers. The Commission commends Barwon Water's proposals to increase GSL payments to $65 in line with tariff increases and suggests that Western Water and Central Highlands Water consider increasing the value of their GSL payments. Furthermore, the Commission seeks public comment on the businesses' proposed payment levels.

Western Water has also proposed to introduce a GSL for sewage spills within a house not contained within 1 hour of notification, an event that will attract a payment of $100. This amount appears low compared to the equivalent payments of $500 offered by other businesses. A sewage spill inside a home is generally considered the worst of all possible retail water related events. To ensure that the payment is meaningful to both customers and the business and to maintain consistency with other businesses offering a GSL for this event, the Commission suggests that Western Water increase this payment to $500 and seeks comment from stakeholders on the businesses' proposed payment levels.

Western Water has proposed that failure to give notice of planned water supply interruptions will attract a GSL payment. However, the obligation to give notice of planned water supply interruptions already exists under the Customer Service Code. In the 2005 Urban Price Review it was a GSL event proposed by Central Highlands Water that was not approved on the basis that businesses cannot pay to relieve their obligations; the obligation is a requirement as opposed to a service standard target. Therefore the Commission proposes to not approve this GSL.

In their Water Plans, the businesses were asked to outline the likely cost of proposed GSL schemes over the regulatory period, including forecast payments (based on historical performance) and any additional costs associated with implementation. These costs will be reflected in the businesses forecasts of operating and capital expenditure discussed in chapters 4 and 5.

Forecast payment costs will reflect the number of events and the rate of payments anticipated for the forthcoming period (see table 2.6). The businesses' forecasts suggest that the payments expected under their GSL schemes are not sufficiently large to have a material impact on prices. Most businesses have forecast a declining trend in payments over the period.

In assessing the businesses' forecast payment levels the Commission has also had regard for the businesses' actual performance in meeting the relevant service standards. The businesses' forecast payment levels are consistent with historic performance.

Table 2.6 **GSLs — forecast number of events**

	Forecast number of events				
	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Central Highlands Water					
Unplanned water supply interruptions in excess of 5 in a 12 month period	45	45	45	45	45
Unplanned interruptions to sewer service not rectified within 5 hours	120	120	120	120	120
Sewerage service interruptions not exceeding 3 within a 12 month period	20	20	20	20	20
Leaking water service not fixed within 5 business days	2	2	2	2	2
Unplanned interruptions to water supply not rectified within 5 hours	8	8	8	8	8
Wannon Water					
More than 5 water unplanned interruptions in a rolling 12 month period	20	15	12	10	10
Sewerage Spills on private property not contained within 5 hours of notification	12	12	8	8	5
Barwon Water					
Maximum of 5 unplanned water supply interruptions	198	186	174	162	150
Maximum of 3 customers receiving more than three sewer blockages per year	3	3	3	3	3
Western Water					
Failure to notify of planned water supply interruption	180	170	160	140	100
Planned interruptions during peak hours	8	6	6	6	6
Planned water supply interruption longer than notification given	40	20	20	12	8
More than 3 sewer interruptions in 12 months	12	12	12	4	4
Sewerage spills inside a house not stopped within 1 hour of notification	5	4	3	3	3

All of the businesses, with the exception of Western Water have proposed an exclusion for their GSL scheme. Barwon Water, Central Highlands Water and Wannon Water have proposed adopting an exclusion where the event was the responsibility of the customer or a third party as approved by the Commission for the first regulatory period. Western Water did not propose any exclusions. The Commission suggests that Western Water consider adopting this exclusion.

2.4.5 Draft Decision

> **Draft Decision**
>
> The Commission proposes to approve the GSL events proposed by Barwon Water, Central Highlands Water, and Wannon Water.
>
> In the case of Western Water the Commission proposes to approve the GSL events proposed with the exception of failure to give notice of planned water supply interruptions. This standard is already required to be met under the Customer Service Code.
>
> The Commission suggests that Western Water and Central Highlands Water consider increasing the value of their GSL rebates. Western Water should also consider increasing the GSL rebate for sewage spills within a house not contained within 1 hour of notification to $500. Furthermore, the Commission seeks public comment on the businesses' proposed payment levels.
>
> The Commission proposes to approve the exclusion (relieving the businesses' of the responsibility of providing a GSL rebate where the event was the responsibility of the customer or a third party) proposed by Barwon Water, Central Highlands Water and Wannon Water. The Commission proposes to require Western Water to adopt this exclusion.
>
> The Commission proposes to allow for the implementation of GSL schemes by all other urban regional water businesses during the next 12 to 24 months subject to further analysis, monitoring and consultation.

2.5 Rural service standards

As per the Commission's Determination in the first regulatory period, a Rural Customer Service Code has been established and imposes a consistent overarching framework for the delivery of services to customers. The Code sets out service level requirements and standards for key matters.

Each business was required to develop a Customer Charter that informs customers about the services that it offers, the respective rights and responsibilities of the business and its customers, and the service standards that the business proposes to deliver over the regulatory period. The Charter must cover certain minimum information requirements set by the Customer Service Code. Each business's service standards are reflected in the respective Customer Charter. There are a number of rural customer charters that have not yet been approved. FMIT is the only rural business that has not provided a Customer Charter to the Commission for approval.

The forthcoming regulatory period marks the first time that rural water businesses are required to propose targets, as relevant to their business operations, for the core set of service standards. The core set was consulted on during the 2006 Rural Price Review (see table 2.7).

The nature of rural services provided by the businesses differs significantly. Each business provides a different mix of rural services and operates in different environments in terms of geographical coverage and the age, condition and nature of the infrastructure used to deliver services.

Because of this, the Commission provides businesses with the flexibility to propose their own service levels or targets, rather than require all businesses to meet a consistent performance standard. This flexibility is intended to reflect the different operating environments faced by each business and allow customers to express their preferences for the level of service for which they are prepared to pay. Each business is required to express its standards or targets on the basis of common definitions.

The Commission is currently developing an annual performance monitoring framework for the rural sector. Upon finalisation, the Commission will monitor the performance of each business against its own targets.

Table 2.7 **Core rural service standards**

Gravity supply (by district/supply system)
Irrigation water orders delivered on day requested (per cent)
Number of channel burst and leaks (per 100 km of channel)
Unaccounted for water (per cent)
Pumped supply (by district/supply system)
Irrigation water orders delivered on day requested (per cent)
Number of pipeline bursts and leaks (per 100 km of pipeline)
Unaccounted for water (per cent)
Irrigation drainage (by district/supply system)
Availability of surface drainage schemes (per cent)
Availability of sub-surface drainage schemes (per cent)
Bulk Water
Annual compliance with storage operator obligations (per cent)
Licensing/administration
Applications for surface diversion, groundwater or supply-by-agreement licences determined within [X] days (per cent)
Processing permanent transfer of surface diversion or groundwater licences within [X] days (per cent)
Processing temporary transfer of water entitlement volumes within [X] days (per cent)
Processing permanent transfer of water entitlement volumes within [X] days (per cent)
Number of diversion licences metered or assessed for metering at 30 June (per cent)
Volume of total surface water and groundwater entitlements metered at 30 June (per cent)
Customer service
Complaints to EWOV (number)
Telephone calls answered within 30 seconds (per cent)

The following standards have been removed from the core set of rural service standards:

- stock and domestic deliveries within [X] days of the initial target delivery period (per cent) and
- unavailability of stock and domestic supply systems for continuous periods in excess of [X] hours (per cent)

These standards originally only applied to GWMWater, however following completion of the Wimmera-Mallee Pipeline Project in the forthcoming regulatory period, these standards will no longer be relevant to the business.

2.5.1 Approach to assessing rural service standards

The Commission has now established a Rural Customer Service Code but is yet to develop a performance reporting framework. Businesses were required to provide targets for a core set of service standards, as relevant to their businesses, as part of their Water Plans.

The Commission's primary focus is to ensure that businesses establish targets that provide customers with a level of service that is at least as good as the actual average achieved over the first regulatory period.

The Commission has used the following criteria to assess proposed standards:

- it has generally accepted a business's proposed targets where they are based on the historical three year average performance or on the businesses' best estimates where data is not available and
- it has required businesses to provide an estimate where no target was proposed.

The Commission identified a number of core service standards for which businesses did not provide targets for the regulatory period despite those standards being directly relevant to their businesses. The Commission sought further information from businesses and requested that targets are proposed.

As part of this Draft Decision, the Commission proposes to approve all of the service standard targets proposed by FMIT but requires revisions of targets from the other businesses as outlined in section 2.5.4.

The following sections provide an overview of the businesses' proposed service standards and targets and the Commission's approach and assessment of those proposals.

2.5.2 Overview of proposed rural service standards

Rural businesses were asked to propose targets for the core set of service standards, as relevant, to apply over the regulatory period. Beyond the core set of service standards, businesses could nominate additional service standards and outputs that reflect business specific services and localised issues.

Businesses were also required to:

- consult with their customers on the appropriateness of proposed targets for the coming regulatory period
- propose targets in accordance with the definitions outlined in the Commission's Draft Performance Reporting Framework[16] and
- consult with other regulators such as the EPA and DSE regarding relevant proposed service standards and outcomes.

In reviewing the businesses' Water Plans the Commission has made the following observations:

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[16] Essential Services Commission, 2006, Draft Performance Reporting Framework, November 2006.

- While all businesses proposed targets for standards for the forthcoming period, some businesses did not provide targets for the full suite of core service standards relevant to their business.
- A small number of businesses proposed targets for service standards for which the Commission has sought clarification and further information.
- Most businesses provided evidence of customer consultation and a small number investigated customers' willingness to pay for service standards using various techniques.

Businesses have proposed similar targets for indicators such as irrigation water orders delivered on day requested and availability of surface and sub-surface drainage schemes. The Commission notes that there are substantial differences between business targets for indicators such as number of channel burst and leaks (per 100 km of channel) and unaccounted for water, which is attributable to the diverse nature and geography of rural service networks.

2.5.3 Overview of proposed additional service standards

As part of their Water Plans, Goulburn-Murray Water, GWMWater and Southern Rural Water have proposed a range of additional service standards to reflect business specific services and localised issues.

Like their urban counterparts, the rural water businesses are subject to a number of obligations imposed by other agencies including DSE and EPA.. These obligations are often significant drivers of expenditure and the Commission has asked businesses to commit to relevant outcomes as additional service standards for the forthcoming regulatory period. The targets for each business are set out in Volume II.

There is substantial variance in businesses' interpretation of the level of their responsibility for achieving sustainability objectives, particularly for reducing CO2 emissions.

Goulburn-Murray Water is proposing to reduce greenhouse gas emissions to 75 per cent of 2005-06 levels by 2013 and further proposing to become carbon neutral by 2050. GWMWater and Lower Murray Water have also proposed targets, which are discussed in the urban additional services section. FMIT and Southern Rural Water did not propose targets for greenhouse gas emissions for the period.

2.5.4 Assessment of service standards

As previously indicated, there were a number of businesses that did not provide targets for the full suite of core service standards relevant to their business. The Commission will consult further with these businesses in the lead up to the Final Decision to set targets.

The Commission also sought clarification on a number of targets and further information relating to targets proposed for specific service standards (particularly with respect to EWOV complaints).

The Commission proposes to approve all service standards proposed by the businesses with the exception of:

- Goulburn-Murray Water
  - processing permanent transfer of surface diversion or groundwater licences within [X] days
  - EWOV complaints.
- GWMWater:
  - applications for surface diversion, groundwater or supply-by-agreement licences determined within [X] days,
  - processing permanent transfer of surface diversion or groundwater licences within [X] days
  - processing temporary transfer of water entitlement volumes within [X] days
  - processing permanent transfer of water entitlement volumes within [X] days.
- Lower Murray Water:
  - EWOV Complaints.

In response to the Draft Decision these businesses should provide further information on the proposed targets for these service standards.

Volume II sets out the approved service standards for each of the businesses, with an indication of the service standards for which businesses should provide targets prior to the Final Decision.

Draft Decision

The Commission proposes to approve all service standards proposed by the businesses for provision of rural water services, except where the Commission has sought further information as indicated below.

Furthermore, the Commission will consult further with businesses who did not propose the full suite of core service standards (as relevant to their business) to put propose targets before the Final Decision. These businesses include Goulburn-Murray Water, Lower Murray Water and Southern Rural Water.

Goulburn-Murray Water

The Commission is seeking further information in relation to the targets set for the following indicators:

- Processing permanent transfer of surface diversion or groundwater licences within [X] days.
- EWOV Complaints.

GWMWater

The Commission is seeking further information in relation to the targets set for the following indicators:

- Applications for surface diversion, groundwater or supply-by-agreement licences determined within [X] days
- Processing permanent transfer of surface diversion or groundwater licences within [X] days.
- Processing temporary transfer of water entitlement volumes within [X] days.
- Processing permanent transfer of water entitlement volumes within [X] days.

Lower Murray Water

The Commission is seeking further information in relation to the targets proposed for EWOV complaints.

3 OVERVIEW OF REVENUE REQUIREMENT AND DEMAND

3.1 Introduction

The Commission must be satisfied that prices are set at a level that generates sufficient revenue to recover the efficient cost of delivering services over the regulatory period. It must also ensure that prices do not reflect monopoly rents or inefficient expenditure.

The Commission has used the ‘building block’ approach to derive forward looking estimates of the revenue that the businesses 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.

Over the regulatory period the businesses proposed a total revenue requirement of $4.22 billion (see table 3.1). This reflects assumptions about the expenditure that the businesses propose to undertake and the return on and of assets over the regulatory period. The Commission has reviewed those assumptions and adjusted the businesses’ own revenue requirement estimates over the regulatory period to reflect its view of the efficient level of expenditure and the efficient costs of financing assets (see table 3.2).

The Commission’s Draft Decision results in a small increase in the revenue requirement compared to what was proposed by the businesses in their Water Plans. The adjustments made result in an increased revenue requirement for most businesses. the difference in the revenue requirement proposed by the businesses and the Commission’s Draft Decision generally reflects the impact of a change in the assumptions regarding the weighted average cost of capital (WACC) and therefore the cost of financing the businesses’ proposed capital programs. The Commission has updated the WACC to reflect current market conditions and hence the WACC used to derive the Draft Decision is higher than that used by the businesses to develop their Water Plan proposals.

The Commission also made downward adjustments to most businesses’ forecasts of capital and operating expenditure. The Commission revised operating expenditure forecasts upwards for those businesses that had not made any allowance for real increases in energy and labour costs over the period and also to reflect advice from the Department of Sustainability and Environment (DSE) on the environmental contribution.

In the case of capital expenditure the Commission revised the forecasts for some businesses upwards to reflect slippage of 2007-08 expenditure into the forthcoming regulatory period, a more reasonable expenditure profile over the period and due to the reclassification of expenditure from operating to capital and from non-prescribed to prescribed.

Table 3.1 **Proposed revenue requirement (all businesses)**
$ million in January 2007 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*
Urban businesses						
Barwon Water	121.47	131.72	135.23	144.46	153.61	686.50
Central Highlands	70.96	69.37	72.57	71.41	72.30	356.61
Coliban	73.04	73.73	75.49	77.70	80.47	380.43
East Gippsland	19.21	21.12	22.63	23.10	23.17	109.23
Gippsland	77.84	84.80	86.67	90.56	93.86	433.74
Goulburn Valley	44.47	46.82	49.09	50.53	51.58	242.49
GWMWater	39.27	44.87	46.23	46.65	47.25	224.27
Lower Murray (urban)	24.21	24.69	24.51	25.18	25.89	124.48
North East	38.24	40.43	42.28	44.02	45.35	210.31
South Gippsland	18.67	18.85	19.51	19.73	19.92	96.66
Wannon	45.62	45.96	48.47	48.36	48.46	236.86
Western	45.11	50.99	56.49	63.35	70.52	286.45
Westernport	13.40	13.58	14.41	14.92	14.90	71.22
Rural businesses						
FMIT	6.20	6.27	6.44	6.53	6.51	31.95
Goulburn-Murray	109.42	110.09	99.26	99.65	100.63	519.05
Lower Murray (rural)	13.43	14.35	14.03	14.95	15.54	72.30
Southern Rural	25.86	26.20	27.19	28.27	30.68	138.20
All businesses	**786.41**	**823.85**	**840.50**	**869.37**	**900.63**	**4,220.76**

Table 3.2 **Draft decision revenue requirement (all businesses)**
$ million in January 2007 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*
Urban businesses						
Barwon	122.90	134.50	138.79	148.66	157.65	702.51
Central Highlands	67.33	69.04	72.73	72.65	73.84	355.59
Coliban	71.74	73.01	75.72	77.19	79.27	376.93
East Gippsland	20.09	22.16	23.94	24.38	24.40	114.97
Gippsland	79.69	86.00	87.42	90.63	94.22	437.96
Goulburn Valley	46.89	50.11	52.07	53.25	54.27	256.60
GWMWater	40.25	46.64	48.19	48.66	49.33	233.08
Lower Murray (urban)	24.31	25.22	25.27	25.89	26.64	127.33
North East	39.18	40.62	42.67	44.70	46.29	213.46
South Gippsland	19.47	19.50	20.05	20.41	21.10	100.53
Wannon	43.90	45.49	47.62	48.01	48.86	233.89
Western	46.38	51.34	55.89	60.31	65.21	279.12
Westernport	14.31	14.50	14.87	15.20	15.71	74.59
Total urban	**636.45**	**678.12**	**705.26**	**729.93**	**756.81**	**3,506.56**
Rural businesses						
FMIT	6.26	6.29	6.68	6.90	6.87	32.99
Goulburn-Murray	109.50	104.42	104.85	101.92	103.10	523.78
Lower Murray (rural)	13.97	14.96	14.51	15.03	15.51	73.98
Southern Rural	25.12	25.40	26.30	27.40	29.91	134.13
Total rural	**154.85**	**151.07**	**152.33**	**151.25**	**155.38**	**764.88**
All businesses	**791.30**	**829.19**	**857.59**	**881.18**	**912.19**	**4,271.45**

Due to the uncertainty around the scope and funding arrangements of the Food Bowl Modernisation Project, the Commission is proposing to only approve prices for Goulburn-Murray Water 's gravity irrigation and drainage services provided in gravity irrigation districts for 2008-09. Prices for the remainder of the regulatory period will be determined once the scope of the Foodbowl Modernisation Project and funding arrangements are clarified. The Commission is intending to approve prices for the remaining services for the five year period, subject to Goulburn-Murray Water providing further detail on some of its proposals in response to this Draft Decision.

Southern Rural Water did not provide information on individual tariffs in its Water Plan but has indicated that it will propose unbundled tariffs in response to this Draft Decision.

There is also some uncertainty around proposals for the Macalister Irrigation district and the Werribee Irrigation District (WID) Recycled Water Scheme. Prices for the WID Recycled Water Scheme will be dependant on a number of factors, not least the pricing arrangements for Melbourne Water. The Government's deferral of the pricing arrangements has meant that Melbourne Water's prices are not part of this price review. Therefore the Commission is proposing to only approve prices for Southern Rural Water for the first year of the regulatory period. Prices for the remainder of the period will be determined once the scope and funding arrangements for the Macalister and Werribee districts have been clarified. In proposing unbundled tariffs for 2008-09 in response to this Draft Decision, Southern Rural Water should consider the tariff structure issues raised by the Commission in chapter 13..

Having derived the revenue requirement for each business, it is then necessary to determine the average annual price increase needed to meet that revenue requirement. This is then translated into specific tariff proposals in accordance with a price control mechanism that specifies how prices will be adjusted annually. Demand forecasts for the period are an important input into determining the prices that will meet the revenue requirement.

3.2 Dealing with uncertainty

Once prices are set, they are not typically adjust them within the regulatory period to reflect differences between actual and forecast costs of service provision. Businesses have an incentive to be efficient because they cannot adjust prices just because costs end up being more than forecast. To the extent that costs end up being lower (and/or demand ends up being higher) than forecast, the business retains the benefits during the regulatory period; similarly, where costs are higher than forecast (and/or demand ends up being lower), the business bears the loss.

However, there is flexibility within the framework to adjust prices to reflect uncertainty. Prices can either be adjusted within or at the end of the regulatory period. In considering what is an appropriate mechanism, it is important to recognise the potential impact on prices, customers and businesses of not allowing adjustments to be made. On the other hand, it is also important to consider the administrative and business incentive costs associated with making adjustments and whether these costs vary with the type of adjustment mechanism adopted. The costs are likely to be greater when adjustments are made within the regulatory period but are reduced (although not eliminated entirely) where the adjustments are made at the end of the regulatory period.

An issue for this price review is the uncertainty about continuing drought conditions and the ability of businesses to adequately reflect this in their expenditure and demand forecasts. The uncertainty arises because the forecasts used by the Commission to determine prices may end up varying significantly from actual performance.

In the case of major capital projects that are known but not fully committed to, the risk is that if they are included in the forecasts and the project does not eventuate, prices will be higher than they otherwise would be. Conversely, if they are not included in the forecasts but go ahead and there is no adjustment mechanism, businesses carry the additional financing costs until the regulatory asset base is updated at the subsequent price review.

In their Water Plans a number of businesses indicated that some of the capital projects they propose to deliver over the period are uncertain in scope, timing and cost. The Commission's expenditure consultants have also identified a number of projects where there is some uncertainty with regard to either timing or cost. The Commission is proposing to allow a pass through mechanism for these projects so that prices can be adjusted once the timing or cost is more certain. In other words, not all of the costs associated with these projects have been reflected in the respective business's revenue requirement. Once the project is more certain, the business will be required to apply to the Commission to have its prices adjusted to reflect the full impact of the project. This pass through mechanism will only apply to those projects that have been previously identified by the Commission. The pass through mechanism for uncertain capital projects is discussed further in chapter 5.

In the case of demand, the uncertainty arises because actual demand ends up being lower or higher the forecast. Without a mechanism to adjust prices to reflect actual demand the business bears the full impact of any difference. The impact of the continuing drought and restrictions has resulted in actual demand (and hence revenue) being significantly less than forecast for the first regulatory period. Some businesses have sought to recover this foregone revenue over the forthcoming regulatory period.

One way to deal with uncertainty going forward is for businesses to submit more conservative (optimistic) demand forecasts than they otherwise would. Everything else being equal more conservative (optimistic) forecasts will result in prices being higher (lower) than they need to be. Alternatively demand uncertainty may be more effectively dealt with through the form of price control. Under a tariff basket or individual price caps the risks associated with demand uncertainty are borne by the business. Under a revenue cap this risk is borne by the customers because prices can be adjusted to meet any under- or over-recovery of revenue associated with demand variability.

Demand uncertainty could also be dealt with through a within-period adjustments to reflect differences in actual demand and the forecasts used to set prices initially. It is the Commission's view that such a mechanism would provide an appropriate balance between protecting customers (from facing prices that are higher than they need to be) and ensuring the businesses recover reasonable costs. Adjusting prices within the period to reflect demand uncertainty is discussed further in chapter 15.

In its previous water price reviews the Commission introduced mechanisms to deal with changes in legislative obligations and catastrophic events. It is proposing to continue with these mechanisms for the forthcoming regulatory period (see chapter 15).

3.3 Expenditure forecasts

Key drivers of proposed prices are the forecast operating and capital expenditure required to deliver services over the regulatory period. The key drivers of expenditure include supply augmentation, asset renewals and maintenance, changes in demand (such as customer numbers), changes in customer preferences for services, and policy and regulatory obligations imposed on the businesses.

Under the WIRO, the Commission must be satisfied that the proposed expenditure forecasts are efficient and account for a planning horizon that extends beyond the regulatory period. The WIRO also requires that prices, or the manner in which they are determined, provide incentives for the businesses to pursue efficiency improvements over the regulatory period.

In reviewing the expenditure proposals of the water businesses, the Commission has sought to ensure that the benchmark level of expenditure is both efficient and sufficient to allow continued serviceability of existing assets, with appropriate allowances for growth and new obligations over the forthcoming regulatory period.

Following the submission of the Water Plans in October, some businesses subsequently revised some of their forecast expenditure figures to either correct errors or reflect better cost estimates.

To assist in its review of expenditure, the Commission engaged consulting firms Sinclair Knight Merz (SKM) and Cardno–Atkins (Cardno) to provide an independent assessment of the businesses' proposed expenditure. The consultants' draft reports were provided to each business for comment. The businesses were then invited to provide further information to the consultants where substantiation issues had been raised or to provide more detailed information on specific projects. The Consultant's final reports can be found on the Commission's website.

The businesses' proposed operating expenditure has been assessed against a benchmark level based on the last year of actual data, being 2006-07, adjusted for growth and expected productivity improvements. Where proposed operating expenditure was greater than this benchmark, businesses were asked to demonstrate that the higher expenditure reflected increases were associated with a reasonable increase in costs associated with business as usual expenditure or new expenditure related to additional obligations, functions and service levels.

Where the proposed increases in expenditure have been assessed as being reasonable, the Commission has used this expenditure for the purposes of approving prices for the regulatory period.

The Commission has made adjustments for a number of businesses to reflect assumptions about:

- electricity costs and greenhouse gas abatements
- labour costs and staffing levels
- additional productivity adjustments
- bulk water expenditure
- licence fees and environmental contribution
- other adjustments (including for non-prescribed services).

For most businesses the Commission's adjustments result in forecast operating expenditure being lower than that proposed.

In the case of capital expenditure, the consultants were asked to review the key capital projects being proposed by the businesses. The projects were considered on the basis of the following criteria:

- appropriateness — have the key drivers for the projects been adequately identified and explained?
- robustness — what analysis was undertaken to identify the project as the preferred option and were other options considered
- deliverability — have key activities associated with planning and construction been identified and can the project be delivered in the proposed timeframe
- reasonableness — are the forecast costs associated with the proposed project reasonable given current construction costs and costs associated with similar projects?

The Commission has generally accepted the adjustments recommended by its consultants. Consequently, most businesses have had their capital expenditure forecasts revised downwards for this Draft Decision. Generally these adjustments reflect:

- revisions to capital programs following consultation between the businesses, the Commission's consultants and other regulatory agencies
- a lack of justification for projects to be undertaken during the regulatory period
- the expected slippage and/or potential for deferral of non-urgent works.

Chapters 4 (operating expenditure) and 5 (capital expenditure) provide an overview of the businesses' proposed expenditure forecasts and the Commission's proposed adjustments. Volume II of the Draft Decision details the adjustments made to each business's forecasts.

3.4 Financing capital investments

The WIRO requires that prices are set to allow a return on past investments — as reflected in the initial regulatory asset value at 1 July 2004 — as well as a return on new assets constructed after that date.[17] This reflects the costs of financing the businesses' capital programs.

The regulatory asset base (RAB) is a key determinant of the return on and of assets that is reflected in the revenue requirement and thus prices. The RAB needs to be updated to reflect actual net capital expenditure and disposals for the first regulatory period. For the Draft Decision the Commission has relied on the businesses to provide it with actual expenditure for 2005-06 and 2006-07 through its financial templates. The businesses are also required to provide the

[17] Initial regulatory asset values (as at 1 July 2004) were set by the Minister for Water. Prices for the first regulatory period were set based on these initial values adjusted annually for forecasts of net capital expenditure, asset disposals and regulatory depreciation.

Commission with regulatory accounting statements consistent with its Water Industry Regulatory Accounting Code. The statements set out the businesses' actual expenditure and revenue over the regulatory period. This information is reviewed by the Commission on an annual basis.

The urban businesses have submitted regulatory accounting statements for 2005-06 and 2006-07 and the rural businesses have submitted information for 2006-07. The Commission is still in the process of reviewing the 2006-07 data and is proposing to use the reviewed data to update the regulatory asset base for the Final Decision. The Commission will seek further clarification from businesses where there are significant differences between the information submitted in the price review financial templates and the reviewed regulatory accounts data.

The Commission has also sought updated forecasts from the businesses for 2007-08 capital expenditure for the purposes of updating the RAB.

This updated RAB value then needs to be rolled forward to reflect any subsequent net capital investments, depreciation and disposals forecast to occur in each year of the forthcoming regulatory period.

In assessing the proposed rate of return on assets, the Commission has adopted a real post-tax weighted average cost of capital (WACC) approach that is consistent with an estimate of the cost of capital that a business undertaking similar activities would face.

The businesses' proposed values ranged from 5.1 per cent to 5.3 per cent on a real post-tax basis. For this Draft Decision, the Commission has estimated a real post-tax rate of return of 6.1 per cent. The higher WACC than that used by the businesses in their proposals reflects the impact of current market conditions. The Commission will update the WACC estimate for the Final Decision.

Deriving a WACC requires assumptions to be made about a number of parameters. In determining the appropriate value for these parameters the Commission has had regard to the businesses' proposed estimates and has also considered current market conditions.

Assumptions about RABs, regulatory depreciation and cost of capital issues are discussed in chapter 6.

3.5 Demand forecasts

Forecasts of customer growth, water deliveries and consumption of water, sewerage and other prescribed services are important factors influencing future expenditure, and also affect the prices that businesses will need to charge to meet their revenue requirement.

Unduly conservative forecasts (that is, those that understate demand) will result in customers paying prices that are higher than they otherwise would. Unduly optimistic forecasts may not enable businesses to recover their expenditure and earn a sustainable revenue stream over the regulatory period. Under either scenario, the Commission would not be satisfied that the businesses' forecasts are reasonable or that proposed prices meet the WIRO requirements.

The businesses' Water Plans set out forecasts of key demand parameters, including forecast water delivery (for rural customers), the number of water and sewerage connections, water consumption, and trade waste volumes and loads. They also present the businesses' views on the key factors likely to influence those forecasts, including the impact of removing or continuing water restrictions, the introduction of permanent restrictions, weather conditions, changes in tariff levels and structures, and estimates of population growth.

The Commission engaged PricewaterhouseCoopers (PwC) to undertake a detailed review and assessment of the businesses' demand forecasts. Each business was given the opportunity to provide further information justifying its proposed forecasts and to comment on PWC's draft report. After considering the matters raised, PwC provided final recommendations to the Commission. The final reports are available on the Commission's website.

The Commission has generally accepted the adjustments proposed by PwC. A number of businesses have adjusted their proposed demand forecasts in response to the consultant's review. PwC accepted the demand forecasts proposed by a number of businesses and has made significant adjustments for other businesses. These adjustments reflect assumptions about the impact of:

- population growth and demographic changes
- future rainfall levels, water inflows and climate change
- restriction levels applying to water consumption
- of price and tariff structure changes on water consumption
- water conservation measures adopted during the regulatory period.

The Commission acknowledges that there is likely to be some uncertainty around the demand forecasts used to set prices given the continued impact of the drought and climate change. It is proposing to deal with this uncertainty through a within-period review that would allow it or the businesses to seek to adjust prices (during the period) if actual outcomes end up being materially different to the demand forecasts. This mechanism is intended to be symmetrical in that prices could be adjusted in cases where actual demand ends up being higher or lower than forecast. This mechanism is discussed in chapter 15.

Chapter 7 provides an overview of the adjustments made by the Commission. The detailed adjustments made to each business's forecasts are outlined in Volume II of this Draft Decision.

4 OPERATING EXPENDITURE

4.1 Overview of business proposals

The urban businesses (including Lower Murray Water's urban services and all of GWMWater) have forecast total operating expenditure for the regulatory period of $2 217 million. The rural businesses have forecast $608 million, including Lower Murray Water's rural services.

As it is directly recovered through revenue, the businesses' proposed operating expenditure has a significant impact on water prices. Businesses were required to provide both historical data and annual forecasts for the forthcoming regulatory period.

Operating expenditure by urban businesses is forecast to increase steadily, as shown in figure 4.1, from $367.7 million in 2006-07 to $459.9 million in 2012-13. This represents an industry-wide average real increase of 25 per cent from 2006-07 to 2012-13.

Rural businesses proposed operating expenditure at the end of the regulatory period ($116.6 million in 2012-13) is only slightly above the $115.6 million in 2006-07. However, operating expenditure is forecast to increase above the 2006-07 level in the first two years of the regulatory period before declining towards the end of the regulatory period (see figure 4.1)

Key drivers of operating expenditure identified by the businesses include:

- additional operating expenditure associated with new assets, for example the Goldfields Superpipe or new sewage treatment plants
- purchases of bulk water through existing entitlements or through additional water sourced from temporary or permanent markets
- additional expenditure associated with the implementation of a number of programs and initiatives, including reductions in greenhouse emissions, biosolid reuse, developing services for small towns and the replacement of water meters in rural systems
- increasing energy costs driven by large increases in the wholesale electricity price and
- increasing costs of labour, chemicals and materials.

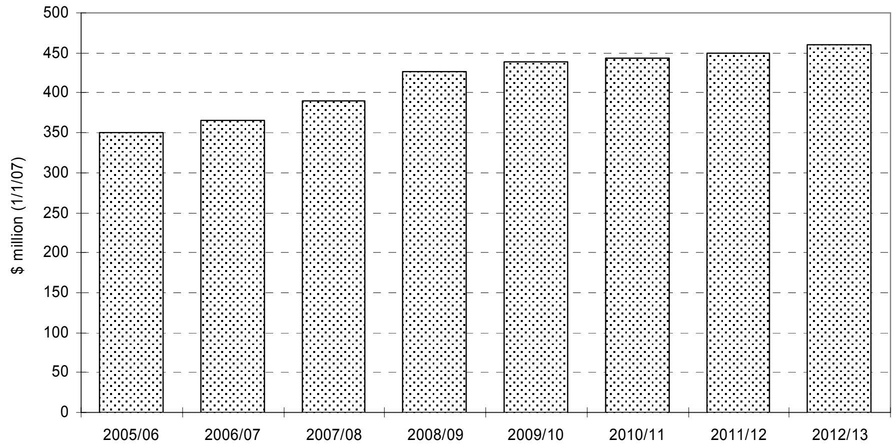
Table 4.1 **Proposed operating expenditure 2005-06 to 2012-13**
$ million in January 2007 prices

	2005-06	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Urban businesses								
Barwon	61.22	63.50	70.55	76.05	81.09	77.75	79.32	81.98
Central Highlands	31.60	34.36	37.80	43.23	45.82	48.06	45.51	45.47
Coliban	46.01	44.69	53.35	55.19	52.44	51.44	51.15	52.10
East Gippsland	10.66	11.27	12.20	11.84	11.97	12.78	13.08	13.05
Gippsland	39.34	41.69	42.47	50.58	54.86	55.01	56.29	56.54
Goulburn Valley	28.24	28.86	28.87	31.17	31.70	32.18	32.45	32.81
GWMWater[a]	26.24	29.31	27.77	25.58	25.89	25.68	25.46	25.25
Lower Murray (urban)	16.77	16.92	15.31	17.48	16.94	16.62	16.91	17.31
North East	23.38	23.89	25.74	26.92	27.71	28.04	28.53	28.86
South Gippsland	10.89	12.21	11.31	12.41	12.02	12.22	12.25	12.38
Wannon	25.23	25.91	28.20	33.61	32.96	34.27	33.71	33.27
Western	23.35	26.77	27.78	32.99	36.44	40.10	45.70	52.02
Westernport	7.46	8.38	8.34	9.07	8.94	9.05	8.97	8.91
Total urban	**350.40**	**367.76**	**389.70**	**426.12**	**438.79**	**443.21**	**449.34**	**459.94**
Rural Businesses								
FMIT	3.82	4.72	5.10	5.14	5.18	5.24	5.26	5.29
Goulburn-Murray[b]	70.41	82.52	102.35	92.19	96.67	83.87	83.12	82.93
Lower Murray (rural)	11.56	10.99	9.99	11.76	11.98	11.21	11.40	11.57
Southern Rural	14.85	17.37	17.80	17.53	17.15	17.21	16.94	16.83
Total rural	**100.64**	**115.59**	**135.23**	**126.63**	**130.98**	**117.52**	**116.72**	**116.62**
All businesses	**451.04**	**483.35**	**524.93**	**552.75**	**569.77**	**560.73**	**566.06**	**576.56**

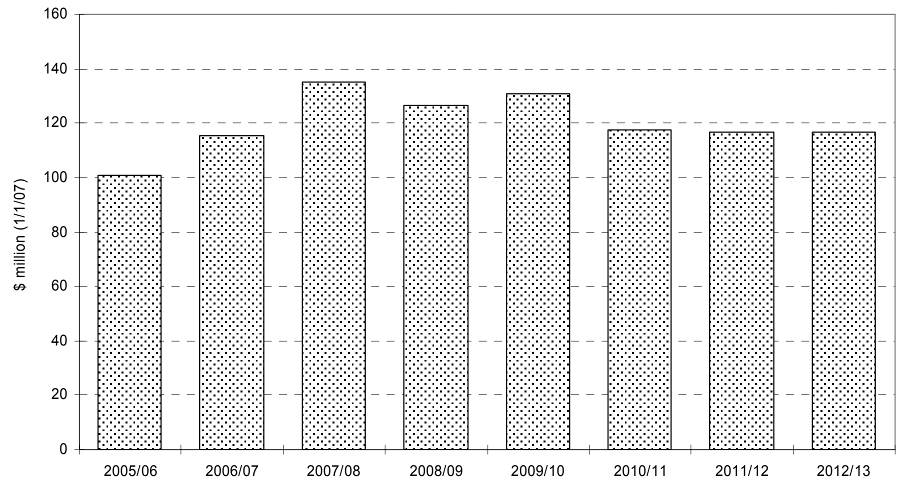
[a] GWMWater does not separate its urban and rural services. [b] Goulburn-Murray Water has only proposed one year of price increases due to uncertainty surrounding the Foodbowl Modernisation Project. Its plan sets out forecasts for each year of the regulatory period but these will be revised once the impacts of the food bowl modernisation project are considered.

Figure 4.1 **Total proposed operating expenditure**
$million in January 2007 prices

Urban businesses



Rural businesses



4.2 Approach to assessing operating expenditure

The Commission's approach to assessing operating expenditure was outlined in the earlier guidance, framework and issues papers.[18]

[18] Essential Services Commission 2006, *2008 Water Price Review Consultation – Framework and Approach*, December; Essential Services Commission 2007, *2008 Water Price Review Guidance Paper*, December; Essential Services Commission 2007, *2008 Water Price Review – Water Plans Issues Paper*, December.

Proposed operating expenditure was assessed against a benchmark level based on the last year of actual data, being 2006-07 adjusted for growth and expected productivity improvements.

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

Where the proposed increases in expenditure have been assessed as being reasonable, the Commission has used this expenditure for the purposes of approving prices for the regulatory period.

Under the WIRO, the Commission is required to be satisfied that proposed 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 has sought to identify the extent to which businesses' pricing proposals reflect a reasonable trend in operating expenditure consistent with an efficient business. In doing so, it has considered (a) the extent to which business proposals explicitly reflect anticipated efficiency improvements and (b) the trend in operating expenditure over the regulatory period implied by the proposals.

The Commission considers it appropriate that prices reflect a 1 per cent, per annum productivity improvement on growth adjusted business as usual expenditure over the regulatory period.

The growth adjusted benchmark business as usual operating expenditure for a particular year was determined by:

- taking the actual gross operating expenditure for the business for the most recently audited full year's operation (i.e. actual gross opex in 2006-07)
- subtracting the expenditure on licence fees bulk water purchases and the environmental contribution
- adjusting the remaining expenditure to account for growth
- applying an assumed productivity improvement of 1 per cent per annum.

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

To support forecasts of operating expenditure each business was asked to consider:

- historical expenditure levels
- benchmarking

- demand forecasts
- introduction of new obligations and
- consultation with Government, regulators and customers.

As a general principle, the Commission expected higher levels of justification where a business proposed a significant departure from historical expenditure levels or where expenditure relates to delivering outcomes that are above and beyond what customers have sought or regulators have mandated.

Operating expenditure proposed by the water businesses was assessed by engineering consultants Sinclair Knight Merz (SKM) for the urban water businesses and Cardno–Atkins (Cardno) for the rural water businesses.

4.3 Overview of operating expenditure draft decision

The Commission's Draft Decision on operating expenditure has been formed through its assessment of Water Plans, consultation with regulators and businesses and the consultants' findings.

Including the impact of bulk water charges, the environmental contribution and licence fees, which fall outside the control of the businesses, the Commission has assumed total operating expenditure of $2 758 million, which is $67 million less than forecast by the water businesses (see table 4.2).

As with capital expenditure, the benchmarks adopted for each business by the Commission do not represent the amounts that businesses must spend or allocate to particular operational, maintenance and administrative activities. They represent assumptions about the overall level of expenditure (to be recovered through prices) that the Commission considers to be sufficient to operate the business and to maintain services over the regulatory period.

It is important to recognise that where a business's actual operating expenditure during the regulatory period exceeds the benchmarks used to set prices because of inefficiency or additional expenditure on other activities, this will result in lower profits rather than higher prices. The converse is true where an efficiency gain is made during the regulatory period.

The following key issues arose in the assessment of proposed operating expenditure:

- electricity costs and greenhouse gas abatements
- labour costs and staffing levels
- additional productivity adjustments
- bulk water expenditure
- licence fees and environmental contribution
- other adjustments.

The Commission's assumptions in relation to these issues are discussed in the following sections.

Table 4.2 **Draft decision – operating expenditure**
$ million in January 2007 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total draft decision*	*Total proposed*	*Change per cent*
Urban businesses								
Barwon	74.61	79.46	76.28	78.06	80.59	389.00	396.19	-1.8
Central Highlands[a]	47.17	45.40	47.52	45.51	45.23	230.83	228.09	1.2
Coliban	54.66	50.93	50.88	51.02	52.17	259.66	262.32	-1.0
East Gippsland	11.97	12.08	12.86	13.14	13.09	63.14	62.72	0.7
Gippsland[a]	50.09	53.58	53.22	53.70	54.01	264.59	275.90	-4.1
Goulburn Valley	31.37	32.18	32.75	32.98	33.31	162.60	160.31	1.4
GWMWater	25.78	26.09	25.87	25.65	25.43	128.81	127.87	0.7
Lower Murray (urban)	17.01	16.55	16.21	16.43	16.83	83.03	85.25	-2.6
North East	27.00	26.82	27.12	27.75	28.24	136.93	140.07	-2.2
South Gippsland	12.70	12.30	12.50	12.39	12.51	62.39	61.28	1.8
Wannon	30.58	30.86	31.83	31.64	31.79	156.70	169.00	-7.3
Western	32.31	34.56	37.04	40.06	44.05	188.02	207.25	-9.3
Westernport	9.28	9.13	9.25	9.17	9.12	45.96	44.94	2.3
Total urban	**424.52**	**429.95**	**433.34**	**437.49**	**446.38**	**2,171.66**	**2,221.20**	**-2.2**
Rural businesses								
FMIT	5.10	5.04	5.10	5.12	5.14	25.50	26.12	-2.3
Goulburn-Murray	91.11	89.70	87.77	83.38	83.15	435.11	438.77	-0.8
Lower Murray (rural)	12.16	12.37	11.58	11.76	11.91	59.77	57.92	3.2
Southern Rural	17.69	17.22	17.19	16.82	16.62	85.55	85.66	-0.1
Total rural	**126.06**	**124.34**	**121.63**	**117.08**	**116.83**	**605.93**	**608.47**	**-0.4**
All businesses	**550.57**	**554.28**	**554.97**	**554.57**	**563.21**	**2,777.60**	**2,829.67**	**-1.8**

4.4 Energy expenditure

Increased energy costs were suggested by the majority of businesses as an explanation of the additional operating expenditure. With electricity for the urban businesses accounting for between 5 to 13 per cent of operating expenditure in 2006-07, changes in electricity tariffs, consumption and renewable energy usage can have a considerable impact on a business's revenue requirement.

Forecasts of increases in energy costs were in the range of 0 to 100 per cent. This variation is due to differences in existing contract prices and expiry dates, the differing magnitudes of usage, understanding of electricity pricing components and the timing of the preparation of Water Plans.

In the first half of 2007, wholesale electricity prices increased from $40 MWh to over $70 MWh. Price rises were driven by concerns that continued drought conditions would negatively impact electricity supply, mainly due to a lack of water for cooling of base load generators and for the operation of hydro generation.

The peak in wholesale energy prices corresponded with the development of Water Plans. Since this time, electricity forward prices have reduced significantly, and are now closer to $40 – $45 MWh. Most water businesses have identified that their electricity contracts expire in June 2008, meaning that they will need to enter into new contracts at a higher cost.

In reviewing the proposed energy price increases, SKM modelled the impact of likely changes to the individual components that make up electricity prices to understand the total impact on energy costs. The most volatile and largest component of electricity prices is the wholesale energy price which accounts for around 40 per cent of the total cost. It appears that a number of water businesses have confused the percentage changes in the wholesale energy price with the change in the total cost.

Based on information regarding future market prices, SKM has calculated that businesses will face significant increases in real energy costs relative to 2006-07 expenditure (see table 4.3).

Table 4.3 **Assumed electricity increases**
Percentage change relative to 2006-07

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Increase	12	15	15	15	15

The Commission has accepted the consultant's findings that real energy increases will occur over the period and agrees that, on the information available a step change in energy prices of between 10 to 15 per cent should be applied to all water businesses. Specific adjustments are detailed in Volume II of this Draft Decision. For some businesses this assumption has resulted in a downwards revision to expenditure and for others an upward revision.

The consultants separately considered where businesses identified major changes in electricity load associated with new projects, for example new treatment plants or recycled water facilities. Any adjustments to these assumptions are detailed in Volume II of this Draft Decision.

Several businesses commented on the Commonwealth government's planned implementation of a carbon emission trading scheme by the end of 2010 and the potential impact on electricity prices. As the impact, timing and nature of the carbon trading scheme are not known, the Commission proposes to allow for any necessary adjustments to costs due to the introduction of such a scheme during the regulatory period where appropriate.

4.5 Green power and GHG emission expenditure

The Statement of Obligations issued to each business states that the water businesses 'must develop and implement plans, systems and processes to manage its assets in ways which allow the licensee to supply its services sustainably'. Several businesses noted that this clause required them to undertake greenhouse gas abatement through purchasing energy from renewable sources ('green energy') or the purchase of emission offsets.

In assessing the expenditure associated with greenhouse gas abatement, the Commission has considered broad government targets, projected offset costs, the cost per customer and emission reductions achieved prior to 2006-07.

Through the Government Sustainable Energy Targets program the Victorian Government required its departments and a number of statutory authorities by July 2006:

- to achieve a 15 per cent improvement in energy efficiency, and
- purchase 10 per cent of their electricity as Greenpower.[19]

While these targets do not explicitly relate to water businesses, they provide an indication of the Victorian Government's view of what may be a reasonable target. The energy target is reinforced by the Victorian Renewable Energy Target (VRET) schemes' mandatory target that 10 per cent of Victoria's energy will be generated from renewable sources by 2016.

VRET runs in parallel with the Commonwealth's Mandatory Renewable Energy Target scheme which aims to have 20 per cent of Australia's energy supplied from renewable sources by 2020. Both schemes are in the early stages, with the majority of the targets remaining to be achieved.

In reviewing the expenditure on greenhouse gas reductions and offsets, the consultants used $20 per tonne of CO_2. This was adopted based on a report published by RMIT Global Sustainability, which compared prices offered by 15 different carbon offset providers. Prices varied according to the quality of the offset, ranging from $9 – $13 a tonne of CO_2 for tree planting and $20 – $40 per tonne for renewable energy. SKM considered that a reasonable benchmark for emission reductions is around $20 tonne of CO_2.

The Commission is of the view that the purchasing of 10 to 20 per cent of green energy or equivalent offsets is not inconsistent with the Statement of Obligations requirement. Where a business proposed higher abatement levels, it has been required to demonstrate sufficient customer support for the associated expenditure. For business with no or low abatement targets the Commission will be seeking further information on how they are complying with the sustainability clause in the Statement of Obligations.

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[19] Sustainability Victoria 2007, Government Sustainable Energy Targets, http://www.sustainability.vic.gov.au/www/html/2603-government-sustainable-energy-targets-gset-report-summary.asp, Accessed 18 February 2008.

The Commission agrees that $20 tonne of CO_2 is a reasonable benchmark from which to assess the efficiency of proposed offsets and that where businesses have identified higher costs reductions have been made. Specific adjustments are detailed in Volume II of this Draft Decision.

The Commission will undertake further consultation with businesses and Government before making its Final Decision.

4.6 Labour costs

A number of businesses identified escalating labour costs as a driver of increasing operating expenditure. As part of this review the Commission has considered if increases in labour costs, both real increases in wages of existing staff and additional staff, are justifiable and represent a reasonable expenditure for an efficient business.

4.6.1 Wage increases

Most businesses identified that they had enterprise bargaining agreements EBAs) which allowed for nominal increases in wage levels of 4 per cent per annum. Official Wage Price Index data for the December quarter showed increases in national annual wage rates of 4.2 per cent, with Victorian public service increases at 2.9 per cent.[20] The Reserve Bank of Australia's February statement on monetary policy suggests that pressure on wages is somewhat higher than suggested by the Wage Price Index, although it acknowledges that wages growth has been lower in Victoria.[21]

For the purposes of this Draft Decision the consultants have recommended adopting a real increase of 1.25 per cent per year. Where businesses have assumed wage growth in excess of this benchmark the consultant has recommended a reduction. Where businesses have assumed CPI or lower real wage increases these have been revised upward to meet the benchmark. The Commission is of the view that the consultant's findings in regards to real wage increases is a reasonable benchmark.

Specific adjustments are detailed in Volume II of this Draft Decision.

4.6.2 Increases in staff levels

Several businesses' expenditure proposals include the provision for additional staff. The largest proposed increases in staff were by Goulburn Valley Water (14 staff), Wannon Water (around 12) and North East Water (14 staff). The proposed new staff represent increases of 8, 7 and 18 per cent, respectively. In contrast,

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[20] Australian Bureau of Statistics, 6345.0 Labour Price Index Australia, December Quarter 2007.

[21] Reserve Bank of Australian, Statement on Monetary Policy – February 2008, Price and Wage Developments, accessed on 24 February 2008 at http://www.rba.gov.au/PublicationsandResearch/StatementsonMonetaryPolicy/Feb2008/price_wage_developements.html

GWMWater forecast a net reduction in staffing levels of around 17 per cent (35 full time equivalent positions) due to the Wimmera Mallee pipeline's completion.

In general the consultants have accepted the need for additional staff. The Commission has accepted the consultant's findings on additional staffing levels with specific adjustments detailed in Volume II of this Draft Decision.

4.8 Bulk water expenditure

Coliban Water, Goulburn Valley Water and North East Water purchase bulk water from Goulburn-Murray Water through bulk entitlement frameworks. This Draft Decision requires Goulburn-Murray Water to propose revised bulk water charges consistent with its assumptions regarding the overall revenue requirement. For the purposes of this Draft Decision, the bulk water charges for the urban businesses have been assumed as per Water Plan proposals. In finalising bulk water charges for Goulburn-Murray Water, the Commission intends to reflect these charges in the assumed bulk water costs of Coliban Water, Goulburn Valley Water and North East Water.

The completion of the Goldfields Superpipe will introduce additional bulk charges for Central Highlands Water and Coliban Water. These include Goulburn-Murray Water's charges to supply water to the Waranga pumping station and the sharing of costs associated with the Waranga to Sandhurst pipeline. In the Draft Decision the Commission has assumed the total operating expenditure proposed by the businesses, without separating bulk charges from other costs. Before releasing its Final Decision, the Commission will consult with businesses on their cost sharing arrangements and assumptions to separate bulk charges from other charges.

Western Water's bulk water charges have been reduced by $10.08 million over the period from that assumed in its Water Plan. The reductions are driven by:

- Melbourne Water's revised bulk charges due to the proposal to fund the desalination plant via a private public partnership (PPP) and
- advice from Southern Rural Water on its proposed storage operator costs.

Southern Rural Water purchases Class A recycled water from Melbourne Water's Western Treatment Plant to supply the Werribee Irrigation District. It has agreements covering the variable costs with Melbourne Water and its customers until 1 July 2009. The Commission proposes to accept Southern Rural Water's forecast operating expenditure for 2008-09. Bulk water charges from 1 July 2009 will be determined when the Commission reviews charges for Melbourne Water.

The Commission proposes to introduce a pass through mechanism so that the changes in bulk charges are adjusted year on year as part of the annual price approval process.

4.7 Adjustments to licence fees and environmental contributions

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. In particular, licence fees are payable as set by:

- the Minister for Health under s51 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 s24 of the *Environment Protection Act 1970*, for costs incurred by the EPA in administering discharge licences and works approvals
- the Minister for Finance in consultation with the Minister for Water under s4H(2) of the *Water Industry Act 1994*, for costs incurred by the Essential Services Commission in administering the economic regulatory framework.

The businesses' operating expenditure forecasts include estimates of the licence fees payable to these regulatory agencies over the regulatory period (see tables 4.4 and 4.5). In the case of some PPP arrangements, the licence fees for the EPA are payable by the service provider and reflected in the toll payment. The forecasts also include costs associated with the environmental contribution to the government under s192 of the Water Industry Act.[22]

[22] DSE provided advice regarding the environmental contribution commencing on 1 July 2008. These amounts were expressed in 2007 dollars and are to be held at this amount during the period, resulting in a net decrease in real terms over the period. DSE note that the prices are subject to further Government consideration .

Table 4.4 **Assumed DHS and EPA licence fees and environmental contribution**
$ million per annum in January 2007 prices

	Licence Fees		
	EPA	*DHS*	*Environmental Contribution*[a]
Urban Businesses			
Barwon	0.21	0.05	5.1
Central Highlands	0.20	0.03	2.31
Coliban	0.16	0.03	2.20
East Gippsland	0.02	0.01	0.79
Gippsland	0.46	0.03	3.13
Goulburn Valley	0.12	0.02	2.03
GWMWater	0.07	0.01	1.46
Lower Murray Water (urban and rural)	0.08	0.01	1.45
North East	0.13	0.02	1.64
South Gippsland	0.14	0.01	0.85
Wannon Water	0.13	0.02	1.67
Western	0.07	0.02	1.93
Westernport	0.03	0.01	0.59
Total urban	**1.80**	**0.26**	**25.15**
Rural businesses			
FMIT	0.00	0.00	0.13
Goulburn-Murray	0.00	0.00	1.72
Southern Rural	0.00	0.00	0.37
Total rural	**0.00**	**0.00**	**2.22**
All businesses	**0.00**	**0.00**	**27.37**

[a] Will be held at nominal levels during the regulatory period.

Table 4.5 **Assumed ESC licence fees**
$ million per annum in January 2007 prices

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Urban Businesses					
Barwon	0.10	0.10	0.10	0.10	0.13
Central Highlands	0.11	0.06	0.06	0.06	0.06
Coliban	0.05	0.05	0.05	0.05	0.06
East Gippsland	0.03	0.03	0.03	0.03	0.03
Gippsland	0.12	0.12	0.12	0.12	0.12
Goulburn Valley	0.05	0.05	0.05	0.05	0.05
GWMWater	0.04	0.04	0.04	0.04	0.04
Lower Murray Water (Urban)	0.02	0.02	0.02	0.02	0.03
North East	0.03	0.03	0.03	0.03	0.04
South Gippsland	0.01	0.01	0.01	0.01	0.02
Wannon Water	0.07	0.07	0.07	0.07	0.07
Western	0.04	0.04	0.04	0.04	0.05
Westernport	0.02	0.02	0.02	0.02	0.02
Total	**0.68**	**0.63**	**0.63**	**0.62**	**0.71**
Rural businesses					
FMIT	0.00	0.00	0.00	0.00	0.00
Goulburn-Murray	0.10	0.10	0.10	0.10	0.14
Lower Murray Water (Rural)	0.00	0.00	0.00	0.00	0.00
Southern Rural	0.03	0.03	0.03	0.03	0.03
Total	**0.13**	**0.13**	**0.13**	**0.13**	**0.17**
Total All Businesses	**0.80**	**0.75**	**0.75**	**0.75**	**0.88**

4.8 Other adjustments

The Commission has agreed to a number of miscellaneous adjustments that the consultants proposed operating expenditure forecasts.

The consultant’s adjustments to expenditure include:

- the transfer of permanent water entitlements from operating expenditure to capital expenditure. For example, Lower Murray Water included the purchase of bulk water as an operating cost
- assumptions regarding the volume and cost of temporary water rights (in the case of North East Water) and or the substitution of permanent water rights for temporary water rights (in the case of Coliban Water)
- errors or subsequent adjustments made by the businesses

- the timing of operating expenditure where adjustments or delays have been recommended for capital projects
- the impact of changes to any relevant legislation.

The specific adjustments are set out in Volume II of this Draft Decision.

4.8.1 Adjustments for non-prescribed services

The correct classification of services as prescribed or non-prescribed is important because, under the WIRO, the Commission has the power to regulate only the prices of those services that are prescribed. While the Commission has no role in regulating prices for non-prescribed services, it needs to be satisfied that these services are correctly classified and that the costs of these services are accurately identified and excluded from the regulated cost base.

Non-prescribed services are not provided ‘in connection with’ prescribed services and are often provided in a competitive market. The Commission considers that services such as property rental or leasing, farming activities on sewage treatment plant sites, boating and recreation services are clearly non-prescribed. There are also a number of other non-prescribed services undertaken by businesses which are often unique to a particular business and relatively large in size. These include works associated with salinity management undertaken under Government Services Contracts, storage operation and land management services provided under contract to the Murray Darling Basin Commission (MDBC).

For this Draft Decision, the Commission has adjusted Lower Murray Water’s forecast operating expenditure by $0.4 million and revenue by $2.6 million due to it having incorrectly assuming recycled water as a non-prescribed service.

5 CAPITAL EXPENDITURE

5.1 Introduction

Capital expenditure is a key component of the revenue requirement. Net capital expenditure is recovered by being added to the regulatory asset base (RAB) and 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 businesses 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
- other issues in relation to capital expenditure.

5.2 Approach to assessing capital expenditure

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 business 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 five year regulatory period. The WIRO further requires the approved prices, or the manner in which they are determined, to provide incentives for the businesses to pursue efficiency improvements over 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 of the amount that is to be spent on individual capital projects. Instead, the assumed capital expenditure is a benchmark used by the Commission to assess whether prices will deliver sufficient revenue to the business over the regulatory period. This being to enable each business to recover an efficient level of capital expenditure needed to deliver the service expectation of customers and any obligations imposed by regulatory agencies. If businesses want to undertake capital expenditure outside this scope they are able to do so, but the costs cannot be recovered through prices charged to customers.

As noted previously SKM and Cardno provided an independent assessment of the businesses' proposed expenditure. Copies of the consultants' final reports can be found on the Commission's website.

This assessment sought to identify and assess the major projects that comprise a significant proportion of the total capital expenditure forecast, rather than an assessment of each business's entire forecast capital expenditure. Specifically, these projects were reviewed to confirm that the following criteria would be met:

- appropriate in relation to key drivers and obligations – with evidence provided of such drivers and in accordance with the Statement of Obligations that sets out responsibilities of each of the water businesses.
- robust (with adequate supporting analysis and systems) – as demonstrated by reports which clearly enunciate the problems faced by the water business, and sets out the analysis undertaken of the options to resolve that problem and identifies the preferred solution. Evidence may also be sought to demonstrate that the preferred solution falls within an overall strategy by the business.
- deliverable over the 5 year regulatory period – demonstrated that the key activities comprising the delivery of the project from planning to construction have been identified and thought through and that the projects can be practically delivered within the proposed timeframe.
- reasonable cost estimate – the cost estimate is well supported either by a schedule of quantities using typical rates currently being experienced in the industry, or 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.

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 EPA for environmental issues, DHS for drinking water quality, 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 pass through mechanisms to deal with uncertainty around capital projects. The issue of dealing with uncertainty and adjustments during the period is discussed later in this chapter.

As noted in the Commission's issues paper some businesses indicated capital projects that they proposed to deliver over the period but are uncertain in scope, timing and cost. These included:

- Connection to the desalinisation plant (South Gippsland Water) - South Gippsland Water indicated that it has not made any allowance for the possibility that it may take water from the proposed desalination plant for Melbourne. In its Water Plan South Gippsland Water indicated that it would seek an adjustment of the determination if it was required to spend greater than $5 million in capital expenditure or $1 million in operating expenditure.
- Augmentation of the Latrobe System (Gippsland Water) – Gippsland Water indicated that it may have a number of capital projects that are uncertain (for example the augmentation of the Latrobe System). It suggested that it would seek agreement with the Commission on a trigger mechanism that would allow for an adjustment of the determination.

Based on the Consultant's review of each businesses' forecast the Commission has also formed its own view on other specific capital projects that have been omitted from or deferred within the expenditure forecast but could be subject to a pass through mechanism.

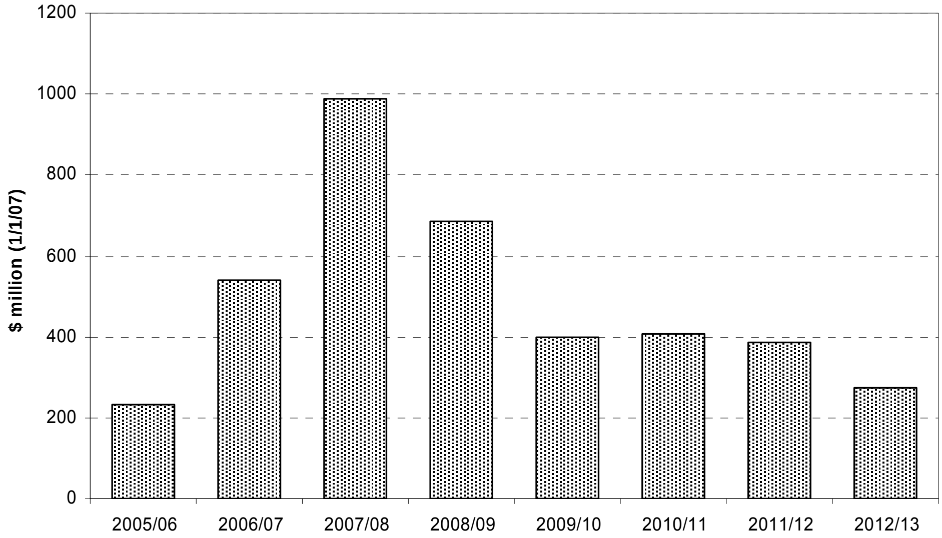
The Commission has also reviewed the proposed expenditure for 2007-08 where it requested from the businesses to supply actual expenditure for the half of the year and up to date forecasts of expenditure for the remaining months of the 2007-08 period. This is discussed in the roll forward of the RAB section in chapter 6.

5.3 Overview of business proposals

Generally, the businesses proposed significant increases in capital expenditure for 2007-08 (the last year of the current regulatory period) and for 2008-09 with expenditure levels falling back to historic levels over the remainder of the regulatory period (see figure 5.1 and table 5.1). The increase in 2007-08 reflects a proposed catch up in expenditure from the first regulatory period and the impacts of supply augmentations such as the Goldfields Superpipe.

Figure 5.1 **Total capital expenditure**

Urban businesses



Rural businesses

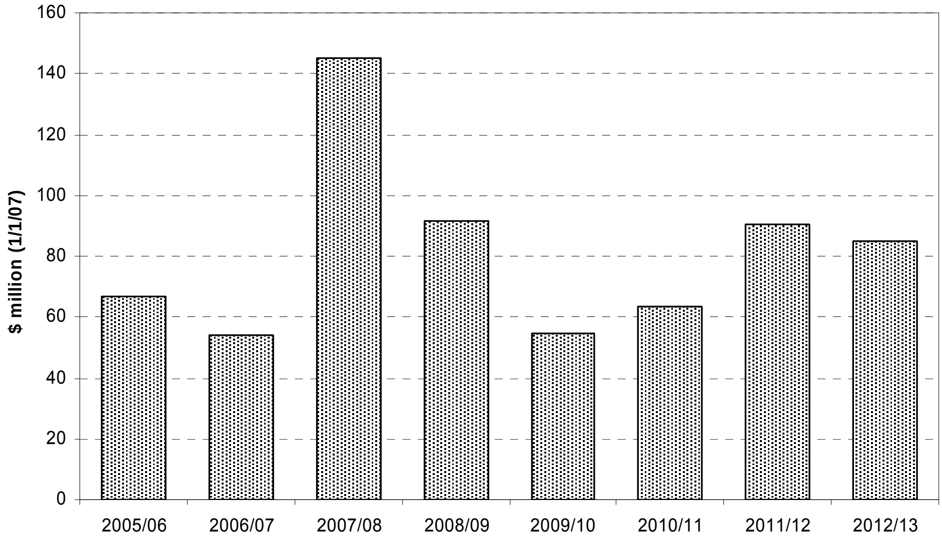


Table 5.1 **Actual and forecast capital expenditure 2005-06 to 2012-13**
$million in January 2007 prices

	2005-06	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Urban businesses								
Barwon	34.36	46.44	84.56	97.50	81.70	162.84	154.03	67.03
Central Highlands	14.98	71.62	179.61	53.55	25.46	22.16	20.88	18.27
Coliban	22.08	85.14	124.21	51.52	44.49	45.74	43.92	28.43
East Gippsland	6.30	17.21	16.83	29.61	15.36	4.45	3.32	3.43
Gippsland	43.08	65.88	135.79	56.93	32.26	42.45	56.89	62.74
Goulburn Valley	14.94	23.41	23.22	24.84	31.87	24.90	17.62	13.66
GWMWater	15.33	147.64	297.36	251.14	45.04	11.78	15.68	17.83
Lower Murray (urban)	10.36	8.89	8.92	27.14	7.47	8.05	6.36	8.38
North East	9.69	15.53	30.84	16.44	23.42	22.36	20.19	17.15
South Gippsland	14.28	12.33	11.46	12.07	10.24	9.86	8.55	7.18
Wannon	17.70	16.14	36.20	25.16	43.80	12.82	16.77	11.54
Western	25.20	22.47	34.46	38.15	33.38	24.25	16.92	15.88
Westernport	2.84	5.52	5.23	2.80	3.95	16.32	4.19	2.38
Total urban	**231.13**	**538.23**	**988.68**	**686.87**	**398.44**	**407.98**	**385.32**	**273.9**
Rural Businesses								
FMIT	4.00	2.52	1.54	0.06	0.86	1.49	0.06	0.06
Goulburn-Murray	58.00	45.35	97.01	56.75	39.11	33.12	38.06	37.45
Lower Murray (rural)	3.26	3.89	26.70	22.76	2.97	13.73	20.00	1.81
Southern Rural	1.58	2.31	19.92	12.09	11.87	15.12	32.21	45.79
Total rural	**66.83**	**54.06**	**145.17**	**91.65**	**54.81**	**63.46**	**90.34**	**85.11**
All businesses	**297.96**	**592.29**	**1133.85**	**737.57**	**453.24**	**471.44**	**475.65**	**359.01**

Some of the key drivers of capital expenditure are supply augmentation and asset upgrades and replacement. Table 5.2 lists some of the major capital expenditure projects and programs for each water business as detailed in their Water Plans. For most businesses a small group of projects account for a significant proportion of their total expenditure. All key capital expenditure projects for each business are set out in Volume II.

Table 5.2 **Key capital expenditure projects**
$million January 2007 prices

Proposed capital expenditure project/program	*Cost*
Barwon Water	
Melbourne Interconnection (water)	142.0
Northern Water Reclamation Plant	69.4
Anglesea borefield project (water)	42.0
Central Highlands Water	
Country town sewerage schemes	14.7
Goldfields pipe	13.8
Ballarat North wastewater treatment plant	9.7
Coliban Water	
Superpipe (current period)	100.0
Rural system reconfiguration	40.0
Sewer improvement strategy - Bendigo	22.0
Bulk water purchases	22.0
Recycled water Scheme	17.0
East Gippsland Water	
Mitchell River water supply system	38.0
Goulburn Valley Water	
Broadford Pipeline	12.6
Corporate Assets	13.4
Alexandra Eildon Pipeline	6.5
Gippsland Water	
Water factory (current period)	170.0
Loch sport servicing project	45.2
Coongulla waste system project	14.3
Water reticulation system renewals program	10.5
GWMWater	
Nhill treated water supply	10.9
Lower Murray Water (urban)	
Koorlong wastewater treatment plant	13.0
North East Water	
Bright/Porepunkah offstream storage	8.0
New office	4.8
Beechworth wastewater treatment plant upgrade	6.0

Proposed capital expenditure project/program	*Cost*
South Gippsland Water	
Poowong/Loch/Nyora sewage scheme	7.9
Tarra River wastewater treatment plant upgrade	6.5
Westernport Water	
Raising of Candowie Reservoir	13.9
Water Quality Improvement	3.75
Western Water	
Merrimu Water Tank	3.0
Melton Outfall Sewer	8.5
Woodend RWP upgrade	5.2
Wannon Water	
Hamilton water supply augmentation	33.4
New Warrnambool office	7.3
Warrnambool WRP Upgrade	7.7
FMIT	
L South Sub area partial replacement	1.6
Goulburn-Murray Water	
Dam safety upgrade	27.7
Surface water management	28.7
Reconfiguration program	17.3
Lake Mokoan – return to wetlands (water savings program)	11.0
Lower Murray (rural)	
Merbein pipeline and pump station	22.0
Robinvale high pressure system	16.6
Southern Rural Water	
Macalister Irrigation District	94.8
Channel automation	7.4
Metering program	4.05

5.4 Capital expenditure assessment

5.4.1 Project timing and delivery

As already noted for the next regulatory period the businesses are proposing significant increases in capital expenditure for 2007-08 and for 2008-09 with expenditure levels falling back to historic levels over the remainder of the regulatory period. As with the current regulatory period a small number of key projects underpin the capital expenditure programs of many businesses (a large proportion of proposed capital expenditure for each of the businesses is linked to around five key projects).

A key issue is whether the businesses have the resources to deliver these major programs within the proposed timeframe, noting that major projects often require detailed planning and approvals before they can proceed. The Commission also notes that deliverability is an issue across the state and nationally in terms of overall capacity to resource due to some of the major projects being undertaken such as the desalination plant and the Sugarloaf pipeline. This suggests that businesses will be competing against each other for resources, materials and contractors. It is these constraints rather than a lack of available capital that may compromise the delivery of major projects.

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

- businesses' performance against previous capital expenditure programs (noting that several regional water businesses have a history of significantly underspending their capital works budgets) 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
- the businesses' project management capability.

Consequently, the consultants recommended adjustments to the timing of major projects that although considered prudent are unlikely to be delivered against the timelines identified in Water Plans. In some instances, the consultants recommended revising the timing of proposed capital expenditure within the regulatory period (for example, moving the project from year one to year four or five). In other instances the consultants advised that, given the current status of project planning and approval, some projects are unlikely to be delivered within the regulatory period. During the review process, the consultants liaised with businesses to better identify the timing of key projects, which resulted in agreed timing adjustments and even the removal of some projects from their Water Plans.

Specifically, SKM and Cardno recommended adjustments to the timing of a number of major projects including:

- Country Towns Water and Sewerage Schemes (Central Highlands Water) – SKM considered that while there is an obligation to undertake these works, they are not aware of any requirements relating to timing associated with this obligation or any evidence of environmental concerns that require these works to be undertaken. It therefore recommended the deferral of works for Smythesdale, Waubra, Landsborough and Avoca for two years and the towns of Blackwood and Gordon for three years.
- Mitchell River Water Supply Strategy (East Gippsland) – SKM considered that the proposed expenditure is prudent and reasonable however due to the

proposed tight timelines it would be more realistic to spread expenditure for 2008-09 across the first two years of the regulatory period.

- Coongulla and Glenmaggie Waste System Projects (Gippsland Water) – SKM recommended that the commencement of construction related expenditure be deferred until 2011-12 for these projects and to flow into the following regulatory period.
- Lake Mokoan – Return to Wetlands (Goulburn-Murray Water) – Given the uncertainty surrounding the final scope of this project, Cardno recommended that the forecast capital expenditure for this project be spread over the first two years of the period.
- Koorlong Waste Water Treatment Plant (Lower Murray Water (Urban)) – Cardno recommended spreading expenditure for the Koorlong Waste Water Treatment Plant and the augmentation for recycled water for the Koorlong WWTW to spread over the first two years of the next regulatory period. Cardno also recommended an 80:20 split of the expenditure for the Nichols Point Project over 2008-09 and 2009-10.
- Poowong/Lock/Nyora Sewerage Schemes (South Gippsland Water) – Due to the increased forecast costs of the Poowong/Lock/Nyora sewerage scheme, SKM considered that further justification is required for this project. SKM recommended that expenditure for this project be deferred until the last two years of the next period and into the following regulatory period.
- Warrnambool WRP upgrade (Wannon Water) – SKM stated that they were not provided with any justifying information to support this project and therefore recommended that expenditure be deferred until the end of the period.
- Raising of the Candowie Reservoir (WESTERNPORT Water) – SKM recommended deferring the construction related expenditure for the raising of the Candowie Reservoir to the end of the next regulatory period, and spreading it over two years.

These adjustments and all other adjustments, where relevant, are detailed in Volume II of this Draft Decision and are discussed in the consultants' final report.

The capital expenditure assumptions adopted in this Draft Decision include some projects that may still need to pass approval hurdles. Projects with expenditure over $5 million, for example, require DTF approval. The Commission will monitor the progress of approvals for major projects between the Draft and Final Decisions to ensure that prices are not set so as to recover the costs associated with these projects where there is sufficient doubt as to whether they will be undertaken during the period. If necessary, the Final Decision may be adjusted to reflect any changes in a project's approval status or delays or pass through provision.

The Commission in conjunction with DSE will continue to use regulatory audits to monitor the progress of businesses in improving the quality of their asset management systems.

5.4.2 Major Adjustments to Capital Expenditure

The consultants in their review recommended a number of other adjustments to major projects due to reasons such as insufficient justification for costs and/or consideration for 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 its Draft Decision. Some of the major projects recommended to be adjusted include:

- Melbourne Interconnection (Barwon Water) – SKM considered that the allowances for contingency and engineering, procurement and construction management (EPCM) appear high and should be reduced from 25 per cent to 15 per cent for contingency from 15 per cent to 10 per cent for EPCM reducing the overall cost from $142 million to approximately $120 million.
- Rural Channel System Reconfiguration (Coliban Water) – SKM considered that the cost of the project of $40 million for water savings of 4,000 ML was relatively expensive especially when compared with the expenditure for other water saving options such as the urban leakage reduction program. SKM considered that it would be prudent to reduce the planned level of expenditure for this project, and undertake some of the less expensive components of the project over the next regulatory period. It also considered that further investigations were required to more clearly establish cost effective ways of reducing system losses and/or prioritise the sub-component initiatives within this category of works. Further, SKM noted that the completion of the Superpipe would appear to reduce the need and urgency to undertake the rural channel system reconfiguration works and realisation of the associated water savings less critical. SKM therefore recommended that the forecast expenditure for this project be reduced from $40 million to $20 million within the next period.
- Gippsland Water Factory Amenities Facility (Gippsland Water) – SKM considered that as there is no obligation to develop this facility, it has a lesser priority than other important capital expenditure in the period. However, it recommended a reduction in the forecast to allow for essential site operations buildings, including a control room, laboratories, reception and administrative offices.

The Commission notes that since businesses submitted their Water Plans, some have revised proposals due to:

- expenditure for 2007-08 shifting into the next regulatory period, including Barwon Water, Central Highlands Water, North East Water and Wannon Water
- timelines of projects being brought forward such as Goulburn Valley Water's Broadford pipeline project and Wannon Water's Hamilton Grampians Interconnector Pipeline, and
- new projects being proposed such as Goulburn Valley Water's Water Treatment Plant filter rehabilitation and a significant increase in water quality treatment costs for Coliban Water**.**

The detail of each adjustment made to the business's expenditure proposals are set out in Volume II of this Draft Decision.

5.4.3 Adjustment provisions during the regulatory period

The Commission notes that based on the consultants' recommendations a number of projects have been omitted from or delayed in the capital expenditure forecasts due to a level of uncertainty around their delivery. However as discussed earlier the Commission considers that if during the regulatory period the delivery of a pre-determined project became more certain the Commission would consider adjusting a businesses' regulatory asset base to pass through the expenditure incurred for that project. The Commission notes that an adjustment to prices could only occur for projects identified as part of this review process and are set out in the Commission's determination.

Some of the projects that have been recommended to be either omitted from or deferred in the capital expenditure forecast but the Commission considers could be subject to a pass through mechanism during the next regulatory period include:

- Melbourne Interconnector (Barwon Water) – Due to the uncertainty with the costs and timing of the Melbourne Interconnector pipeline, and the uncertainty of the pricing structure of the Desalinisation Plant, Barwon Water could consider delaying expenditure for this project until the end of the period. If the project was then to become more certain during the regulatory period, prices could be adjusted to reflect those costs.
- Merbein channel replacement (Lower Murray Water (Rural)) – expenditure for this project of $22 million has been omitted from Lower Murray Water's forecast due to uncertainty around the receipt of Federal Government funding. However if Federal funding is granted during the regulatory period the price determination for Lower Murray Water could be adjusted during the period to include the expenditure for this project.
- Moe Groundwater ($8 million), Warragul Groundwater ($1.5 million) and Mirboo North Groundwater projects (Gippsland Water) – As these projects are currently at options study stage and that there may be some interactions between the needs of these projects, the Commission has allowed some expenditure for planning and feasibility to be undertaken in the next regulatory period. However if the project costs are finalised and Gippsland Water could justify that these projects will be delivered in the next regulatory period then an adjustment of Gippsland Water's price determination could be considered.
- Macalister Irrigation District (Southern Rural Water) – The proposed expenditure for this project has not been included in prices by Southern Rural Water, as there is uncertainty surrounding government funding being granted. However if this funding was granted during the period Southern Rural Water's determination could be adjusted to include the government contribution for this project and any impact on prices.
- Raising of Candowie Reservoir (Westernport Water) – SKM recommended that the proposed expenditure for this project of $14.9 million be deferred until the end of the period due to insufficient planning. However if Westernport Water could justify its commencement earlier than forecast it could trigger an adjustment of its price determination during the regulatory period.

5.5 Overview of capital expenditure draft decision

For the purposes of this Draft Decision, the Commission has adopted the expenditure forecasts set out in table 5.3 for urban businesses and 5.4 for rural businesses.

In making its Draft Decision, the Commission has generally accepted the recommendations of SKM and Cardno regarding the required level of capital expenditure for each water business. As shown in table 5.3 and 5.4 overall the Commission's Draft Decision forecast capital expenditure is 0.4 per cent more than that proposed by urban businesses and 2.9 per cent (net) less than that proposed by rural businesses. The Commission notes that this increase for urban businesses is largely due to a number of businesses during the review process identifying expenditure to be deferred from 2007-08 into the next regulatory period, as deliverability of works will be less than originally forecast for the current year. The Commission proposes to review this deferred expenditure between the Draft and Final Decisions to ensure that the business's proposed capital programs are still deliverable.

The major difference between the proposed forecasts and the Draft Decision for urban and rural businesses is the shift of expenditure from the first two years to the last two years of the regulatory period, due to the uncertainty around the timing and deliverability of a number of projects. As previously discussed the Commission notes that some projects may during the period be brought forward earlier in the period via a pass through adjustment.

Generally, the main reasons for adjustments to forecast capital expenditure programs as discussed above are related to:

- revisions of capital works programs following consultation among the businesses, the consultants and other regulatory agencies
- lack of justification for projects to be undertaken in the forthcoming regulatory period
- 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 accepted the proposed expenditure forecasts for GWMWater while it has adjusted expenditure for all other businesses. There is a significant increase for FMIT (119 per cent) which used forecasts from its 2005 Master Plan without inflating expenditure to January 2007 prices and made no provision for other cost increases. South Gippsland Water's proposed expenditure increased by 12.7 per cent due to the increased costs forecast for the Poowong/Loch/Nyora Sewerage Scheme from the costs originally proposed in its Water Plan.

Overall aside from capital expenditure in 2007-08 and 2008-09, which includes a couple of large projects such as the Goldfields Superpipe, the Wimmera Mallee Pipeline and the Gippsland Water Factory, the Draft Decision provides for a level of capital expenditure that is comparable with historical levels. The detailed adjustments for each business are set out in Volume II.

Table 5.3 **Draft Decision - Urban businesses capital expenditure 2008-09 to 2012-13**
$million in January 2007 prices

	Proposed						Draft decision						
	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*	*Change per cent*
Barwon	97.50	81.70	162.84	154.03	67.03	563.10	114.45	83.57	159.90	142.37	62.70	562.99	0.0
Central Highlands	53.55	25.46	22.16	20.88	18.27	140.32	52.81	27.13	28.36	25.29	25.19	158.77	13.2
Coliban	51.52	44.49	45.74	43.92	28.43	214.10	76.04	42.29	32.94	14.64	25.52	191.43	-10.6
East Gippsland	29.61	15.36	4.45	3.32	3.43	56.17	24.77	20.16	4.49	3.32	3.43	56.17	0.0
Gippsland	56.93	32.26	42.45	56.89	62.74	251.27	53.64	30.58	40.52	53.19	62.27	240.20	-4.4
Goulburn Valley	24.84	31.87	24.90	17.62	13.66	112.90	39.50	25.84	18.25	17.07	13.06	113.71	0.7
GWM Water [a]	251.14	45.04	11.78	15.68	17.83	341.47	251.14	45.04	11.78	15.68	17.83	341.47	0.0
Lower Murray (urban)	27.14	7.47	8.05	6.36	8.38	57.40	26.98	13.64	8.54	6.84	8.86	64.86	13.0
North East	16.44	23.42	22.36	20.19	17.15	99.55	18.87	21.94	25.04	17.28	19.55	102.68	3.1
South Gippsland	12.07	10.24	9.86	8.55	7.18	47.90	10.36	6.24	9.36	14.55	13.48	53.99	12.7
Wannon	25.16	43.80	12.82	16.77	11.54	110.09	35.99	35.00	15.36	15.95	14.46	116.76	6.1
Western	38.15	33.38	24.25	16.92	15.88	128.59	38.15	33.38	25.15	16.92	15.88	129.49	0.7
Westernport	2.80	3.95	16.32	4.19	2.38	29.65	2.85	4.00	3.02	10.69	8.88	29.45	-0.7
Total Urban	**686.87**	**398.44**	**407.98**	**385.32**	**273.90**	**2,152.40**	**745.55**	**388.81**	**382.71**	**353.79**	**291.11**	**2,161.97**	**0.4**

[a] GWMWater's capital expenditure includes a government contribution of $124.5 million for the Wimmera Mallee Pipeline in 2008-09.

Table 5.4 **Draft Decision – Rural businesses capital expenditure 2008-09 to 2012-13**
$million in January 2007 prices

		Proposed						Draft decision						
		2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*	*Change per cent*
FMIT	Gross	0.06	0.86	1.49	0.06	0.06	2.53	0.05	1.72	3.67	0.05	0.05	5.54	119.1
	Net	0.06	0.86	1.49	0.06	0.06	2.53	0.05	1.72	3.67	0.05	0.05	5.54	119.1
Goulburn-Murray Water	Gross	56.75	39.11	33.12	38.06	37.45	204.49	45.12	44.38	34.54	36.24	35.75	196.03	-4.1
	Net	27.06	27.26	25.64	29.49	30.02	139.46	22.06	29.26	28.64	29.49	30.02	139.46	0.0
Lower Murray (rural)	Gross	22.76	2.97	13.73	20.00	1.81	61.26	21.13	4.52	4.51	4.50	4.52	39.17	-36.1
	Net	16.16	2.97	10.73	11.99	1.81	43.65	14.53	4.52	4.51	4.50	4.52	32.57	-25.4
Southern Rural	Gross	12.09	11.87	15.12	32.21	45.79	117.09	11.97	11.75	15.00	32.09	45.67	116.49	-0.5
	Net	7.80	8.03	14.99	32.09	45.67	108.59	7.68	7.91	14.87	31.97	45.55	107.99	-0.6
Total Rural	**Gross**	**91.65**	**54.81**	**63.46**	**90.34**	**85.11**	**385.36**	**78.27**	**62.37**	**57.72**	**72.89**	**85.99**	**357.22**	**-7.3**
	Net	**51.09**	**39.12**	**52.84**	**73.63**	**77.55**	**294.23**	**44.33**	**43.41**	**51.68**	**66.01**	**80.13**	**285.56**	**-2.9**

5.6 Other capital expenditure issues

5.6.1 Asset Management

The Commission expects businesses to ensure that they effectively plan for and manage the renewal and maintenance of existing infrastructure assets, and that the augmentation of infrastructure meets the future requirements of new and existing customers for water and sewage services. The WIRO requires that the expenditure forecasts contained in the Water Plans must take into account a planning horizon that extends beyond the regulatory period.

Key elements of good asset management include the establishment of asset databases, the use of Geographic Information Systems and SCADA systems, the establishment of condition assessment and internal performance monitoring, and the development of economic decision-making tools to evaluate the most cost effective means of deciding whether to renew or rehabilitate assets.

Though the consultants were not specifically requested to focus on this area it was noted that in general businesses had improved their asset management capabilities over the current regulatory period and forecast expenditure was sufficient to meet each of the businesses asset management requirements over the next regulatory period.

Regulatory audits undertaken by the Commission for the Minister for Water also concluded that asset management capabilities of the water businesses had improved over the current regulatory period.

5.6.2 Permanent Water Rights

The Commission notes that part of the forecast capital expenditure for the next regulatory period includes the purchasing of permanent water rights which have been included as capital expenditure.

The Commission notes that Lower Murray Water (Urban) included permanent water rights expenditure ($0.53 million per annum) in its proposed operating expenditure but for the Draft Decision this expenditure has been shifted from operating to capital expenditure. This will ensure costs of buying permanent water entitlements are paid for by customers over time. SKM also recommended an adjustment to Coliban Water’s bulk water purchases to reduce the volume of purchases and an acceleration of the proposed rate of purchases. The Commission has also adjusted Lower Murray Water’s (Urban) regulatory asset base to account for bulk water purchases in 2005-06 and 2006-07.

5.6.3 Monitoring performance

The Commission has allowed significant increases in capital expenditure programs for a number of 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 which prices will be based on for the regulatory period.

Businesses may also want to consider between the draft and Final Decision whether the timelines for project delivery they have committed to are realistic and if any further deferral of expenditure to later in the period is required.

The Commission will publish details annually of the businesses' actual 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.

The Commission in conjunction with DSE will audit the asset management capability of all water businesses as part of the regulatory audit program.

5.6.4 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 on time. As a result, prices do not reflect large projects that may be deferred or spread into future regulatory periods.

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.

The Commission notes that North East Water has not included all of its small town projects in its forecast for the next regulatory period. However North East Water proposed that in the event that the full program of small town projects is delivered during the period would be entitled to an additional element in the building block for 2013-14 to compensate for all the costs associated with the program including the cost of borrowed funds incurred prior to 1 July 2013. The Commission agrees with this approach in principle however it notes that if this were to occur North East Water would receive capital costs minus government and customer contributions, multiplied by the borrowing costs calculated based on the WACC.

5.6.5 Accounting for government contributions

The Commission is aware that the government is expected to contribute to a number of capital projects in the water sector (such as, new town water and sewerage schemes and recycled water projects). Where contributions are received from the government or customers, the value of the contribution should be netted off the regulatory asset base to ensure the business does not recover the costs through prices.

However, most of the Water Plans do not identify projects that are expected to receive government contributions. Eight businesses (Coliban Water, East Gippsland Water, Goulburn Valley Water, North East Water, Western, Westernport Water, FMIT and Southern Rural Water) identified that no government contributions are expected across the regulatory period. The tariffs for these businesses will thus be sufficient to recover the costs of all projects identified in the Water Plans.

Between the Draft and the Final Decision the Commission will seek to clarify with DSE whether there may be better information on the level of known government contributions that the water businesses will receive across the regulatory period. Without information about government contributions, customers may pay more than they otherwise would need to because the businesses may receive both the contribution and the full capital financing costs associated with the project through prices. At the beginning of the next regulatory period, the Commission will adjust the businesses regulatory asset base to account for all government contributions actually received during the period.

6 FINANCING CAPITAL INVESTMENTS

In submitting their Water Plans, the businesses were required to propose a return on and of existing and new investments that satisfied the regulatory principles of the WIRO.

The WIRO requires the Commission to ensure that the prices proposed in the businesses' Water Plans provide a return on all investments made after 1 July 2004 to augment existing assets or construct new assets. This implies that businesses' revenue should provide:

- a return on the value of the regulatory asset base (RAB) (that is, the weighted average cost of capital multiplied by the RAB) and
- a return of the initial investment over time through an allowance for regulatory depreciation.

The following section outlines the Commission's Draft Decision regarding the rolling forward of the RAB, the rate of return on capital investments, the businesses' regulatory depreciation, renewals annuity programs and any requests by urban businesses for foregone revenue or additional expenditure from the current regulatory period.

6.1 Rolling forward the RAB

Each water business's RAB represents the value of its past capital investments for pricing purposes. It reflects the initial regulatory asset value set by the Minister and the value of new assets constructed by the businesses since the initial value was set. This resulting value is the value on which a business can expect to earn a return (return on capital), and the value that is returned to the business over the economic life of the assets (as regulatory depreciation). As outlined in previous consultations, the formula to calculate the opening RAB for each business at 1 July 2008 is as follows:

	Opening RAB $_{2008}$
equals	Opening RAB $_{2004}$
plus	Gross capital expenditure $_{2004\text{-}2007}$
less	Contributions (both government and customers) $_{2004\text{-}2007}$
less	Proceeds from disposal of assets $_{2004\text{-}2007}$
less	Regulatory Depreciation $_{2004\text{-}2008}$

Once the opening value has been established, the same approach is then used to determine the opening value for each year of the regulatory period. Forecasts of capital expenditure, contributions, regulatory depreciation and disposals are used for this calculation.

As previously stated, the Commission's preferred approach to determining the RAB at 1 July 2008 is to adopt the standard regulatory approach of using the actual capital expenditure, contributions, and proceeds from disposals for the period 1 July 2004 to 31 June 2006 and the estimated forecasts of capital expenditure, contributions and disposals used in the 2005 and 2006 Price Reviews. The regulatory depreciation used in determining the opening RAB is that which was forecast in the 2005 and 2006 reviews.

Under this approach an adjustment would be made in 2013 for any difference between assumed and actual net capital expenditure for 2007-08 when the opening RAB is calculated for the next regulatory period. Regulatory depreciation remains the same as that estimated in this price review. The Commission has previously indicated that it would consider proposals from the businesses to use an updated forecast of 2007-08 net capital expenditure to update the RAB.

In their Water Plans, all businesses have proposed to use the most recent forecast of capital expenditure for 2007-08 rather than that incorporated in the last price decision (see table 6.1). The Commission requested that where businesses were seeking to reforecast 2007-08 expenditure, the Water Plan should include a breakdown of the proposed expenditure and explain the reasoning for adopting the forecast.

The Commission had previously indicated to businesses that it proposed to consider actual capital expenditure to the six months ending 31 December 2007 to inform its decision on the appropriateness of any reforecast in expenditure and the rolling forward of the 2007-08 RAB.

In March 2008, the Commission requested each business to provide actual expenditure for July to December 2007 and forecast expenditure for the remaining six months (to June 2008), including 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 some businesses will over/underspend.

The Commission notes that a number of businesses' revised forecasts are lower than that proposed in their original Water Plan, as shown in table 6.1. The Commission has accepted the revised forecast expenditure for 2007-08 for each business, but notes that due to the uncertainty around expenditure for the remaining months until the end of June 2008, it will reassess expenditure levels for 2007-08 between the Draft and Final Decisions.

Table 6.1 **Approved 2007-08 capital expenditure compared to Water Plan forecast**

	Approved 2005 Final Decision	*Proposed forecast – Water Plan October 2007*	*Revised 2007-08 forecast March 2008*
Barwon Water	33.6	84.6	60.9
Central Highlands	24.1	179.6	142.7
Coliban	16.3	124.2	83.5
East Gippsland	10.5	16.8	18.2
Gippsland	51.7	135.8	128.7
Goulburn Valley	13.9	23.2	23.2
GWMWater	68.1	310.8	310.8
Lower Murray (urban)	14.6	8.9	8.9
North East	13.2	30.8	24.2
South Gippsland	4.5	11.5	10.0
Wannon	17.1	36.2	33.5
Western	28.3	34.5	37.3
Westernport	13.0	5.2	6.6
FMIT	0.1	2.4	2.4
Goulburn-Murray	51.8	97.0	97.0
Lower Murray (rural)	22.8	29.6	29.6
Southern Rural	23.4	23.1	23.05

Note Table relates to gross capital expenditure. Only net capital expenditure for 2007-08 will be rolled into each business' asset base.

6.2 Rate of return

Regulators normally adopt a rate of return that reflects an estimate of the opportunity cost of capital on the basis of a weighted average cost of capital (WACC) that reflects the weighted average of its different sources of finance – namely debt and equity.

In previous regulatory decisions, the Commission, and most other regulators in Australia and the UK have used the capital asset pricing model (CAPM) to provide an estimate of the required return on equity. The return is calculated as the sum of the return earned by risk-free assets, and a premium for risk:

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

where R_e is the required return on equity

R_f is the risk-free rate

β_e is the equity beta

$(R_m - R_f)$ is the return in excess of the risk-free rate (the equity or market-risk premium) that investors would need in order to invest in a well diversified portfolio of assets.

The cost of debt financing is then normally estimated from the observed, or estimated, debt financing costs of businesses in the water industry or comparable utility infrastructure businesses. Therefore, the weighted average cost of capital can be represented as:

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

where R_d is the cost of debt

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

Applying this methodology requires assumptions to be made about the following:

- the real risk-free rate of return (R_f)
- equity (market) risk premium (R_m-R_f)
- equity beta (β_e) and
- cost of debt (R_d) and capital structure (E/V and D/V)

As part of their Water Plans, each business was required to propose an estimate of the rate of return using a real post-tax WACC. The models drawn from finance theory and practice for estimating the cost of capital provide for an estimate of the post-tax WACC, however the price controls that are incorporated by the Commission are derived on a pre-tax basis. Therefore an allowance needs to be included in the revenue requirements to allow for this difference, this is represented by the franking credits component. The Commission provided an estimate of the WACC in its Guidance Paper which used a risk-free rate based on the 20-day period of 7 February to 6 March 2007.

The Commission's Draft Decision with regard to the WACC to apply to the water businesses is 6.1 per cent. The Commission notes that there has been a large increase in the WACC in comparison to the indicative WACC provided in earlier guidance. This is primarily due to increases in the real risk-free rate and increases in the debt margins. The following table provides the parameters used to determine the WACC, this is followed by an outline of the parameters involved and the Commissions reasoning for the decisions with regard to each parameter.

Table 6.2 **Draft Decision - real post tax WACC**

Real risk-free rate	*Equity beta*	*Market risk premium*	*Debt margin*	*Financing structure*	*Franking credit value*	*WACC*
(per cent)	*(β)*	*(per cent)*	*(per cent)*	*(per cent)*	*(ÿ)*	*(per cent)*
3.41	0.65	6.00	1.95	60	0.5	6.1

Real risk-free rate

The risk-free benchmark rate used in the CAPM should reflect the yield on a risk-free investment. The yield on government securities is typically used as a proxy. In earlier consultations, the Commission had proposed to apply the same approach to calculate the real risk-free rate as it did in the 2005 Urban Water Price Review. Namely, to estimate the value of the real risk-free rate based on a 20-day average of the yield on Commonwealth Government inflation-indexed bonds with a ten-year term to maturity.

During the most recent Gas Access Arrangement Review (GAAR), the Commission established that there were issues with the yield on real Commonwealth Treasury Issued Bonds (TIBS). It was identified that the issues associated with the yields on these bonds related to the possibility of both absolute and relative bias.

Relative bias refers to the bias in real Commonwealth Government Securities (CGS) yields compared to nominal CGS. Primarily, the argument was made that demand for CGS outstripped supply, resulting in the real yield not reflecting the risk-free rate. Absolute bias similarly refers to the bias in both nominal and real CGS, meaning that all yields are suppressed.

During the GAAR, the Commission also relied on statements made by the RBA and Commonwealth Treasury assuring the Australia Energy Regulator that there is no reason to suspect that the market is not functioning adequately (i.e. that no supply and demand issue exists).

In order to address the issues of bias, the Commission applied an alternative approach to determining the real risk-free rate. This alternative approach was to use nominal risk-free bonds and develop a forecast of inflation to then determine the real rate of return for the bonds. Consequently, the Commission now derives the real risk-free rate from nominal government bonds adjusted for an independent forecast of inflation. For more information regarding this change in approach, refer to the GAAR Final Decision.[23] The calculation is outlined as follows:

$$\left\{ \frac{(1 + \text{risk} - \text{free} \quad \text{nominal} \quad \text{rate})}{(1 + \text{inflation} \quad \text{forecast})} - 1 \right\} \times 100$$

In determining the nominal risk-

[23] Essential Services Commission, Gas Access Arrangement Review 2008-12 – Final Decision – Public Version, March 2008.

free rate of return, the Commission uses information from the RBA based on the yield for a 10-year nominal government bond. This is still based on a 20-day average as per previous regulatory decisions. The Commission has calculated this nominal risk-free rate of return based on the average of the 20-day trading period until 19 March 2008; which has resulted in a nominal rate of 6.20 per cent.

In calculating the inflation forecast the Commission has relied largely on the findings of its GAAR Final Decision. This process resulted in a considerable debate between consultants from both the gas distributors and the Commission. While short-term forecasts resulted in higher forecasts of inflation, the longer term forecasts were viewed to be more appropriate and within the long-term inflation target of the RBA of between 2 and 3 per cent.

The Commission is of the view that the conditions in the market have not changed significantly enough to warrant another review of the forecast inflation over such a similar time frame. Therefore the Commission has adopted a forecast inflation rate of 2.70 per cent, the same as that applied for the GAAR. This inflation forecast is then used to determine the benchmark real risk-free rate of return.

While the businesses did not propose to alter the approach to determining the risk-free rate, the Commission is of the view that, where possible, it must be consistent in its treatment of fundamental issues for the financing of capital investments across the regulated industries. In that case the Commission proposes to adopt the approach established in the GAAR in determining the real risk-free rate of return.

The Commission's Draft Decision is that the real risk-free rate for this review will be set at 3.41 per cent. This consists of a nominal risk-free rate of 6.20 per cent, based on a 20-day trading period until 19 March 2008, and then applying an inflation factor of 2.7 per cent. The Commission notes that this is an estimate and it will more than likely change for the Final Decision based on the most recent market data at the time of forming the Final Decision.

In deriving an estimate of the real risk-free rate, the Commission notes that the rate used for the Draft Decision (3.41 per cent) is significantly greater than the indicative real risk-free rate provided by the Commission in its Guidance Paper (2.6 per cent). This is largely due to the market conditions at the time of producing each paper. This has lead to the Commission developing a WACC estimate that is significantly greater than that provided for in the Guidance Paper.

Equity beta

The equity beta reflects the non-diversifiable risk of an asset relative to the market as a whole. Assets with an equity beta greater than the market average of one would be expected to compensate investors for greater risk through higher returns. Conversely, an equity beta less than one will compensate investors for less risk, through lower returns.

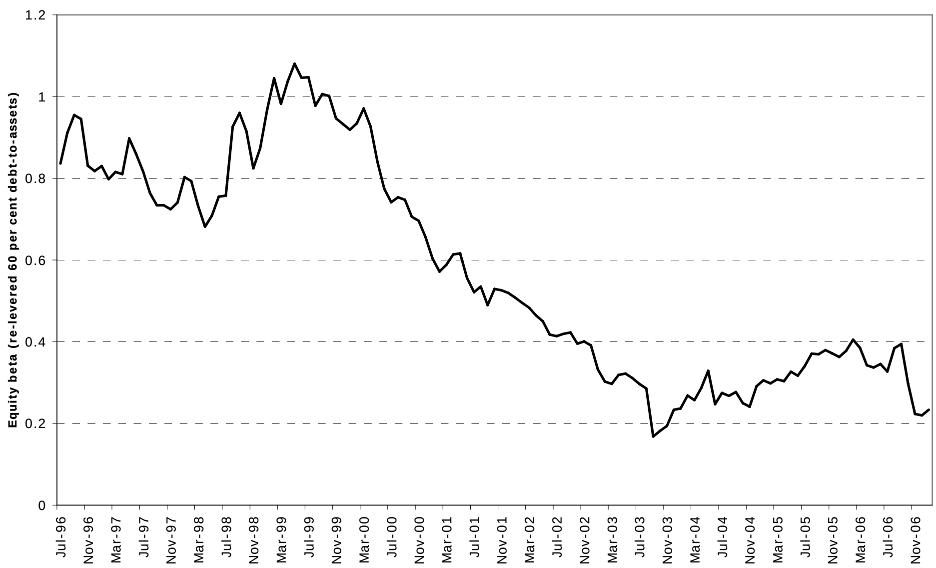
The Commission outlined in its Guidance Paper that it proposed an equity beta proxy of 0.75, based upon benchmark gearing of 60 per cent debt to regulatory assets. The Commission notes that this proposal was in line with the previous decision on the equity beta for water businesses.

All of the water businesses, except Barwon Water, accepted the proposed equity beta for the upcoming review period. Barwon Water proposed in its Water Plan to increase the equity beta to at least 0.85 based on recent regulatory precedent and the need to err on the side of caution. Following the release of the Issues Paper, Barwon Water provided a submission indicating that it was willing to accept the parameters from the indicative WACC that was provided by the Commission, contrary to the approach outlined in its Water Plan.

Subsequent to the Commission releasing its Issues Paper, it also released a Final Decision in relation to the GAAR. In this review, a significant amount of research was devoted to the appropriate level of the equity beta for the gas distribution businesses. Both the Commission and the distributors engaged consultants to establish an appropriate estimate of the equity beta for the distributors. The result of this process was the Commission applying an equity beta of 0.7 for the gas distribution businesses as it was of the view that this estimate was supported by the empirical evidence from the Australian energy sector.

The Commission was provided with data for a range of equity betas for similar entities to the gas businesses, with an example of this provided below, outlining an average of equity betas over time. In the Commission view, the empirical evidence suggested that the best estimate arrived at on a reasonable basis lies between the range of 05.to 0.8. This is consistent with prevailing conditions in the market for funds and the risk involved in delivering the businesses' services

Figure 6.2 **Average equity betas for comparable Australian entities for the gas industry**



Source: Essential Services Commission, Gas Access Arrangement Review 2008-12: Draft Decision, August 2007.

For more information regarding the Commission's decision on the equity beta for the gas businesses, refer to both the GAAR Draft and Final Decisions.[24]

In previous regulatory reviews of water businesses, it has been widely accepted that the non-diversifiable risk for regulated water sector activities is likely to be lower than that for the energy sector. This was noted previously by the Commission when first establishing equity betas for the water businesses of 0.75. Following the GAAR Final Decision, the gas industry equity beta is now lower than the current water industry beta, which is contradictory to the Commission's view that the water businesses face a lower non-diversifiable risk to the energy businesses.

Due to recent regulatory decisions in other industries and the relatively lower non-diversifiable risk experienced by the water businesses in comparison to the energy businesses, the Commission is of the view that the equity beta should be updated to reflect the latest empirical observations. The Commission's Draft Decision is to apply an equity beta of 0.65 for the upcoming regulatory period.

Market risk premium

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

The Commission noted in earlier consultation that during the last price review it adopted an estimate of the expected market risk premium of 6 per cent. This estimate was considered:

- below long-run historical returns (7.3 per cent), but is otherwise within the range provided by such results (3.4 to 7.3 per cent) modelled over varying time periods that extend beyond a full market cycle and
- within the 95 per cent confidence interval associated with the long-term historical returns (4.3 to 10.4 per cent) and is above forward looking estimates (4 per cent).

The Commission notes that it can be difficult to establish an accurate estimate of the market risk premium and notes that other recent regulatory decisions have applied a market risk premium of 6 per cent, most notably the recent GAAR Final Decision.

The Commission has not received any information from the businesses in regard to a more appropriate estimate of the market risk premium. The Commission therefore proposes to adopt a market risk premium of 6 per cent. It is of the view that this provides an accurate estimate and is also consistent with previous regulatory decisions.

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[24] Essential Services Commission, Gas Access Arrangement Review 2008-12 – Final Decision – Public Version, March 2008. Essential Services Commission, Gas Access Arrangement Review 2008-12 – Draft Decision, August 2007.

Debt margin

In determining an estimate of the debt margin, the standard practice amongst Australian regulators (including the Commission) is to adopt a benchmark for the cost of debt that reflects the latest market evidence available on the borrowing costs of an efficiently financed business. For the first regulatory period, the Commission estimated a debt margin at 1.11 per cent, this assumed BBB+ rated debt with a 10 year term to maturity and included an establishment fee of 10 basis points.

In determining the appropriate debt margin for the businesses, the Commission must make an assumption on the credit rating for an efficient business operating within the industry, or similar industry. In previous regulatory decisions, both water and other regulated industries, this rating has been set as being BBB+.

Goulburn Valley Water states that the assumption of a BBB+ rating for water businesses may result in a poor outcome for businesses such as Goulburn Valley Water with a credit rating below BBB+.

The Commission notes that the use of a credit rating of BBB+ is a benchmark for the water businesses. The Commission has used this credit rating across the regulated utility industries as a benchmark for an efficiently financed business operating in such an industry. The Commission is of the view that the water businesses should be able to operate with the same benchmark as these other regulated utility businesses and therefore does not consider that the benchmark credit rating for the water businesses should be adjusted downwards.

Barwon Water stated in its Water Plan that it does ‘not see any reasons from the Essential Services Commission regarding why it would depart from the now well established precedent of adjusting the data by 25 basis points (to correct a likely downward bias in the Commonwealth Bank of Australia Spectrum database) and providing an allowance of 12.5 basis points for the debt raising fees.’ Following the release of the Issues Paper, Barwon Water has proposed to move forward with the indicative WACC that had been provided by the Commission previously.

The Commission notes that analysis was undertaken by Allens Consulting Group (ACG) for the Commission during the GAAR. This analysis established that the adjustment of 25 basis points, due to the under-estimation bias in the CBASpectrum data, was based on historical data and was no longer relevant. It was found that the under-estimation bias was based on 2005 data however there is no basis for such an adjustment at the current time. For further information, ACG’s analysis can be located in the GAAR Final Decision section of the Commission’s website.[25] Based on this analysis, the Commission does not accept Barwon Water’s initial proposal to adjust the debt margin by 25 basis points.

Information regarding actual debt margins is not available to regulators when performing price reviews, therefore an estimate of the debt margin needs to be derived, generally from the latest available market data. This then establishes a

[25] Allens Consulting Group, 2008, Gas Access Arrangement Review 2008: updating estimates of debt margins for 20 trading days to November 2007 and December 2007.

benchmark from which the businesses can either attempt to better, or hedge against.

With regard to the water businesses acquiring debt, the Commission notes that the water businesses must access funds through the Treasury Corporation Victoria (TCV). TCV is Victoria's central financing authority, providing loans and financial services to Victoria's Government Business Enterprises (GBE's).

Following discussions with TCV, the Commission has acquired a greater knowledge of the actual debt margins that the water businesses face and can therefore provide a more accurate estimate for the debt margin. By providing a more accurate estimate for the debt margin the Commission is ensuring that the businesses receive a more accurate return on capital.

This proposed approach is slightly different to that undertaken by the Commission with regard to the recent GAAR Final Decision. This is because the Commission recognises that the gas businesses must access their debt privately through the market, however the water businesses are different in that they have access to funds through the TCV. By using information acquired from TCV, the Commission is able to tailor the debt margin aspect of the WACC determination to suit the water businesses more specifically.

The Commission received confidential advice from TCV that outlined a range for the debt margins that it charges to clients based on a ten-year term to maturity. This range was due to the Financial Accommodation Levy (FAL) that is charged, depending on the credit ratings of the individual businesses. The FAL is a charge designed to place the government business in a similar commercial environment to their private sector counterparts. Based on this range, the Commission has formed a view that the debt margin should be 1.95 per cent. This margin is based on debt with a ten-year term to maturity and a credit rating of BBB+ and includes an adjustment for any establishment fee.

This debt margin estimate of 1.95 per cent is significantly greater than the estimate provided for by the Commission in its Guidance Paper (1.11 per cent). This is due to changing market conditions and the increase in the cost of debt in that time, largely due to global conditions. This has lead to a significant increase in the estimate of the WACC between the Guidance Paper and the Draft Decision. The debt margin is also different to that applied in the GAAR Final Decision due to the use of information from TCV and the different access businesses have to debt compared to the gas businesses.

Financing structure

The standard practice amongst Australian regulators is to adopt benchmark assumptions about financing arrangements, rather than to use the businesses' actual positions. This allows regulated businesses to benefit from innovative (and more efficient) financing decisions, while protecting customers against any inefficient financing decisions.

For the previous price review, the Commission adopted a financing structure of 60 per cent debt to regulatory assets. This was considered consistent with:

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

In previous consultations the Commission has proposed to adopt the same financing structure for this review. None of the businesses have suggested that a different ratio of debt to equity would provide a more suitable financing structure. Therefore, the Commission proposes to continue to adopt a debt to equity ratio of 60 per cent.

Franking credits

This parameter is not essentially part of the WACC calculation. It is used following the finalisation of the WACC calculation in order to determine the businesses' required revenue. As the form of the WACC outlined above provides for an after-tax return, a separate allowance must be included in each of the businesses' revenue benchmarks (which are defined in pre-tax terms) to cover any expected taxation liabilities. This allowance, or adjustment, is known as the gamma, or franking credits.

The Commission proposed in earlier consultations that the WACC be based on an assumption of 0.5 for gamma, which is consistent with the 2005 Urban Water Price Review. This reflects:

- an assumption that franking credits are valued at 60 per cent of their face value, and that 82 per cent are distributed.
- that a gamma of 0.5 is consistent with the majority of businesses' proposals during the last price review and recent regulatory decisions

No business commented on the appropriateness of the proposed level of gamma, therefore the Commission proposes to keep the gamma at a level of 0.5.

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.

All businesses have forecast regulatory depreciation based on a straight-line approach, whereby an equal amount of the asset is depreciated each year based on the expected useful life of the asset. The Commission has stated previously that it is of the 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.

The Commission noted in its Issues Paper that while the businesses have all agreed on an approach to forecasting regulatory depreciation, the estimated useful life of the assets across businesses varies considerably. These variations in the useful lives of the assets only impact the timing of the cash flows rather than the overall position of the business. Therefore if the rate of depreciation is increased, through a shorter estimated asset life, then revenue (and prices) would be higher in the short term, but the required revenue (and prices) would be lower than otherwise in the future.

Some businesses have responded to the Issues Paper by stating that the depreciation profiles employed had been rather conservative in nature rather than aggressive. Wannon Water stated that regulatory depreciation profiles are a mechanism available to businesses to manage their cash flows and, subsequently, loan portfolios.

By having such short estimated useful lives in order to gain a greater cash flow in the short term, the businesses are also charging current customers more than future customers who will also benefit from the asset. Furthermore, by spreading the depreciation over a longer period of time, current customers are not financially disadvantaged in the short-term.

The Commission notes that depreciation profiles enable businesses to manage their cash flows. However, it is concerned with inconsistencies in the useful lives adopted, especially with large water supply augmentation capital projects. It has identified two major projects which appear to be inter-generational projects — Barwon Water's Interconnector and the Superpipe. It is reasonable to assume that these are significantly long-lasting capital projects, with quite a lengthy estimated useful life for depreciation purposes, ensuring that all beneficiaries should pay for the service that each project will provide.

Currently Barwon Water has an estimated useful life for the Interconnector or 66.67 years. It is noted that the current estimated useful lives for the Superpipe actually differ between Central Highlands Water and Coliban Water, with 80 and 60 years, respectively. The Commission understands through its review of the metropolitan businesses, that similar large water supply augmentation capital projects, such as the Sugarloaf Interconnector, have been undertaken with an estimated life in excess of 100 years.

The Commission would prefer that these large capital projects be based on an estimated useful life of at least 100 years. However, it also notes that Coliban Water and Central Highlands Water have two of the lowest interest cover ratios of all water businesses, and that it has also previously stated that depreciation is another way of managing a business' cash flows. The interest cover ratio is discussed further in section 6.5. Therefore with regard to this upcoming regulatory period, the Commission does not propose for Coliban Water and Central Highlands Water to change their depreciation profiles. The Commission proposes to re-assess these estimated useful lives in the future when the specific businesses have more than sufficient interest cover.

The Commission suggests that Barwon Water consider adjusting its depreciation profile for its Interconnector capital project to at least 100 years. This may help to alleviate pricing concerns that Barwon Water's customers may have, and as stated earlier, ensure that all beneficiaries of the project pay for the service that the project provides.

The straight-line approach to depreciation has been outlined previously as being the most appropriate approach to depreciation for the water businesses. However, the Commission notes in applying this approach for large projects requiring several years of construction, the businesses receive a return on and a return of their capital investment, even before the project begins operating. The Commission considers that this approach for significantly large capital projects could be an area for further investigation.

With regard to the depreciation profiles in general, the Commission remains of the view that they are slightly on the aggressive side and suggests that businesses consider extending the estimated useful lives of their capital expenditure. This approach would also help to ease any pricing pressures on current customers within their region in the near term.

6.4 Renewals annuities

For the first regulatory period, Victorian rural water businesses had a choice as to whether to adopt a RAB approach to recover expenditure on renewing and rehabilitating assets, to continue with a renewals annuity approach, or to apply a combination of both methods.

Goulburn-Murray Water and GWMWater adopted a RAB approach, while three businesses, Lower Murray Water, FMIT and Southern Rural Water continued with the renewals annuity approach to funding expenditure. Under the annuity approach, businesses forecast long-term expenditure on renewing and rehabilitating assets, and then convert this expenditure to an annual figure using an appropriate discount rate. This amount is then recovered in prices each year through a renewals annuity payment. Importantly, the renewals annuity figure factored into prices will not necessarily equate to the actual renewals expenditure incurred in any given year.

The Commission has previously stated that a move from an annuity to a RAB approach has been driven by the difficulty in making accurate long-term forecasts about future investment needs and the changing nature of the businesses' asset bases. For example, the move from channels to pipelines and the reconfiguration of rural systems means that a like for like replacement of existing assets may never occur.

The Commission notes that both Lower Murray Water and FMIT are proposing to adopt the RAB approach for the next regulatory period rather than continuing with the renewals annuity approach. Lower Murray Water stated that its decision was driven by the fact that uncertainty about future demand and improved service standards for irrigation delivery is changing the investment profile for rural assets, which are unlikely to be renewed like for like in the future. Both businesses have identified transition issues regarding this change in approach and how they proposed to deal with them.

This left Southern Rural Water as the only rural water business operating with the renewals annuity approach. The Commission's Issues Paper questioned whether there would be any benefits from all the rural businesses adopting a consistent approach.

In response to the Issues Paper, Southern Rural Water stated that while there may be some marginal savings in the assessment and determination process of having a consistent approach to recovering expenditure on renewing or rehabilitating assets, it is of the opinion that the more important consideration is customer engagement and acceptance of pricing principles. It also stated that its customer committees currently view the renewals annuity approach as providing some certainty of continued investment and expenditure on infrastructure and therefore some assurance of business continuity and system availability.

The Commission accepts the reasons put forward by Southern Rural Water to implement the renewals annuity approach for the upcoming period. However the Commission will continue to assess the approach to determine that it is the most appropriate approach for Southern Rural Water.

Transitioning from a renewals approach

As noted earlier, Lower Murray Water and FMIT propose to change their current approach to financing infrastructure renewals in this regulatory period by moving away from a renewals approach to a RAB approach.

Lower Murray Water has previously used a renewals annuity approach whereby the annuity amount was calculated for each district. Lower Murray Water notes that transitioning to the RAB approach will require it to manage the balances that are left in the renewals reserve of each district at the end of June 2008. It has proposed to return any positive balance in the districts renewals reserve to the customers as customer contributions through the RAB. Negative balances will be recovered through increased prices phased in over a 10-year period discounted by the WACC. Lower Murray Water has outlined the current renewals balances per district on page 31 of the rural section of its Water Plan, however the Commission notes that Merbein has been included in the table twice.

The Commission notes that while Lower Murray Water proposes to return the balances to the individual districts through customer contributions, there may be issues with the detailed proposals. Lower Murray Water has included the customer contributions for the first year of the regulatory period, however the Commission understands that the Merbein Irrigation balance is $1.51 million, while the capital expenditure for the Merbein district only amounts to $0.84 million for that first year. The Commission requests that Lower Murray Water provide more detail before the Final Decision on how it proposes to provide these balances back to the individual districts through the customer contributions.

In proposing a transition to a RAB approach, FMIT has indicated that early in the process it may be difficult to achieve a level of funding that will cover the debt payments on borrowings and associated interest costs. It has therefore initially applied a 10 year depreciation profile to a 50 year capital works program. For asset projects after 2018, it has advised that it will review the RAB depreciation period. It expects that a depreciation period of 35 years would then be appropriate for new assets, and from 2030 onwards a 50 year period may be appropriate for new assets.

The Commission accepts this method of transitioning proposed by FMIT. It notes that as one of the problems with transitioning from the renewals annuities approach to the RAB approach is the business' cash flows, the business' depreciation approach can be a method of controlling its cash flows.

6.5 Foregone revenue for urban water businesses

Prior to the submission of the businesses' Water Plans, a number of urban businesses indicated that as a consequence of the continued drought and the impact of water restrictions they have incurred higher than expected operating costs and collected less revenue than expected. They have since requested that these amounts be recovered in the next regulatory period.

In previous guidance, the Commission requested the businesses to clearly:

- indicate whether they are proposing to recover any foregone revenue or increased operating expenditure in the second regulatory period
- explain how estimates of increased expenditure or foregone revenue have been determined
- express the expected impact on customers in terms of the contribution to proposed price increases for the second regulatory period, and
- explain how the business will be impacted if the foregone revenue or increased expenditure is not recovered. In particular, the impact on financial viability of not doing so.

Coliban Water stated that it has suffered a considerable reduction in revenue as a direct result of water restrictions, with under recovered revenue of approximately $15.2 million. Coliban Water is therefore proposing an adjustment at the start of the next regulatory period to reflect:

- the inclusion of additional net capital expenditure of $84.6 million in the RAB that was necessarily incurred in the first regulatory period and
- a one-off increase to reflect a minimum revenue loss of $15.2 million.

Coliban Water stated that the impact of the adjustment of the operating expenditure and lost revenue alone will add an average of approximately $29 per year per property to the cost of both water and sewerage services. Coliban Water also provided a table of financial ratios within its Water Plan to show that it would become financially unviable during the period. It stated that in the absence of the recovery of the foregone revenue from the previous period, the business would not meet minimum financial viability criteria.

In its Water Plan, Central Highlands Water indicated that it has under recovered revenue for the first period to the value of $11.9 million, comprising $1.2 million from 2005-06, $3.4 million from 2006-07 and an estimated $7.3 million in 2007-08. It states that this shortfall in revenue has been largely driven by the impact of drought and water restrictions on the demand for water within the region. Central Highlands Water is proposing to recover an amount of $7.3 million, which is $5.4 million less than the net present value of the total cost of under recovered revenue. It is proposing to carry forward this $5.4 million of under-recovered revenue to the 2013-18 regulatory period.

GWMWater stated that as a result of the reduced water allocations and increased water restrictions, it will incur an estimated overall loss of revenue across the current regulatory period of $5.2 million. While its Water Plan stated that the business intends to recover the foregone rural revenue (through the revenue cap) it does not state explicitly that it intends to recover the foregone revenue for the urban side of the business. Through investigating the templates, the Commission established that GWMWater intends to recover both the rural and urban foregone revenue, amounting to $1.2 million and $4 million respectively.

Lower Murray Water is requesting that its estimated loss of revenue of $2.2 million from its urban business for 2007-08 be recovered during the forthcoming regulatory period. It stated that this under recovery was a result of rainfall patterns and catchment yields being below long-term averages and the impact of Stage 4 water restrictions. It has not stated what the impact on customers would be of this proposed approach.

Wannon Water has proposed to include cost impacts of the drought from 2006-07 in its revenue requirement for 2008-09. These costs amount to $1.1 million. These costs are a mixture of increases in expenditure and a reduction in revenue for the year. It also stated that similar costs will be incurred in 2007-08, yet it has elected to absorb these costs.

The Commission notes that a number of other urban businesses have outlined an under recovery of revenue for the first period, due to the drought and other reasons, but have not sought to recover this lost revenue through the next regulatory period. Many of these urban businesses have acknowledged that they were operating under a price cap regime for the first regulatory period and have therefore not requested this extra recovery of revenue.

As has been stated previously, the urban businesses were regulated under a price cap regime for the first regulatory period, while the rural businesses were regulated under a revenue cap regime. The revenue cap approach provides businesses with the opportunity to recover any under recovered revenue in the following period. Similarly, if the business has any over recovery of revenue for the period, the required revenue for the following period will decrease. With regard to a price cap approach, businesses have a set price that they can charge their customers over the regulatory period and any under or over recovery of revenue during the period is borne or held on to by the business.

The Commission notes that a number of the urban businesses have stated that they under-recovered with revenue in the first regulatory period, which they claimed was largely due to the drought conditions. One of the risks involved with setting price caps is that differences in actual and forecast demand can have significant impacts on revenue for the business. However, with the businesses citing the unpredictability of weather and demand forecasts for the next five years, the Commission notes that the majority of the urban businesses are proposing price caps again for the upcoming regulatory period.

As the Commission noted above, an unintended consequence of utilising a price cap approach to regulation, is the risk associated with the difference between the forecast, or approved, demand and the actual demand for the period. By structuring prices based on forecasts of weather and demand, the businesses can over, or under, recover on revenue, depending on how far the actual figures for the period differ from the forecasts. The Commission notes that in the current period, the difference between the forecast and actual demand figures was considerable for some businesses.

The Commission has since proposed a ‘with-in period review’ mechanism to assist in alleviating some of this risk associated with relying on forecast figures. This mechanism is discussed in more detail in section 15.2.3. This section states that where the Commission considers actual demand levels are sufficiently different from those assumed at the time of the price determination, it proposes to conduct a within-period review to assess the impact on businesses’ revenues. Such a review could be initiated by the Commission or requested by a business. Where the Commission finds a material impact on revenues, prices may be adjusted during the period.

The Commission stated previously that in order for a business to be able to recover the under-recovered revenue from the first regulatory period, it must show the impact of not recovering the revenue on financial viability. A significant aspect of a business’ financial viability is its ability to cover its interest payments. The Commission has therefore calculated the interest cover over the period for the water businesses seeking to recover foregone revenue from the first regulatory period and these are set out in table 6.3. These ratios have been calculated based on the WACC that has been derived for the Draft Decision and with a smoothed pricing approach.

Table 6.3 **Interest cover**

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Central Highlands	1.0	1.1	1.4	2.1	2.6
Coliban	0.0	0.7	1.3	1.6	2.2
GWMWater	14.8	2.1	2.3	3.0	3.7
Lower Murray (U)	90.2	7.5	7.0	8.6	11.0
Wannon	3.2	2.7	2.7	3.1	3.8

Note These calculations are based on a smoothed price path, the Commission’s Draft Decision WACC of 6.1 and excludes the businesses’ proposed foregone revenue

With regard to the businesses’ interest cover ratios, the Commission notes that the majority of the businesses are operating at a more than sufficient ratio. The Commission does however, have concerns regarding Coliban Water’s interest cover ratio. Coliban Water’s ratio is actually negative for the 2007-08 year of the current regulatory period, and is proposed to gradually increase during the upcoming regulatory period to 2.2 by the end of the period.

The Commission notes that businesses can influence their interest cover to manage their individual circumstances. This can occur through both different depreciation profiles and changes to the pricing path profiles. This can help businesses that may have variable interest cover ratios through the regulatory period, such as Central Highlands Water. For example, Central Highlands Water’s proposal to have a significant price increase for the first year of the period followed by a smaller smooth increase for the remaining years assists in providing it with a reasonable interest cover early in the period.

In the case of Coliban Water the adjustments required to ensure a less variable interest cover through the period are either unreasonable or are insufficient.

The Commission proposes to allow Coliban Water an adjustment to its revenue requirement in order to alleviate any financial viability concerns that the Commission may have. This situation has evolved from unique circumstances that concern Coliban Water and its ability to operate effectively for the upcoming period. Coliban Water was required to finance its expenditure on the Superpipe for the first regulatory period itself, as this expenditure was not foreshadowed and hence not reflected in the prices approved by the Commission. This has contributed to Coliban Water's current low interest cover The adjustment endeavours to provide Coliban Water with an average interest cover of 1.5 across the forthcoming regulatory period. By the end of the regulatory period, Coliban Water should have more than sufficient interest cover and such an adjustment will no longer be necessary. Table 6.4 sets out Coliban Water's proposed interest cover ratios for the regulatory period, following the adjustment.

Table 6.4 **Interest cover for Coliban Water with the adjustment for financial viability**

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Coliban Water	0.1	0.8	1.5	1.9	2.7

Note These calculations are based on a smoothed price path, the Commission's Draft Decision WACC of 6.1 and the inclusion of an adjustment for financial viability

The Commission notes that all of the other businesses have sufficient interest cover ratios for the period, and therefore it is not necessary to make an adjustment to their revenue requirements.

Coliban Water's request to have the additional capital expenditure included in the RAB has been assessed by the capital expenditure consultants. The outcome of this has been addressed earlier in the capital expenditure section and in regard to the roll-forward of the RAB.

The Commission is comfortable with GWMWater recovering any foregone revenue from the rural business through the revenue cap, as established in the previous review. With regard to the lost revenue from the urban business, the Commission is of the view that GWMWater would not become financially unviable if it was not able to recover the foregone revenue.

Although Lower Murray Water is seeking to recover under-recovered revenue, it actually underspent on capital expenditure for the first regulatory period by approximately $14 million. While this was primarily due to a major project (Koorlong Project) being delayed, the business was able to benefit from this deferral by receiving a return of and on capital expenditure for this project during the time that it was delayed.

Lower Murray Water also, has based on the Draft Decision, significant interest cover over the next regulatory period compared to other water businesses. The Commission therefore does not accept Lower Murray Water's request to recover foregone revenue from the first regulatory period of $2.2 million.

Barwon Water has also requested to recover increased expenditure from the current period of $0.2 million. Based on Barwon Water's current financial position, the fact that it has already absorbed these costs in its current operations and the fact that these costs will be included in its revenue requirement for the upcoming period, the Commission does not accept Barwon Water's proposal to recover this expenditure.

7 DEMAND FORECASTS

The water businesses' demand forecasts represent a critical element of their Water Plans for the regulatory period. Changes in customer numbers and consumption are important determinants of the capability of the water and sewerage infrastructure to provide services and of the need for expenditure on renewal and augmentation. Thus, the demand forecasts have a direct bearing on the prices that customers will pay during the period.

In assessing the demand forecasts proposed by the businesses, the Commission has given consideration to the businesses' Water Plans, the further information the businesses have provided in support of the forecasts, the results of PricewaterhouseCoopers' (PwC) review and the views and information presented by stakeholders.

In this chapter the Commission sets out its draft view on what it considers are reasonable demand forecasts for the purposes of setting prices. It acknowledges that there may be uncertainty over future demand levels and is proposing to deal with this uncertainty through a within-period review. This mechanism is discussed in chapter 15.

7.1 The businesses' demand forecasts

7.1.1 Urban water businesses

The key demand parameters that influence prices and revenue for the urban water businesses 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 businesses' proposed forecasts for customer connections and water and sewerage volumes are set out in tables 7.1 and 7.2.

Some of the businesses revised their forecasts in response to PwC's draft report and vary from those submitted in their Water Plan. In particular, North East Water and Westernport Water made substantial revisions to their forecasts in response to consultant's draft report. The forecasts set out in the tables are the most recent forecasts received from the businesses.

The businesses also levy trade waste charges on a per connection basis. The businesses' proposed trade water customer connection forecasts are set out in table 7.3.

Table 7.1 **Forecast total volume of water and sewerage**

		2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Average annual growth 2008-09 to 2012-13*
		ML	ML	ML	ML	ML	per cent
Barwon	Water	31,438	34,461	35,743	35,074	34,369	2.3
	Sewerage	13,248	14,522	15,062	15,403	15,537	4.1
Central Highlands	Water	12,284	12,998	14,410	16,115	16,543	7.7
	Sewerage	516	521	526	531	537	1.0
Coliban	Water	21,869	23,172	26,691	27,073	27,466	5.9
	Sewerage	2,394	2,580	3,002	3,023	3,044	6.2
East Gippsland	Water	5,255	5,304	5,350	5,396	5,440	0.9
	Sewerage	24	25	25	26	26	2.5
Gippsland	Water	15,661	15,417	15,177	14,943	14,713	-1.5
	Sewerage	1,367	1,371	1,374	1,377	1,380	0.2
Goulburn Valley	Water	25,353	25,637	25,775	25,860	25,982	0.7
	Sewerage	1,468	1,483	1,499	1,514	1,528	1.0
GWMWater	Water	7,829	9,245	9,976	10,263	10,124	8.9
	Sewerage	737	865	952	989	981	10.1
Lower Murray	Water	14,260	16,414	16,530	16,643	16,754	4.1
	Sewerage	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
North East	Water	11,816	11,832	13,409	13,577	13,641	3.7
	Sewerage	2,637	2,636	2,634	2,632	2,631	-3.8
South Gippsland	Water	5,055	5,063	5,073	5,084	5,096	0.6
	Sewerage	149	149	149	149	149	0.0
Wannon	Water	12,351	12,181	12,217	12,093	12,107	-0.5
	Sewerage	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Western	Water	11,714	12,759	13,310	14,443	14,945	6.3
	Sewerage	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Westernport	Water	1,700	1,717	1,734	1,752	1,769	2.3
	Sewerage	na	na	na	na	na	n.a.

Note Sewerage volumes relate to non-residential services for all businesses with the exception f Barwon Water. Excludes contract volumes.

Table 7.2 **Forecast total customer connections**
Water and sewerage connections

		2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
		number	number	number	number	number
Barwon	Water	132,177	134,684	137,113	139,583	142,095
	Sewerage	118,696	120,911	123,136	125,376	127,627
Central Highlands	Water	59,083	59,735	60,397	61,064	61,741
	Sewerage	48,607	49,213	49,827	50,450	51,081
Coliban	Water	66,014	67,049	68,098	69,161	70,238
	Sewerage	57,676	58,555	59,707	60,533	61,374
East Gippsland	Water	23,369	23,754	24,128	24,499	24,858
	Sewerage	19,918	20,226	20,526	20,824	21,113
Gippsland	Water	59,642	60,207	60,759	61,306	61,852
	Sewerage	51,082	51,719	52,179	52,686	53,350
Goulburn Valley	Water	54,126	54,938	55,761	56,597	57,445
	Sewerage	45,593	46,413	47,248	48,098	48,964
GWMW	Water	3,786	3,805	3,824	3,843	3,862
	Sewerage	24,963	25,099	25,141	25,281	25,422
Lower Murray	Water	34,221	34,646	35,072	35,497	35,923
	Sewerage	28,353	28,788	29,223	29,658	30,093
North East	Water	44,131	44,895	45,643	46,375	47,084
	Sewerage	38,942	39,631	40,304	40,964	41,591
South Gippsland	Water	18,596	18,853	19,115	19,381	19,642
	Sewerage	15,420	15,629	16,048	16,782	17,001
Wannon	Water	43,784	44,457	45,165	45,913	46,710
	Sewerage	33,318	33,690	34,068	34,450	34,842

Western	Water	53,936	55,684	57,454	59,557	61,672
	Sewerage	44,759	46,225	47,708	49,351	51,127
Westernport	Water	13,996	14,267	14,543	14,824	15,111
	Sewerage	14,519	14,783	15,053	15,328	15,608

Note Excludes vacant land, fire services and other standalone fixed charges.

Table 7.3 **Proposed trade waste customer connection forecasts**

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
	number	number	number	number	number
Barwon[a]	1	1	1	1	1
Central Highlands	n.a.	n.a.	n.a.	n.a.	n.a.
Coliban	n.a.	n.a.	n.a.	n.a.	n.a.
East Gippsland	387	391	396	400	404
Gippsland	788	984	1230	1254	1254
Goulburn Valley	954	971	988	1006	1024
GWMWater	552	552	552	552	552
Lower Murray	2559	2559	2559	2559	2559
North East	839	839	839	839	839
South Gippsland	244	244	244	244	244
Wannon	n.a.	n.a.	n.a.	n.a.	n.a.
Western	426	447	461	474	491
Westernport	na.	na	na	na	na

[a] Barwon Water Template lists 1 customer under a fixed price cap. It also services customers under a variable charge (volumes are listed in the Template). Barwon Water's Water Plan reports that as at 30 June 2006, BW had 65 industrial and 1391 commercial trade waste customers. n.a. not applicable.

7.1.2 Rural water businesses

The key demand forecasts influencing the prices that the rural water businesses charge include irrigation volumes and customer numbers, volumes supplied to stock and domestic customers and customer numbers, drainage volumes and customer numbers and the volumes of groundwater supplied. The forecasts provided by the rural water businesses for each of these demand variables are set out in volume II.

7.2 The Commission's approach

7.2.1 Consultant's review

The Commission engaged PwC to undertake a detailed review of the businesses' demand forecasts. The review assessed whether the demand forecasts:

- were developed using appropriate forecasting methodologies or approaches, given the materiality of the forecasts for the businesses' revenue and resulting prices
- reflected reasonable assumptions about the key drivers of demand, including the impact of supply restrictions
- used the best available information, including historical data that can support trends in demand and
- took account of current demand and economic conditions.

In undertaking this assessment, PwC had regard to the businesses' Water Plans, additional information provided by the businesses, relevant Victorian Government policy and its own experience in preparing and assessing the veracity of forecasts of demand for rural and urban water services in Victoria and other Australian states.

PwC provided the Commission with a draft report in January 2008, in response to which the businesses were invited to provide comment. After taking into account the views received, PwC provided a final report to the Commission in March 2008. the final report is available from the Commission's website.

PwC commented that many of the water businesses had not provided detailed information on the methodologies that they had employed in developing their forecasts:

> *In most cases, it has been extremely difficult to understand the detailed methodology that the businesses have used to develop their demand forecasts. In a number of cases, we get the impression that the businesses have simply used their 'best guess' at future demand. While more robust methodologies would be preferable, we have some sympathy with this approach given the current severity of the drought in some districts and the large uncertainties over future rainfall patterns.*

In most cases PwC accepted the forecasts that the businesses had provided. However, it also made significant changes to some of the businesses' forecasts as they viewed these forecasts as being overly conservative given the assumptions and forecasts provided by other businesses.

7.2.2 Key issues in the assessment

The key issues that the Commission has considered in assessing the demand forecasts include the influence of the weather, restrictions on usage, water conservation and demand management programs, building activity (particularly in relation to new dwellings) and changes to tariff levels and structures.

Many of the businesses are forecasting improved rainfall levels going forward, although some have based their forecasts on an assumption that drought conditions will continue over the period. Generally, the businesses forecasting dry conditions in the future operate in the western districts of Victoria where drought levels have been the most severe.

However, most of the businesses in the western district are forecasting strong growth in water demand as alternative water sources are commissioned. In particular, the businesses are of the view that the Goldfields Pipeline will alleviate supplies in the west of the state and thus demand will increase over the regulatory period.

With increasing supplies from either rainfall or alternative water sources, most of the businesses are forecasting that water restrictions will lift over the period. The pace at which restrictions are lifted and the size and pace at which consumer demand increases in response to the lifting of restrictions is a key issue for this review.

Most of the businesses are forecasting that consumption levels will not return to pre-drought levels because of changes in customer behaviours and permanent water savings rules. Some businesses have assumed that increased community awareness of the need to conserve water resources and permanent restrictions on the way in which water is used will permanently reduce average usage levels in the future.

Many of the businesses are relying on these permanent changing to consumption habits to achieve their water reduction targets as set out in their Water Strategy plans. These targets commit each business to reduce consumption levels by 25 per cent of mid-1990s levels by 2015.

Another factor that businesses are anticipating will assist them to achieve their 2015 targets are water conservation measures. The businesses are proposing to introduce non-price water conservation measures, such as water efficient appliances, over the period. Few of the businesses included elasticity effects in their forecasts but at the same time, indicated that they would place increasing reliance on variable charges.

Growth in the number of connections is a key determinant of total customer numbers. Nearly all of the businesses have relied on the Department of Sustainability and Environment's Victoria in Future population and household forecasts to develop their forecasts of customer numbers.

In recent years, new dwelling construction in some urban area has been at high levels, particularly on the metropolitan fringe and in coastal areas. However, growth in new dwellings construction and thus customer numbers is variable across the state with many non-metropolitan areas experiencing declining populations. Ageing populations and the increasing number of single occupancy residences is another driver of customer numbers that has been considered in this review.

The Commission has also placed weight on the businesses' recent connection history when evaluating connections forecasts as well as any proposals for small town water and sewerage systems.

7.2.3 The Commission's draft decision

The Draft Decision on the urban and rural water businesses' demand forecasts are set out in the following sections.

The Commission has generally accepted the adjustments proposed by PwC.

Urban water businesses

The Draft Decision on the demand forecasts for the urban water businesses are set out in tables 7.4 to 7.7.

Table 7.4 **Draft Decision — water connections**
Residential and non-residential

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
	number	number	number	number	number
Barwon	132,177	134,684	137,113	139,583	142,095
Central Highlands	59,103	60,073	61,051	62,037	63,027
Coliban	66,014	67,049	68,098	69,161	70,238
East Gippsland	23,369	23,754	24,128	24,499	24,858
Gippsland	59,983	60,858	61,747	62,649	63,565
Goulburn Valley	54,126	54,938	55,761	56,597	57,445
GWMWater	3,786	3,805	3,824	3,843	3,862
Lower Murray	34,221	34,646	35,072	35,497	35,923
North East	44,131	44,895	45,643	46,375	47,084
South Gippsland	18,827	19,324	19,835	20,359	20,898
Wannon	43,784	44,457	45,165	45,913	46,710
Western	53,936	55,684	57,454	59,557	61,672
Westernport	14,420	14,697	14,979	15,266	15,559

Note Excludes vacant land, fire services and other standalone fixed charges.

Table 7.5 **Draft Decision — water volume**
Residential and non-residential

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
	ML	ML	ML	ML	ML
Barwon	31,438	34,461	35,743	35,074	34,369
Central Highlands	12,277	13,064	14,562	16,371	16,893
Coliban	21,869	23,172	26,691	27,073	27,466
East Gippsland	5,236	5,285	5,331	5,377	5,420
Gippsland	15,611	15,426	15,245	15,069	14,896
Goulburn Valley	25,209	25,492	25,629	25,713	25,835
GWMWater	7,829	9,245	9,976	10,263	10,124
Lower Murray	10,838	16,414	16,530	16,643	16,754
North East	12,927	13,117	14,600	16,098	16,635
South Gippsland	5,027	5,034	5,044	5,056	5,067
Wannon	12,754	12,656	12,669	12,518	12,518
Western	11,785	12,839	13,400	14,543	14,994
Westernport	1,695	1,802	1,919	2,045	2,182

Table 7.6 **Draft Decision — sewerage connections**
Residential and non-residential

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
	number	number	number	number	number
Barwon	118,696	120,911	123,136	125,376	127,627
Central Highlands	59,103	60,073	61,051	62,037	63,027
Coliban	57,676	58,617	59,795	60,648	61,515
East Gippsland	19,918	20,226	20,526	20,824	21,113
Gippsland	51,206	51,968	52,741	53,526	54,323
Goulburn Valley	45,593	46,413	47,248	48,098	48,964
GWMWater	24,963	25,099	25,141	25,281	25,422
Lower Murray	28,353	28,788	29,223	29,658	30,093
North East	38,942	39,631	40,304	40,964	41,591
South Gippsland	15,420	15,629	16,048	16,782	17,001
Wannon	34,452	34,824	35,202	35,584	35,976
Western	44,759	46,225	47,708	49,351	51,127
Westernport	15,125	15,391	15,668	15,950	16,238

Note Excludes vacant land and other standalone fixed charges.

Table 7.7 **Draft Decision — sewerage volume**
Residential and non-residential

	2008-09	*2009-10*	*2010-11*	*2011-12*	*2012-13*
	ML	ML	ML	ML	ML
Barwon	13,248	14,522	15,062	15,403	15,537
Central Highlands	522	530	538	546	554
Coliban	2,394	2,612	3,055	3,091	3,126
East Gippsland	24	25	25	26	26
Gippsland	1,364	1,367	1,371	1,374	1,377
Goulburn Valley	1,468	1,483	1,499	1,514	1,528
GWMWater	604	737	865	952	989
Lower Murray	n.a.	n.a.	n.a.	n.a.	n.a.
North East	2,395	2,430	2,705	2,727	2,766
South Gippsland	149	149	149	149	149
Wannon	n.a.	n.a.	n.a.	n.a.	n.a.
Western	n.a.	n.a.	n.a.	n.a.	n.a.
Westernport	n.a.	n.a.	n.a.	n.a.	n.a.

Note Sewerage volumes relate to non-residential services for all businesses with the exception f Barwon Water. Excludes contract volumes.

Rural water businesses

The Commission has accepted the demand forecasts proposed by the rural water businesses, with the exception of Lower Murray Water. Table 7.8 sets out only the revised forecasts for Lower Murray Water.

Table 7.8 **Draft decision —revised forecasts, Lower Murray Water**

District	*Description*	*Unit*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Merbein drainage	Div 1 Delivery Share Charge	ML VR	3,111	3,111	3,111	3,111	3,111
Merbein drainage	Div 4 Delivery Share Charge	ML VR	79	79	79	79	79
Red Cliffs drainage	Div 1 Delivery Share Charge	ML VR	4,396	4,396	4,396	4,396	4,396
Red Cliffs drainage	Div 4 Delivery Share Charge	ML VR	431	431	431	431	431
Robinvale drainage	Div 1 Delivery Share Charge	ML VR	2,521	2,521	2,521	2,521	2,521
Other stock and domestic (Irrigation)	1st Div	ha	4,797	4,797	4,797	4,797	4,797
Other stock and domestic (Irrigation)	2nd Div	ha	213	213	213	213	213
Merbein irrigation	Usage Charge	ML Supp	28,204	28,204	28,204	28,204	28,204
Red Cliffs irrigation	Usage Charge	ML Supp	39,957	39,957	39,957	39,957	39,957
Robinvale irrigation	Usage Charge	ML Supp	19,208	19,208	19,208	19,208	19,208
Millewa Rural (Irrigation)	Usage Charge	kL	633,659	633,659	633,659	633,659	633,659
Millewa Urban (Irrigation)	Usage Charge	kL	39,728	39,728	39,728	39,728	39,728
Merbein irrigation	Garden Fee unmetered	cust	189	179	169	159	149
Red Cliffs irrigation	Garden Fee unmetered	cust	310	295	280	265	250
Robinvale irrigation	Garden Fee unmetered	cust	96	91	86	81	76
Diversions (Irrigation)	Env levy per ML old water	ML WR	325,144	346,644	368,144	389,644	411,144

7.3 Key factors influencing demand

In developing their customer connection and volume forecasts, the businesses gave consideration to the following key assumptions:

- population growth and demographic changes
- future rainfall levels, water inflows and climate change

- restriction levels applying to water consumption, and
- the water conservation measure that they intend introducing over the period.

PwC addressed each of these assumptions in its review and gave its own view on how these assumptions will affect demand over the next regulatory period.

In the sections that follow, the Commission discusses each of these factors.

Population growth and demographic changes

The businesses derived their customer number forecasts from DSE's VIF (2004) population and household forecasts for Victoria. VIF forecasts population growth over the period 2001 to 2051 for Victoria, regional Victoria and Melbourne and covers the period from 2001 to 2031 for the 79 Local Government Areas (LGAs) and 200 Statistical Local Areas (SLAs) in Victoria.

Connections history over the last three or four years has also provided a starting point for the Commission's analysis. Forecast growth rates in connections should resemble connections growth over the last few years unless there are clearly identifiable reasons why a change in growth rates may occur.

In its report, PwC noted that the businesses adjusted the population and household forecasts in the VIF to derive forecasts of customer numbers for their water supply area:

> *As the population groupings contained in the VIF do not often translate directly to the water businesses' supply areas, the businesses have adjusted the forecasts in the VIF using local council and/or historical information to develop a population forecast for their water supply area.*[26]

It also noted that the businesses had adjusted their forecasts to take into account the ageing populations of many urban communities and the increasing trend toward single occupancy residences.

> *Most of the businesses have forecast that the growth in residential customer connections will be above the expected population growth rate forecast by VIF. The higher growth rate aims to take account of ageing populations in many of the urban communities that these businesses serve. In their view, an ageing population will result in more single occupancy residences and thus a greater number of connections than suggested by population forecasts.*[27]

It concluded that the businesses' reliance on the VIF forecasts and the adjustments each business made to translate these forecasts to its water supply area (taking into account demographic changes) was reasonable.

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[26] PricewaterhouseCoopers 2008 urban and rural water price Review 2008: Assessment of Demand Forecasts, Final Report.

[27] Ibid, p. 35

The Commission also accepts that the VIF forecasts are a reasonable starting point for developing forecasts of residential customer connections. Demographic changes such as ageing populations and increasing single occupancy residences also need to be incorporated into the forecasts.

For this reason, the Commission accepts the assumptions that most of the businesses have used to develop their customer connection forecasts.

Rainfall levels, climate change and water inflows

The assumption that the businesses made on future rainfall levels varied between the east and west of the state. In eastern Victoria, most businesses forecast improved water supply levels as rainfall returned to the long term medium. Most businesses in western Victoria, where the current drought has been most severe, forecast that drought conditions would continue over the regulatory period.

PwC noted that most of the businesses that had formulated their forecasts assuming a continuation of drought conditions would also be the recipients of water obtained from alternative water sources such as the Goldfields Pipeline and groundwater sources.

> *Most of these businesses will be the beneficiaries of alternative water supplies — in particular the Goldfields Pipeline — that will come on line during the period. Thus, even though these businesses have forecast low inflows, their water demand forecasts anticipate the complete removal of restrictions and strong growth in consumption levels as the supplies from these alternative sources become available.*[28]

However, there were some businesses that forecast low or declining growth in water demand because they forecast drought conditions will continue and supplies will not be augmented by alternative water sources.

In these cases, the consultant recommended changes to their forecasts believing the forecasts would likely underestimate demand over the period.

The Commission considers that the forecasts should be based on average weather. For this reason, it has accepted the assumption used by some businesses of a return to long term medium rainfall levels when evaluating their demand forecasts. The Commission also accepts the assumption of increased water supplies arising from alternative water sources that other businesses have built into their forecasts.

However, basing forecasts on an assumption of low inflows is overly conservative for the purposes of this price review and may result in prices being higher than they otherwise might be. As a result, the Commission has accepted the adjustments that PwC has made to the forecasts of certain businesses to ensure that they provide a more reasonable expectation of future rainfall levels.

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[28] Ibid, p. 13.

Restrictions

It follows from an assumption of a return to average weather conditions that restrictions will ease over the next regulatory period. PwC commented that:

> *How quickly customers return to consumption patterns and levels that were prevalent prior to restrictions coming into effect will influence the rate of growth in water demand over the period.*[29]

PwC noted that several water businesses anticipated that consumption will return to between 70 and 90 per cent of pre-restriction levels over a two year period. Given this, PwC assessed each water business's assumption regarding the expected bounce back in consumption using 70 to 90 per cent over two year as benchmark.

The Commission has accepted the restriction levels and the responsiveness of customer demand to the lifting of the restrictions assumed by most businesses.

Price impacts

Only five of the water businesses took into account the impact of changing prices on residential demand through assumptions about the price elasticity of demand. Where it has been applied, it has often been unclear from the plans what elasticity figures has been used and/or how the measure used has been translated in the businesses' demand forecasts.

None of the businesses incorporated elasticity impacts into their forecasts for non-residential demand.

In analysing the businesses' demand forecasts, PwC sourced price elasticity information from the Water Supply Association of Australia (WSAA) and:

> *... assessed the extent to which price impacts can explain any slowing in future water demand growth rates. For example, one business is proposing to introduce large price increases in the next regulatory period and, at the same time, is forecasting a slowing in demand growth compared with recent history. Applying the WSAA elasticity estimates to the anticipated price increases accounts for almost all of the slower growth and thus we have accepted their volume forecasts.*[30]

PwC applied a -0.07 price elasticity to the demand forecasts where they believed this was necessary. This measure was derived by taking the weighted average of WSAA's price elasticity estimates with the weights based on 80 per cent indoor use and 20 per cent outdoor use. These proportions are reflective of usage patterns suggested by the businesses.

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[29] Ibid, p. 12.

[30] Ibid, p. 14.

PwC qualified their elasticity adjustment by noting the adjustments they had made to the businesses' forecasts were based on the prices that the businesses had set out in their Water Plan templates. If the Commission adjusted the businesses' prices as a result of its price review, then this would affect the price elasticity adjustment made to the businesses' forecasts.

The Commission accepts PwC's approach to price elasticity and agrees that further adjustments to the forecasts may be required where the Commission has determined materially different prices for a business than those set out in the Water Plan template.

Water conservation measures

The businesses can influence demand by introducing non-price water conservation or demand management programs. The types of programs being proposed by the businesses include water efficiency appliance programs, indoor retrofitting and business efficiency programs.

All of the businesses indicated they will undertake water conservation activities across the regulatory period. Most businesses also indicated that they intended to maintain permanent water saving rules. These rules limit the extent of water use for outdoor activities such as odd/even day watering programs and prohibitions on pavement watering.

PwC noted that:

> *The level of information provided by the businesses in support of the water savings that will be achieved by the proposed water conservation programs and water savings rules varies. Some businesses have used the results achieved in metropolitan areas such as Melbourne and Sydney to quantity to anticipated benefits of these programs. ... Other businesses have not provided similar independent support for the savings that they anticipate they will achieve over the period. In some cases, the business has stated that certain programs will be implemented with little justification of the water volume savings they have assumed when developing their forecasts.*[31]

Generally, PwC accepted the savings assumed by the businesses where the anticipated savings had been supported by the results of implementing such programs elsewhere. However, where this justification had not been provided, PwC adjusted the forecasts upward to discount for the effect of water conservation programs in their forecasts.[32]

The Commission agrees with PwC's approach and has accepted the anticipated savings where these have been based on the outcomes from similar programs in other areas.

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[31] ibid, p. 15.

[32] ibid, p. 15.

7.4 Review of the urban businesses' forecasts

The businesses were asked to provide forecasts of the demand expected under each of their proposed tariffs. While the types of forecasts provided varied between the businesses because of the differences in the tariffs and tariff structures that they impose, generally the businesses provided forecasts of:

- residential and non-residential connection numbers, including water and sewerage connections
- water volumes
- sewerage volumes and
- trade waste connections and volumes.

Each of these forecasts is discussed in turn.

7.4.1 Residential and non-residential connection numbers

Residential connection numbers

Nearly all of the businesses relied on DSE's Victoria in Future (VIF) population and household forecasts to develop their forecasts of residential customer numbers. In most cases, the forecasts in VIF did not directly map onto the business's water supply area. As a result, the businesses used local council information or other data to convert the VIF forecasts into customer number forecasts for their water supply area.

Having developed a forecast for residential customer numbers, the businesses then derived their sewerage connection forecasts taking into account available information on expected take up of septic tank or extension of sewerage services to established housing.

Generally, sewerage connections will grow in line with the growth in residential customer numbers. However, differences in the growth rates will often occur because:

- customers may install septic tanks or other waste disposal methods rather than connect to the sewerage system and thus sewerage connections may grow at a slower pace than water connections or
- residential water customers previously utilising a septic tank may choose to connect to the sewerage system in which case sewerage connections may grow faster than water connections.

PwC did not find any major issues with the methodology that the businesses had used to convert the VIF forecasts into forecasts of residential customer numbers and suggested that most of the resulting forecasts of residential customer connections were reasonable.

However, it noted the low growth in customer numbers forecast by Gippsland Water and Central Highlands Water and recommended adjustments to the forecasts proposed by these businesses.

- Gippsland Water's forecast lower growth in residential connections from that which had occurred in the past. PwC believed that these forecasts were at odds with historical growth rates and land supply forecasts from Beca which found higher growth rates were expected and recommended increasing Gippsland Water's forecast of residential connections.[33]
- PwC recommended increasing Central Highlands Water's forecast residential water and sewerage connections to reflect VIF's household growth projection for the Central Highlands and the strong growth in population and development in general expected for that region.

The Commission has accepted the residential water and sewerage customer forecasts proposed by most of the businesses with either no or minor adjustments. However, it has also accepted the recommendations that PwC has made regarding Gippsland Water and Central Highlands Water. It has accepted the adjustments that PwC made to Gippsland Water's forecasts even though it considers that PwC's adjustment is very conservative.

As a result, the Commission has:

- increased Central Highlands Water's forecast residential water and sewerage connections to reflect VIF's household growth projections and
- increased the growth rate underlying Gippsland Water's residential customer number forecasts to reflect more accurately the connections growth rate experienced over past seven years.

Non-residential customer connections

Generally, the businesses derived their forecasts of non-residential customer numbers from their forecasts of residential customer numbers. The businesses either relied on the historical relationship between residential and non-residential connection growth to forecast non-residential connections or adjusted the forecasts derived in this manner to take into account information obtained from local businesses or other sources.

PwC recommended that the Commission accept the non-residential customer connection forecasts provided by the urban water businesses. The exception was Central Highlands Water where PwC recommended increasing the non-residential connections forecasts to bring them into line with the adjustment made to residential connections.

The Commission has accepted PwC's recommendations and accepted most of the businesses' non-residential connections forecasts as its Draft Decision. The exception is Central Highlands Water's forecast of non-residential connections, which have been increased in line with PwC's recommendations.

[33] Ibid, p. 52

7.4.2 Water volumes

As discussed in section 1.3, the businesses made assumptions on rainfall levels and climate change impacts, restriction levels and the effectiveness of water conservation measures when developing their water demand forecasts. In some cases, price impacts were also included.

Generally, the businesses are forecasting increases in water demand over the period as supply increases and restrictions ease. However, average demand is forecast to remain below historical levels because of water conservation and permanent water savings rules.

PwC assessed the assumptions that the businesses used to formulate their forecasts and, in most cases, PwC found the businesses' water demand forecasts were reasonable.

However, PwC recommended the following adjustments to the water demand forecasts believing the forecasts proposed would likely underestimate demand over the period:

- Increasing the forecasts of North East Water (NEW) to reflect PwC's view of a medium rainfall outlook going forward and a bounce back in consumption of 70 to 90 per cent over two years. NEW's estimated 'bounce back' was based on consumption unadjusted for growth in customer numbers. PwC considered that a more appropriate method that accounts for connections growth is to apply bounce back to projected per connection consumption and generate final volume estimates based on the adjusted per connection consumption and the customer numbers.
- Increasing Wannon Water's forecasts to remove anticipated water savings arising from reductions in leakage. PwC noted that some of Wannon Water's anticipated water conservation savings came from leakage reduction. PwC was of the view that while this measure should reduce bulk water demand of the system as a whole (and help conserve water and augment supplies), it will not reduce end customer demand.
- Amending Wannon Water's forecasts to provide for an earlier lifting of restrictions. In doing so, they recommended adjusting the water demand forecasts for 'Block 3' in Group 3 as it was their understanding that Group 3 related to areas subject to restrictions in the original forecasts.
- Reducing Lower Murray Water's forecast for the 2008-09 year to account for its revised restrictions forecast for 2007-08 and 2008-09. In response to PwC's draft report, Lower Murray Water advised that its outlook for restrictions in these years had changed since it submitted its Water Plan to the Commission and it now expected stage 4 restrictions will remain in place until 2008-09.
- Reducing the anticipated savings that South Gippsland Water expected from restrictions and thus increased their water demand forecasts. South Gippsland Water assumed that the water savings made from imposing use restrictions would accelerate over time. In contrast, PwC believed that the savings from water restrictions would present a step reduction in water use and not accelerate over time.

- Increasing Western Water's demand forecasts for reductions in unaccounted for water. Western Water subtracted these savings from its baseline demand. However, PwC commented that while a reduction in unaccounted for water will reduce total demand in providing a given supply to end users, it will not reduce consumption by end users.
- Increasing Westernport Water's forecasts to remove anticipated savings from water conservation programs. Westernport Water did not provide sufficient information to support the savings it had assumed and thus PwC recommended removing the assumed savings from the forecasts.
- Adjusting most of the businesses' forecasts to take into account price elasticity effects. As noted in section 1.3, PwC reduced the forecasts of water demand for most businesses by applying a price elasticity of -0.07.
- Increasing some businesses' forecasts because they had applied price elasticity to already low level of water usage due to severe restriction levels. PwC considered that customers on stage 3 or 4 level restrictions had reduced their discretionary consumption to such a point that price will have little impact on usage. This affected Lower Murray Water and Western Water where price effects were removed in the earlier years of their forecasts in recognition of the high level restrictions in place.

The Commission has reviewed the analysis and recommendations made by PwC as well as the information the businesses' have supplied in their Water Plans and in response to information requests made by PwC.

The Commission agrees with the recommended adjustments made by PwC, particularly the price elasticity adjustments made to the forecasts. As a result, the Commission has adjusted the water demand forecasts for North East Water, Wannon Water, Lower Murray Water, South Gippsland Water, Western Water and Westerport Water consistent with the adjustments recommended by PwC. It has also accepted the adjustments PwC recommended made to these and the other businesses for price elasticity impacts.

7.4.3 Sewerage volumes

Nine of businesses forecast sewerage volumes — Barwon Water; Central Highlands Water (non-residential only); Coliban Water (non-residential only); East Gippsland Water; Gippsland Water (non-residential only); Goulburn Valley Water; Grampians Wimmera Malley Water (non-residential only); North East Water; and South Gippsland Water. Other businesses do not intend to levy volumetric charges and thus did not forecast sewerage volumes.

Generally, the volume of sewerage that will be collected was forecast based on the historical relationship between water distributed and sewerage collected would continue into the future.

PwC found most of these businesses' proposed sewerage volume forecasts reasonable. However, it recommended increasing Central Highlands Water's total sewerage volumes in line with their recommended adjustment to sewerage connections.

The Commission is generally satisfied with the approach adopted by most businesses in estimating sewerage volumes.

However, the Commission accepts PwC's findings in relation to Central Highlands Water. As a result, the Commission has increased the forecasts of sewerage volumes proposed by Central Highlands Water in line with the increase made to this business's sewerage connection numbers.

7.4.4 Trade waste

Most of the businesses levy trade waste charges on a per connection basis and only provide forecasts of trade waste connections in their Water Plans. Forecasting trade waste volumes is unnecessary for tariff and thus price review purposes.

In addition, many of the businesses only designate major waste producers as trade waste customers and thus their forecasts of trade waste connections remain fairly stable.

Despite noting some issues with businesses' trade waste forecasts in its draft report, PwC has not recommended amending any of the businesses' forecasts of trade waste connections. In response to PwC's draft report, the businesses were able to provide sufficient information and justification for their proposed forecasts.

The Commission has also reviewed the businesses' proposed trade waste customer connection forecasts and agrees with PwC's assessment. As a result, the Commission has accepted the businesses' proposed forecasts.

7.5 Review of the rural water businesses' forecasts

Under their Water Plans, the rural water businesses provided forecasts of volumes provided for irrigation, stock and domestic and surface and groundwater diversions. Some businesses forecast drainage volumes expected where this service was supplied to customers.

The businesses provided forecasts of the number of licences that would be on issue over the period for surface and groundwater diversions. However, they also noted that they did not expect the total number of licences on issue to increase over the period as most of Victoria's river systems are now subject to caps on the number of licences issued.

In its review, PwC noted that, in most cases, the rural water businesses based their forecasts on the historical trend observed over recent years. On this basis, PwC found most of the forecasts provided by the rural water businesses were reasonable and recommended that the Commission could largely adopt the forecasts set out in the businesses' Water Plans.

The exception to this was Lower Murray Water's forecasts to which PwC recommended a number of changes:

- Increasing forecast irrigation volumes to reflect a medium rainfall scenario. Lower Murray Water forecast irrigation volumes using data on irrigation flows from the last seven years. Given the dry conditions experienced over these years, PwC considered this approach resulted in forecasts based on a low rainfall scenario and re-forecast Lower Murray Water's irrigation volumes using historical data from 1997-98 to 2006-07.

- Adjusting forecast stock and domestic volumes to account for the 14 months of volumes that were recorded in 2005-06. Lower Murray Water forecast that stock and domestic volumes would be consistent with volumes used over the last three years. However, the inclusion of 14 months of volumes in 2005-06 could bias the forecasts and thus Lower Murray Water advised PwC to base the forecasts on an average of the last five years. PwC recommended that the Commission make this adjustment.
- Increasing Lower Murray Water's diversion forecasts. Lower Murray Water assumed that the volume of water taken by diverters increases at a rate of 20,000ML per annum. This was based on volumes over the last 3 years, which have increased at a rate of between 20,000 and 23,000ML per annum. PwC noted that the lower end of this range had been used to forecast volumes and that the business's Water Plan indicated the average annual increase since 2003 had been 21,659 ML per annum. PwC amended the forecasts so that the annual increase throughout the regulatory period was 21,500 ML.
- Adjusting the number of connections. Lower Murray Water revised its projected metered and unmetered property numbers, which show that properties are being gradually changed from unmetered to metered properties. They also provided revised estimates for hectares and delivery share. PwC recommended adopting these revised forecasts.

The Commission accepts the recommendations made by PwC and has amended the forecasts accordingly.

However, obtaining accurate forecasts of demand for the rural water businesses is not as great a concern as it is for the urban water businesses. Each of the rural water businesses are currently on a revenue cap form of price control. Revenue caps correct for any over or under-recovery of revenue due to inaccuracies in the forecasts of demand.

8 OVERVIEW OF PRICES

The Commission is responsible for regulating prices for certain water and sewerage services provided by the water businesses. The WIRO prescribes the following services for which the Commission has the power to regulate prices:

- retail water services — the supply of water by a water business to a retail customer
- retail sewerage services — the removal, treatment and disposal of sewage and trade waste by a metropolitan retailer or a regional water authority
- retail recycled water services — the supply of recycled water by a water business to a retail customer
- storage operator and bulk water services — the supply of bulk water from one water business to another
- bulk sewerage services — the conveyance, treatment and disposal of wastewater by Melbourne Water for another water business
- bulk recycled services — the supply of recycled water by Melbourne Water
- metropolitan drainage services — the supply of drainage services by Melbourne Water
- irrigation drainage services — the removal and disposal of run-off of irrigation by a rural water authority
- connection services — the connection of a serviced property to a water supply or sewerage system
- services to which developer charges apply — contributions to the cost of works for connections services
- diversion services — the management, extraction or use of groundwater or surface water by a water business.

The Commission's price regulation role relates explicitly to these and any other services in connection with these prescribed services. It does not extend to other services that water businesses may provide in competition with other service providers, such as plumbing services or the sale of gardening products and water tanks.

As part of their Water Plans each of the water businesses subject to this review has proposed average annual price increases unadjusted for inflation, ranging from 0.3 per cent to 17.2 per cent (see table 8.1).

As outlined in chapter 3 the Commission has derived a revenue requirement for each business based on its assessment of proposed expenditure and capital financing requirements. The annual average price increases implied by the

Commission's Draft Decision range from 1.1 to 17.4 per cent unadjusted for inflation (see table 8.1).

Table 8.1 **Average annual increase in prices over the regulatory period**

	Proposed	*Draft decision*
	per cent	per cent
Urban businesses		
Barwon Water	10.6	11.5
Central Highlands	11.3[a]	10.9[a]
Coliban	13.1	12.8
East Gippsland	5.4	7.3
Gippsland	17.2[b]	17.4[b]
Goulburn Valley	5.9	8.3
GWMWater	5.9	7.3
Lower Murray (urban)	4.1	4.8
North East	8.4	8.5
South Gippsland	4.3	5.9
Wannon	6.1	5.9
Western	10.9	10.0
Westernport	4.7	5.6
Rural businesses		
FMIT	6.5	7.7
Goulburn-Murray	2.2	2.5
Lower Murray (rural)	0.3	1.1
Southern Rural	c	c

Note Average annual price increase compared to 2007-08 prices. It represents the amount that current prices need to increase to match the present value of the revenue requirement and implies a smoothed increase in prices over the period. **a** Proposed a non smoothed increase of 25 per cent in the first year of period followed by 5.5 per cent for each remaining year. By the end of the period prices are 55 per cent higher than at start of period compared to 71 per cent under a smoother approach. The same amount of revenue is recovered through prices under both approaches and customers pay the same in net present terms **b** Proposed a non smoothed of 23 per cent for each of the first and second years of the period followed by 10 per cent for each remaining year. At end of period prices are 100 per cent higher than at beginning of period compared to 121 per cent under a smoothed approach. The same amount of revenue is recovered through prices under both approaches and customers pay the same in net present terms. **c** Southern Rural Water did not provide the Commission with sufficient information to enable it to calculate the required average annual price change.

8.1 Assessing businesses' proposed prices

As part of their Water Plans, the businesses have set out the nature of the charges that they propose to apply in relation to the various services that the Commission is responsible for regulating.

The Commission must decide whether to approve the businesses' proposed prices or the manner in which they propose to calculate or otherwise determine them for the five year period beginning 1 July 2008.

The WIRO requires the Commission to be satisfied that the proposed prices or the manner in which they are determined:

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

In its final report for the tariff structure inquiry,[34] the Commission acknowledged that a number of often competing economic and non-economic objectives are advanced as important considerations in the design of water tariff structures. It also recognised that there is no one 'single best tariff' and that a range of different tariff structures will be consistent, or at least not inconsistent, with the WIRO principles.

The Commission acknowledged that the water businesses typically serve different customer groups with different needs, willingness to pay and service costs. Thus, different businesses may consider that different tariff structures are better suited to their particular circumstances — it is not a case of 'one size fits all'. The Commission also accepted that some businesses may choose not to propose refinements to their tariff structures especially where they believe current tariff structures already meet the WIRO principles.

In its previous guidance to businesses and in assessing tariff structures for the 2005 Urban Water Price Review the Commission indicated that the water businesses are best placed to:

- develop tariff structure proposals that reflect their particular underlying cost structures

[34] In September 2007, the Commission was asked by the Minister for Finance to conduct an inquiry into tariff structures for the Victorian water industry. The Commission' final report to the Minister and other related material can be found on its website.

- test the proposals with customers to ascertain whether the proposed tariff structures would be understood and accepted
- demonstrate how any customer impacts would be managed
- explain how the proposals address the various objectives and other considerations important in designing tariff structures
- demonstrate that the proposed tariff structures are consistent with the Government's broader water demand and supply strategies.

In practice, applying the WIRO principles requires interpretation of the requirements placed on water businesses and decisions about what actions will satisfy those requirements. The Commission has interpreted the WIRO principles as requiring businesses to demonstrate that prices reflect costs. Cost reflective pricing satisfies a number of WIRO principles. It ensures that businesses will cover their efficient costs without earning monopoly profits and provides incentives for businesses to operate efficiently. It also provides signals to consumers about the costs of water consumption and promotes the efficient allocation of water.

On the other hand, there may be little efficiency gain, in terms of sending appropriate price signals, from attempting to perfectly allocate costs to individual customers if those costs are sunk and have little impact on present and future consumption decisions. Where proposed changes to tariff structures cannot be justified on the basis of improving signals, the Commission would need to be satisfied that any adverse customer impacts have been considered and dealt with adequately.

The WIRO requirement to promote the sustainable use of Victoria's water resources suggests that tariffs should comprise a volumetric component so that customers pay according to the amount of water they use. The volumetric component provides an incentive for customers to use water only up to the point where the benefits from water use equal the price paid.

The Commission has interpreted the WIRO principle that the interests of customers are taken into account as requiring that prices do not unduly impact customers or any particular customer group. Businesses have been required to demonstrate that they have engaged customers in consultation processes to elicit their willingness to pay for capital expenditure projects (such as supply augmentation) and service improvements (such as improved reliability). They should attempt to minimise customer impacts, such as by avoiding sudden large price increases, and customer preferences for alternative price paths should be ascertained through consultation processes. In addition, businesses are required to formulate hardship policies and measures to address negative financial impacts on low income and vulnerable customers (such as large households) from tariff structure reforms.[35]

The WIRO principle that customers should readily understand the tariff structures adopted by businesses has been interpreted as requiring that tariff structures are

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[35] Such measures might include instalment payment arrangements, referrals to grants schemes or financial counsellors, or provision of water audits and installation of water-saving devices.

not overly complex. Excessively complex tariff structures, while potentially being more cost reflective, might not elicit the desired customer response if customers do not understand them — water businesses need to demonstrate that proposed tariff structures will be effective in achieving their aims. Determining whether or not customers will be able to understand tariff structures is a subjective exercise. Current tariff structures for retail water services are relatively simple, allowing customers to readily understand prices and the way in which they are calculated.

Generally, businesses are not proposing significant changes to tariff structures for the forthcoming regulatory period. The Commission has focused its assessment on those businesses that are proposing significant changes to price levels for individual tariff components or introducing new structures. It has assessed the businesses' proposals in the context of a broad range of factors, including:

- the overall level of, and change in, prices
- the prevailing demand/supply balance
- each business' total revenue requirement for the regulatory period
- any other proposed tariff structure reforms
- the combined customer impacts from all proposed tariff structure changes
- the general price changes proposed for the regulatory period and
- feedback from stakeholder consultation.

The Commission's detailed assessment of the businesses' tariff proposals for each of the prescribed services that it regulates is set out in chapters 9 to 14. However, there are a number of observations that the Commission has made that are relevant across the ranges of services provided by businesses.

Allocating costs between residential and non-residential customers

It is not always clear how businesses have allocated costs between residential and non-residential customers. Often the prices charged to non-residential customers are not reflected in the businesses' tariff schedule having been the subject of a separate negotiation process and reflected in long term contracts. Few businesses have provided details of contracts where scheduled prices do not apply. Without access to these contracts the Commission has not been able to assess wether costs have been allocated to some non-residential customers on a reasonable basis. Under the determination for the first regulatory period the Commission set out a number of pricing principles that would apply to determining non-scheduled prices. Any non-scheduled prices contained in contracts that were renegotiated, renewed or entered into during the period should be consistent with those pricing principles.

Similarly, any contracts that are renewed or entered into over the forthcoming regulatory period will also need to be consistent with those principles. The Commission will monitor compliance with these pricing principles and is proposing to include an assessment of compliance of contracts with the pricing principles as part of its annual audit process.

Smoothing price impacts for particular customers or customer groups

Second, a number of businesses have proposed significant price increases for particular services or tariff components over the regulatory period. These proposed tariff changes are likely to result in significant impacts for particular customer groups. The potential for adverse customer impacts is likely to be greater where customers face difficulties or costs in changing their behaviour in response to price or tariff structure changes. For example, business customers may be unable to respond quickly or without significant cost impacts because of the need to change production processes or invest in new equipment.

Whilst these proposals to change tariffs may be justified in terms of sending appropriate signals to customers, the Commission questions whether there is scope to minimise the impact on customers by phasing the proposed changes in over the period. This would allow customers to adjust their behaviour accordingly. Any change in tariff proposals to minimise customer impacts for a particular customer or customer group may result in adverse outcomes for other customers. In response to the Draft Decision businesses proposing significant increases for particular services or tariff components should consider what phasing-in arrangements would adequately address customer impacts in the context of potential impacts on other customers.

Proposed price paths

The WIRO requires businesses to take the interests of customers into account when proposing prices. This includes not exposing customers to any unnecessary price shocks. The Commission is of the view that an approach which attempts to minimise large price shocks to customers is most likely to be in the best interests of customers.

The average real price increase is derived from each business's revenue requirement and the prices that apply in 2007-08. It represents the amount that current prices need to increase to match the present value of the revenue requirement. The average price increase set out in table 8.1 reflect a smoothed increase in prices over the period.

The majority of businesses have proposed relatively smooth year on year price paths. A number have proposed significant increases in the first year of the regulatory period followed by smaller annual price increases over the rest of the period.

Central Highlands Water and Western Water have proposed significant increases in their prices from 2007-08 to 2008-09, while Gippsland Water has proposed large increases in the first two years of the regulatory period, rather than smooth year-on-year increases.

Western Water noted in its submission to the Commission's 2007 Issues Paper that its proposed price path reflected a large upfront capital spend and was supported by customer consultation. Some smoothing of prices has been incorporated.

Central Highlands Water proposed a large increase in prices in the first year of the regulatory period primarily in order to achieve lower prices at the end of the five year regulatory period. Central Highlands Water noted that while its price path led to an initially higher tariff, prices would be lower in the last year of the regulatory period. Customer consultation undertaken by Central Highlands Water found that the majority of respondents preferred a larger price increase in the first year.

Gippsland Water noted that a smoothed price path would lead to under recovery in the first years of the period, and over recovery in the later years. Therefore prices at the beginning of the third regulatory period may be higher than required going forward, leading to a 'see-saw' effect on prices.

In its submission to the Commission's December 2007 Issues Paper, Gippsland Water stated that it outlined three proposed price paths (including a smoothed price path, the approach proposed in the Water Plan and a greater up-front increase) during six community consultation sessions across its region. Along with concerns about the overall increase in tariffs, Gippsland Water stated that customer feedback confirmed customers were concerned about limiting the increase in the later years of the period.[36] Under Gippsland Water's proposals, prices are 100 per cent higher at the end of the period compared to the start of the period.

It should be noted that regardless of the price path proposed, businesses will still recover the same amount of revenue from customers, the only difference being the stage of the regulatory period that the revenue is recovered in. The Commission has some concerns that customer consultation may not have made this clear to customers.

Additionally, there is no imperative for businesses to recover their expenditure on capital investments when they are undertaken, as the costs are recovered over the life of the asset via the WACC and regulatory depreciation.

Draft Decision

The Commission proposes to approve the price paths proposed by the businesses on the basis that they are not inconsistent with the WIRO.

[36] Gippsland Water, 2008 Water Price Review – Water Plans Issues Paper Gippsland Water Submission, January 2008, p.3

9 RETAIL WATER AND SEWERAGE SERVICES

9.1 Introduction

Retail water and sewerage services are provided by 11 regional urban water businesses (Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, North East Water, South Gippsland Water, Wannon Water, Western Water and Westernport Water) and two hybrid rural/urban businesses (GWMWater and Lower Murray Water).

The tariffs proposed by businesses for the 2008-13 regulatory period can be broadly classified as either:

- fixed tariffs – single fixed charges with no relation to usage or
- two part tariffs – tariffs comprising a fixed component and a usage component related to metered water use.

Two part tariffs may include a flat usage charge where the price per kL of water is constant for all customers, or alternatively an inclining block structure, where customers are charged a higher price per kL as their consumption increases.

This chapter sets out the Commission’s approach, businesses’ proposals with regard to retail water and sewerage tariffs, the Commission’s assessment of whether the proposals satisfy the regulatory principles in the WIRO and the Commission’s Draft Decision on the businesses’ proposed tariffs.

9.2 Commission’s approach to assessing retail water tariffs

Pricing principles contained in the WIRO

The WIRO includes a number of principles against which the Commission is required to assess prices. The WIRO states 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.

Initial guidance

In its December 2006 Framework and Approach paper, the Commission proposed to address the following considerations in assessing proposed prices against the WIRO for the 2008-13 Water Price Review:

- proposed prices should be constructed in a way that they are consistent with the objectives of demand and supply strategies
- in meeting demand supply objectives, proposed prices should aim to provide adequate signals to customers
- proposed prices need to have consideration for their impact on customers

In order to satisfy these principles water businesses need to clearly articulate what they are trying to achieve over the regulatory period in terms of the obligations and outcomes they are proposing to deliver.

Price signals

Where businesses are proposing that prices are being used to provide signals to customers, businesses need to demonstrate how tariffs have been structured to ensure that those signals are being sent. For example, where business propose to increase variable charges on the basis of obtaining more effective price signals for future expenditure, the proposal should be accompanied by long run marginal cost (LRMC) estimates and the drivers behind these estimates.

Setting the variable (volumetric) component of tariffs to reflect the long run marginal cost (LRMC) of supply is consistent with the WIRO requirement that prices should signal the costs of providing services, including the cost of future supply augmentation.[37] However, given the lumpy nature of capital expenditure for water services, estimates of LRMC are often very low, particularly after completion of a large supply augmentation project resulting in excess capacity. Businesses have typically not reflected this in their volumetric charges on the basis that this would undermine customers' incentives to use water sustainably. In such cases, a judgement has to be made about how to balance the principles of cost reflectivity and promoting sustainable use.

Under circumstances where demand exceeds the supply of water, pricing on the basis of short run marginal cost (SRMC) may be consistent with the WIRO principle that prices signal the costs associated with restricted supply. Various forms of scarcity pricing may, therefore, comply with the WIRO principles.

Where businesses are proposing to restructure tariffs for the purpose of reallocating costs and there is little or no improvement in the ability of those tariffs to signal or influence customer behaviour, businesses need to demonstrate that the benefits of reallocating costs are not outweighed by the customer impacts.

[37] Given difficulties in estimating LRMC, the Commission does not require businesses to present estimates, but does expect them to have regard to the factors that would affect LRMC.

Price elasticity

When assessing prices against the WIRO principles, it is important for the Commission to form a view on the ability of proposed tariffs to influence customer behaviour. This will depend on whether or not customers understand tariff structures, and the responsiveness of demand to changes in price, which can be measured by estimating the price elasticity of demand.[38]

Inclining block tariffs

Inclining block tariffs are typically used in conjunction with two part tariffs, and are applied to the usage or variable component of the tariff. The rationale for inclining block tariffs is that charging a higher tariff for discretionary water use gives customers an incentive to moderate this use and that this will lead to a decrease in total water consumption.

For the first regulatory period the Commission approved inclining block tariffs to be applied to residential customers for eight of the twenty Victorian water businesses. For some of these businesses inclining blocks had only been recently introduced and there has been little evidence of their impact.

From the responses received for the Commission’s December 2006 Framework and Approach paper it is not conclusive whether inclining block tariffs are effective in providing price signals to customers about sustainable water use.

The Commission does not propose to preclude businesses from using inclining block tariff structures in the urban setting nor require businesses to use them. However, as noted in its 2007 Water Tariff Structures Review, the Commission has been mindful of concerns about the cost reflectivity and efficiency of the charges imposed for various blocks,[39] specifically the extent to which the top tier usage charge exceeds the long run supply cost and the first tier charge falls short of the supply cost. In addition, it has recognised concerns about the potential for negative equity impacts on larger households and perverse water conservation effects.[40]

The businesses’ proposals to introduce inclining block tariff structures should take into account prevailing demand and supply conditions and the proposal’s expected effects and customer impacts.

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[38] A value for the price elasticity of demand between zero and -1 represents relatively inelastic demand, that is, an increase in price is likely to result in a less than proportionate decrease in demand. In contrast, a value less than -1 is said to be relatively elastic, in that an increase in price is likely to result in a more than proportionate change in demand.

[39] Edwards, G. 2006, ‘Whose values count? Demand management for Melbourne’s water’, *Economic Record*, vol. 82, no. S1, pp. S54–S63.

[40] Large households with low per person water usage could face a higher volumetric charge than a small, wasteful household, depending on the size of the blocks. Small households may have little incentive to use water efficiently if all of their water use falls within the first block (where the volumetric charge is lower than marginal cost), undermining the sustainability objective. See, for example, Sibly, H. 2006, ‘Urban Water Pricing’, *Agenda*, vol. 13, no. 1, pp. 17–30.

Seasonal charges

In the 2005 Water Price Review, the Commission decided not to approve Westernport Water's proposed seasonal usage charge on the basis that long term security of supply issues required charges that provided an equal year round incentive to conserve water.

In the 2006 Rural Water Price Review, the Commission approved Lower Murray Water's seasonal inclining block tariff (discussed in section 9.3.1), but noted that it was concerned about the overall signals it sent from a water conservation perspective. The Commission also noted that it expected Lower Murray Water to review its tariff structure for the second regulatory period.

9.3 Overview of businesses' retail water tariff proposals

9.3.1 Two part tariff structures

All businesses have proposed two part tariffs comprising a fixed service charge and a usage charge (based on the volume of water used) for residential customers for the 2008-13 regulatory period (see table 9.1).

Central Highlands Water, Wannon Water[41] and Westernport Water are proposing to introduce three tier inclining block tariff structures.

Coliban Water, Lower Murray Water and Western Water are proposing to continue with inclining block structures.

Barwon Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, North East Water and South Gippsland Water are proposing to continue with flat usage charges.

With regard to non-residential customers, all businesses have proposed a two part tariff comprising a fixed service charge and a flat usage charge.

Most businesses have not proposed significant changes to the structure of fixed charges, which are levied per property or by meter size (whereby a larger connection or meter attracts a larger charge).

Barwon Water, Central Highlands and South Gippsland Water are the only businesses that levy fixed charges on a per property basis rather than by meter size.

Most business also levy fixed charges on un-connected or vacant land pursuant to s.259(1)(b) of the *Water Act 1989*.

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[41] Previously, Wannon Water applied a three tier inclining block tariff in the Portland Coast region and a two tier inclining block tariff in the South West region.

Table 9.1 **Proposed retail water tariff structures for residential customers**

	Usage charge		*Fixed charge*		
	Flat	*Inclining block*	*Per property*	*Meter based charge*	*Vacant land charge*
Barwon Water	✓		✓		
Central Highlands Water		✓**a**	✓		✓
Coliban Water		✓**a**		✓	✓
East Gippsland	✓			✓	✓**a**
Gippsland Water	✓			✓	✓
Goulburn Valley Water	✓**a**			✓	✓
GWMWater	✓**a**			✓**a**	✓**ab**
Lower Murray Water		✓**c**		✓	✓
North East Water	✓			✓	
South Gippsland Water	✓**a**		✓**a**		✓**a**
Wannon Water		✓**a**		✓**a**	✓**a**
Western Water		✓		✓	✓
Westernport Water		✓	✓		✓

a Tariffs vary by geographic area. **b** Vacant land tariffs only apply to designated growth towns. **c** Lower Murray Water varies its inclining block structure on a seasonal basis, raising the usage blocks from 1 October–31 March.

Inclining block tariff proposals

Central Highlands Water, Wannon Water[42] and Westernport Water are proposing to introduce inclining block tariff structures for the first time, while Coliban Water, Lower Murray Water and Western Water are proposing to continue with inclining block tariff structures for the 2008-13 regulatory period.

Businesses implementing or maintaining inclining block tariff structures have typically justified their proposals on the basis that they encourage water conservation and assist with demand management.

Central Highlands Water is proposing to introduce a three tier inclining block tariff structure with usage blocks at 0-150 kL, 150-300 kL and >300 kL per annum. The relativities of the blocks involve a 20 per cent increase in price from block one to

[42] Previously, Wannon Water applied a three tier inclining block tariff in the Portland Coast region and a two tier inclining block tariff in the South West region.

block two and a 25 per cent increase in price from block two to block three (with an overall 50 per cent increase from block one to block three).

Central Highlands Water states that based on historical figures approximately 13 per cent (or 7,000) of its customers use in excess of 300 kL per annum.

Wannon Water, which previously applied inclining block tariffs in the Portland Coast and South West regions only, is proposing to implement a three tier inclining block structure across all of its residential customers. The proposed usage blocks are at 0-160 kL, 160-300 kL and >300 kL per annum. The 160 kL tier is set at average winter consumption. The relativities of the blocks involve a 20 per cent increase in price from block one to block two and a 50 per cent increase in price from block two to block three.

Westernport Water is proposing to introduce a three tier inclining block structure with usage blocks at 0-99 kL, 99-324 kL and >324 kL per annum. The levels of the blocks are based on historical levels of winter consumption, with the first block intended to represent non-discretionary household usage. Westernport Water states that during its peak usage period (November to February) 28 per cent of customers would be impacted by block two charges and two per cent by block three charges.

Those businesses proposing to introduce inclining block tariffs have typically not provided an assessment of the administrative costs involved in introducing a new tariff structure. However, Wannon Water noted that as inclining block tariffs are already in place for two thirds of its customers, the administrative costs of implementing them across its entire customer base will be minimal.

Western Water is maintaining a three tier inclining block tariff structure, but is proposing to increase the relativities between the tiers. The differential between the second and third blocks is increasing from 47.7 per cent in 2007-08 to 100.0 per cent in 2008-09 (maintained for the duration of the regulatory period).

Lower Murray Water is proposing to maintain a seasonal three tier inclining block, but to lower the tiers for summer consumption. Lower Murray Water is proposing to reduce the summer thresholds for consumption from 0-150 kL, 150-300 kL and >300 kL per quarter to 0-100 kL, 100-200 kL and >200 kL per quarter respectively. Lower Murray Water has indicated that its current average residential consumption lies within the second tier. Average annual residential consumption for 2005-06 was 552 kL, 42 kL below the third tier of 600 kL per annum.

Lower Murray Water has stated that the first step of its inclining block tariff allows for in-house use, while the second and third tiers capture discretionary outdoor use. The higher consumption allowance for warmer months is justified on the basis that customers have greater in-house consumption requirements, such as for evaporative air conditioning and more showering and washing of clothes.

Coliban Water is proposing to retain the current structure and relativities of its three tier inclining block tariff.

Table 9.2 **Proposed inclining block levels and per kL charges**
Residential customers ($1 January 2007 prices)

	Based on consumption	*Block level (kL)*	*2012-13 ($ per kL)*
Central Highlands Water[a]	4 monthly	0-50	1.5174
		50-100	1.8209
		>100	2.2761
Coliban Water[b]	3 monthly	0-50	1.7112
		50-100	2.0702
		>100	3.3995
Lower Murray Water (1 April – 30 September)	3 monthly	0-50	0.3311
		51-100	0.6021
		>100	0.7737
Lower Murray Water (1 October to 31 March)	3 monthly	0-100	0.3311
		101-200	0.6021
		>200	0.7737
Wannon Water – Group 1	3 monthly	0-40	1.5138
		40-75	1.8174
		>75	2.7260
Wannon Water – Group 2	3 monthly	0-40	1.5139
		40-75	1.8173
		>75	2.7262
Wannon Water – Group 3	3 monthly	0-40	2.0866
		40-75	2.5049
		>75	3.7574
Wannon Water – Group 4	3 monthly	0-40	1.2128
		40-75	1.4559
		>75	2.1839
Wannon Water – Group 5	3 monthly	0-40	1.4901
		40-75	1.7888
		>75	2.6832
Western Water	4 monthly	0-53	1.4685
		53-106	1.9480
		>106	3.8960
Westernport Water	4 monthly	0-33	1.3149
		33-108	1.5753
		>108	2.0287

[a] Excludes Amphitheatre and Redbank. [b] Central Districts.

Level of third tier charges

As shown in table 9.2, Coliban Water, Wannon Water and Western Water are proposing third tier usage charges significantly higher than other businesses and significantly higher than previous levels across the state.

Coliban Water's proposed third consumption tier in 2012-13 is priced at $3.40 per kL. Coliban water noted that its volumetric charge was within the upper and lower bound of LRMC, but did not provide any figures or the model used. Fixed access charges are to decrease in the first year of the regulatory period, with all subsequent price rises to be apportioned to the volumetric charge. Coliban Water has stated that the proposed increase in volumetric prices is intended to promote conservation and support demand management policies.

Wannon Water is proposing to price its third consumption tier in 2012-13 at $3.76 per kL for group 3 customers (Hamilton and Glenthompson systems). Wannon Water has stated that LRMC in Hamilton and Glenthompson is very high, due to significant supply augmentation requirements during the period, but has not provided any figures or described the model used to estimate LRMC.

Western Water is proposing to price its third tier at $3.90 per kL in 2012-13. Western Water has not supported its variable usage charge with LRMC modelling.

Customer support

All three businesses proposing to introduce inclining block tariff structures undertook some form of community consultation regarding the proposed tariff structures.

Wannon Water stated that its Customer Engagement Committee supported the implementation of a three tier inclining block structure to encourage conservation.

Westernport Water stated that community consultations supported an increase in the volumetric price of water and that the option of introducing an inclining block was communicated. It is not clear from Westernport Water's Water Plan if customers were in favour of the proposals.

Central Highlands Water stated that it undertook community consultation workshops in preparation for developing its Water Plan which revealed customers supported an inclining block tariff structure that rewards and encourages water conservation provided that vulnerable customers were identified and protected.

Western Water has stated that its decision to increase the relativities between the tiers is supported by customer consultation on its inclining block tariff structure conducted in April 2007, the results of which included:

- customers did not have a good understanding of inclining block tariffs
- customers' conservation habits were influenced more by restrictions and social obligation and
- customers recommended an increase in the price differential between the tiers of the inclining block tariff.

Western Water is also proposing to initiate a customer education plan to facilitate better understanding of water charges.

Customer impacts and mitigation

Whilst inclining block tariffs provide price signals for customers to reduce water use, there can be adverse impacts on large households who may not easily be able to reduce their consumption. Most businesses proposing inclining block tariff structures recognised this in their Water Plans, and proposed ways to mitigate customer impacts:

- Coliban Water stated that its existing policies would be appropriate to respond to customer impacts generated by its pricing proposals
- Central Highlands Water stated that it did not believe many vulnerable or low income customers would face significant adverse impacts, however, it is reviewing its hardship policy to make it more accessible to customers
- Wannon Water noted that it would directly correspond with all customers who are tenants holding concession cards, pay for audits for residential high water users and contribute to the costs of retrofitting water saving measures, assist customers with instalment payments and not apply the third tier volumetric price to customers in hardship (who apply on an annual basis)
- Western Water's Water Plan sets out provisions for a free water audit for large families and notes the potential to charge residential customers in hardship the non-residential tariff (rather than the inclining block applying to residential customers)
- Westernport Water has proposed reviewing and amending its hardship policy to cater for large families with high levels of non-discretionary water use and
- Lower Murray Water works with community based agencies such as Mallee Family Care to assist low income and vulnerable customers. Lower Murray Water also noted that its hardship policy would assist customers under financial stress and that 'assessments of the capacity of customers to pay are made through evaluation of a range of inputs from customer consultation, reference to pricing of comparable services provided elsewhere in Australia and pricing of complimentary services provided by other agencies in the Sunraysia region'.[43]

9.3.2 Altering the proportion of revenue collected from fixed and variable charges

Barwon Water, Coliban Water, East Gippsland Water, Goulburn Valley Water, GWMWater, Lower Murray Water, North East Water, Wannon Water and Western Water are proposing to increase the proportion of revenue recovered from the usage component of their two part tariffs.

Central Highlands Water is proposing to increase the proportion of revenue recovered from the fixed component of its two part tariff.

The businesses' proposals to increase the proportion of revenue recovered from the usage component of their tariffs were generally put forward on the basis of achieving demand reduction targets (such as those set out in the businesses' Water Supply Demand Strategies) and giving customers greater control over their bills.

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[43] Lower Murray Water 2007, *Water Plan 2008-09 to 2012-13*, October, p.57.

Table 9.3 **Retail water usage charges 2012-13**
($ 1 January 2007 prices)

			Residential	Non-residential	
	Average usage charge ($ per kL)	*Proportion of bill (per cent)*	*Proportion of revenue (per cent)*	*Usage charge ($ per kL)*	*Proportion of revenue (per cent)*
Barwon	1.99	76.0	69.7[a]	1.99	93.0[a]
Central Highlands [b]	1.63	64.5	59.9[c]	1.52	88.0[c]
Coliban r[d]	1.77	83.7	85.4	1.88	93.7
East Gippsland	1.30	64.5	59.2	1.30	n.a.
Gippsland	1.89	73.5	65.5[e]	1.89[f]	78.3[e]
Goulburn Valley	0.84	64.8	75.0	0.84	n.a.
GWMWater[g]	1.30	48.2	52.1	2.05	n.a.
Lower Murray	0.35	34.6	58.1	0.60	71.5
North East	1.95	76.1	73.8	1.95[f]	n.a.
South Gippsland[h]	1.42	57.2	58.3	1.42	n.a.
Wannon	1.29-2.23	55.2-74.2	73.4[a]	1.46-2.50	n.a.
Western	1.63	61.0	63.3	1.95	81.1
Westernport	1.47	52.7	31.5[i]	1.43	55.1[i]

Note Average usage charge for residential customers is calculated by dividing the total water usage charge for consuming 240kL by 240 (240kL was the average annual household consumption in regional Victoria in 2005-06). Usage charges as a proportion of revenue represents the proportion of total water (residential or non-residential) attributable to usage charges. **n.a.** not applicable, the business does not levy a separate non-residential tariff. [a] Excludes revenue from fire services. [b] Excludes Amphitheatre and Redbank. [c] Excludes revenue from vacant land and fire services. [d] Excludes revenue from fire services and agreements. [e] Excludes revenue from major clients and fire services. [f] North East Water and Gippsland Water levy a lower volumetric charge for major customers ($0.78 and $0.67 per kL respectively). [g] Price is a general ‘potable’ charge (including Underbool and Willaura/Lake Bolac); prices differ for channel supplied, Kaniva, Nhill, Donald, non-potable and groundwater. [h] price is for East/West district, Murray Goulburn price is $1.73 per kL – revenue includes tariffs for all regions. [i] Excludes vacant land revenue.

To achieve this, all of the aforementioned businesses other than Lower Murray Water are proposing to increase the usage component of their two part tariff in relation to the fixed component. Lower Murray Water has proposed to decrease the tiers of its inclining block tariff to get the same result.

By the end of the regulatory period, the proportion of residential customers' bills made up of variable charges will range from an average of 34.6 per cent for Lower Murray Water, to an average of 83.7 per cent for Coliban Water (see table 9.3).[44]

The percentage changes in volumetric usage charges proposed by the businesses from 2007-08 to 2008-09 and from 2007-08 to 2012-13 for non-residential customers are set out in table 9.4. Increases in the volumetric charges applied to non-residential customers over the entire regulatory period range from 30 per cent for Westernport Water to 187.9. per cent for North East Water.

Table 9.4 **Change in non-residential usage charges from 2007-08 to 2008-09 and 2007-08 to 2012-13**
($1 January 2007 prices)

	2007-08	*2008-09*	*Change per cent*	*2012-13*	*Change per cent*
Barwon	0.95	1.33	40.2	1.99	108.9
Central Highlands [a]	0.66-1.13	0.82-1.22	8.6-52.5	1.52	34.9-131.5
Coliban [b]	0.76	1.03	35.0	1.88	145.5
East Gippsland	0.89	0.96	7.4	1.30	45.5
Gippsland					
Non-residential	0.94	1.16	22.7	1.89	100.4
Major clients	0.33	40.9	22.7	0.67	100.4
Goulburn Valley	0.57	0.62	8.1	0.84	47.6
GWMWater[c]	0.98	1.14	15.7	1.30	32.3
Lower Murray	0.49	0.51	4.2	0.60	22.3
North East:					
Non-residential	0.68	1.30	91.9	1.95	187.9
Major customers	0.68	0.67	-1.6	0.78	14.9
South Gippsland	0.97-1.18	1.05-1.27	8.3	1.42-1.73	47.2
Wannon	0.72-1.15	1.20-1.55	4.4-76.4	1.46-2.50	26.9-153.5
Western	0.90	1.24	37.5	1.95	116.3
Westernport	1.10	1.20	8.9	1.43	30.0

a Excludes Amphitheatre and Redbank. **b** Central districts. **c** Price is a general 'potable' charge (including Underbool and Willaura/Lake Bolac); prices differ for channel supplied, Kaniva, Nhill, Donald, non-potable and groundwater.

Barwon Water, Central Highlands Water (category 1 major customers and Beaufort and Clunes non-residential), Coliban Water, Gippsland Water, North East Water,

[44] Based on annual consumption of 240 kL, the 2005-06 average in regional Victoria.

Wannon Water and Western Water have proposed significant increases in non-residential volumetric charges from 2007-08 to 2008-09.

Non-residential customers of Barwon Water, Central Highlands Water,[45] Gippsland Water, North East Water, Wannon Water[46] and Western Water will face more than double the current volumetric rate by the end of the regulatory period.

Implementation

Barwon Water is proposing to implement its restructure of tariffs in the first year of the regulatory period, by lowering fixed charges and increasing variable charges significantly from 2007-08 to 2008-09. Price increases will then be applied equally to the fixed and variable component of the water charge.[47]

Central Highlands Water is proposing a significant restructuring of its tariffs, including:

- rebalancing water and sewerage tariffs such that more revenue is recovered from water customers in aid of greater cost reflectivity. This is to be implemented by more than doubling fixed access charges for water, while applying a lesser increase or marginal decrease to fixed access charges for sewerage. Historically, the water segment of Central Highlands Water has recorded losses, while the sewerage segment has recorded profits. The proposal to rebalance tariffs from sewerage access fees to water access fees means that the proportion of water revenue from variable charges declines substantially from 2007-08 to 2008-09.
- moving to uniform variable usage charges for water for all categories of residential and non-residential customers.[48] The majority of usage charges will be aligned in 2008-09.[49] This will have the greatest impact on customers starting from the lowest variable usage charges, being category 1[50] and category 2[51] residential customers, and all non-residential customers other than category 2.
- moving to a three tier inclining block tariff structure (discussed in section 9.3.1 above).

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[45] Applies only to Category 2 (Ballan, Ballarat, Creswick, Daylesford and Lexon) contract customers.

[46] Excluding Koroit, Lismore/Derrinallum and Mortlake customers from Group 1, Group 4 customers (Peterborough, Port Campbell and Timboon) and Casterton, Colerain, Macarthur, Merino and Sandford customers from Group 5.

[47] One anomaly created by this approach is that having been reduced, fixed charges will return approximately to 2007-08 levels over the five year regulatory period.

[48] Excepting variable usage charges for Amphitheatre and Redbank which will remain significantly lower.

[49] Variable usage charges for contract customers will not come into line with other charges until 2011-12.

[50] Avoca, Learmonth, Maryborough, Talbot, Tullaroop and district, Landsborough and Waubra.

[51] Beaufort and Clunes.

Coliban Water is proposing to reduce its fixed access charges for water from 2007-08 to 2008-09 and increase variable charges. All water price rises for the rest of the period will then be apportioned to the volumetric component.

Coliban Water is loading price increases more heavily towards the beginning of the period, with a 35.0 per cent increase in Central districts non-residential and residential variable usage prices from 2007-08 to 2008-09. Both residential and non-residential customers in Central districts face a 145.5 per cent increase in the variable price for water from 2007-08 to 2012-13.

Goulburn Valley Water is proposing to hold its fixed access charges or water constant (in real terms) over the period, while apportioning an annual price increase of 8.1 per cent to the volumetric component only.

North East Water is proposing a significant restructuring of its water tariffs in the first year of the regulatory period towards recovering more revenue from the variable usage component. Volumetric charges for residential and non-residential customers are almost doubling from 2007-08 to 2008-09, and then increasing at a decreasing rate for the rest of the period, resulting in an overall 187.9 per cent increase by 2012-13.[52]

North East Water currently levies the same variable usage charge on non-residential and major customers. However, to lessen the impacts of its proposed increase in trade waste charges for major customers, North East Water is proposing to increase the variable usage charge for major customers by significantly less than for non-residential customers.

North East Water is also proposing to implement uniform fixed access charges for water. North East Water currently levies three different fixed access charges across its region, ranging from $112.39 to $138.04. Fixed access charges are to increase by 31.5 per cent over the regulatory period.

Wannon Water is proposing significant restructuring of its tariffs in the 2008-13 regulatory period, including:

- grouping customers into five separate groups for water services and five separate groups for sewerage customers (note that the groups for water and sewerage are substantially different)
- restructuring water tariffs towards recovering a higher proportion of revenue from variable charges for groups 1, 2 and 3 (with the aim of recovering 30 per cent of revenue from fixed access charges and 70 per cent from volumetric charges)
- minor restructuring for most group 4 and 5 customers (with the aim of recovering 50 per cent of revenue each from fixed access charges and volumetric charges)[53] and

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[52] North East Water is proposing only modest increases to volumetric charges for major customers over the period (an average increase of 2 per cent per annum, with a total increase from 2007-08 to 2012-13 of 14.9 per cent).

[53] Other than for Dartmoor customers in group 5, who will have a substantial reduction in fixed access charges and increase in volumetric charges to bring their charges into line with other group 5 customers.

- introducing three tier inclining block tariffs across its entire customer base (discussed in section 9.3.1).[54]

Wannon Water's proposal to restructure its tariffs from 2007-08 to 2008-09 will result in significant increases in variable usage charges for a number of customer groups. Group 1 customers (Portland, Port Fairy and Heywood) face an increase in variable prices of 70.9 per cent from 2007-08 to 2008-09 while Allansford and Warrnambool customers in group 2 face an increase of 76.4 per cent.

Western Water is proposing to increase its proportion of revenue collected via its variable usage charges, and also to increase the relativities between the charges of its inclining block tariff. Restructuring of the relativities will occur from 2007-08 to 2008-09, resulting in a greater increase in the variable price at the beginning of the period.

Western Water's non-residential water customers will experience a 37.5 per cent increase in the variable price from 2007-08 to 2008-09 with an overall 116.3 per cent increase from 2007-08 to 2012-13. Residential water customers will experience a 34.2 per cent increase in the variable price from 2007-08 to 2008-09 and an overall 111.1 per cent increase from 2007-08 to 2012-13.

East Gippsland Water and GWMWater are proposing only minor increases in the proportion of revenue recovered from variable usage charges.

Gippsland Water is not proposing any significant restructuring of tariffs during the 2008-13 regulatory period. However, the magnitude of its price increase and the effect of concentrating price increases in the first two years of the period may mean that customers have difficulty adjusting to price increases. Volumetric charges for both residential and non-residential customers are increasing by 22.7 per cent from 2007-08 to 2008-09 and by 50.1 per cent from 2007-08 to 2009-10.

Signalling costs of future supplies

In setting the variable component of their tariffs, a number of businesses including Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water,[55] North East Water and Wannon Water stated that they had considered long run marginal cost (LRMC) in their proposals.

Most businesses have proposed variable charges in excess of their estimations of LRMC for a variety of reasons, including:

- providing customers with incentives to conserve water through higher volumetric charges in order to assist with balancing supply and demand in the short run
- giving customers greater control over their bills through higher volumetric charges
- maintaining uniform tariffs across the customer base and

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[54] Previously, Wannon Water applied a three tier inclining block tariff in the Portland Coast region and a two tier inclining block in the South West region.

[55] Note that Gippsland Water is not proposing to alter its proportion of revenue derived from volumetric charges.

- low estimates of LRMC due to augmentation projects having already been undertaken or uncertainty around the need for future augmentation.

None of the businesses provided a working version of the model used to generate their LRMC estimates.

Barwon Water estimated LRMC to be $1.00 per kL for its Geelong and Lorne systems, and $1.56 per kL for its Apollo Bay system. Barwon Water stated that its proposed variable charge ($1.99 per kL in 2012-13) exceeds LRMC to take into account externalities unable to be quantified and provide water conservation signals.

Central Highlands Water found that due to many required augmentation projects planned for the next 20 years already being underway due to the drought, the LRMC was significantly lower than current charges (essentially, the LRMC approximated the SRMC). Central Highlands Water stated that it believed that volumetric charges based on the LRMC would not encourage customers to use water sustainably. Central Highlands Water did not provide any figures or the model used.

Gippsland Water undertook LRMC modelling resulting in an estimate of LRMC of $1.12 per kL, with a maximum of $1.74 per kL. However, Gippsland Water noted it had little confidence in the validity of these assumptions due to uncertainty surrounding demand forecasts and forecasts of capital expenditure.

North East Water, while not providing any figures, noted that its variable usage charge would exceed LRMC and that it had chosen to depart from LRMC pricing in order to:

- implement a uniform tariff structure
- give customers greater control over their bills and
- benefit the environment by giving customers stronger incentives to conserve water.

Wannon Water stated that modelling was undertaken to determine LRMC across its region, although did not provide figures or the model used. Wannon Water found a highly variable LRMC with most areas other than Hamilton and Glenthompson facing very low LRMC due to capacity augmentation not being required for the next 40 years. Wannon Water stated that LRMC for the Hamilton and Glenthompson systems is very high due to their immediate requirements for supply augmentation. Reasons for diverging from LRMC included:

- anticipated difficulties with applying substantially different tariffs in Hamilton and Glenthompson
- avoiding see-sawing effects on tariffs in Hamilton since once augmentation was completed in 2010 LRMC would fall significantly and
- low variable charges would give customers little control over their bills, and run counter to Government policy and customer preferences.

East Gippsland Water stated that pricing models developed by the industry show LRMC in excess of its variable charge. East Gippsland Water's proposed variable price for 2012-13 of $1.30 per kL is one of the lowest in the state.

Coliban water noted that its volumetric charge was within the upper and lower bound of LRMC, but did not provide any figures or the model used.

Price elasticity

The majority of businesses did not provide estimates of price elasticities of demand for water to support their tariff structures. The estimates provided by Coliban Water, Lower Murray Water, North East Water and Western Water suggested that demand for water services is relatively inelastic, although not unresponsive to price (see table 9.5).

Table 9.5 **Price elasticity estimates for water services**

	Demand elasticity estimate (per cent)
Coliban Water	Commissioned research by Marsden Jacob Associates on elasticity, which found water demand was inelastic to price (no figures presented in Water Plan)
Lower Murray Water (urban)	-0.05 for the first tier (0-300 kL per annum) -0.2 for the second tier (300-600 kL) -0.3 for the third tier (>600 kL)
North East Water[a]	-0.05 for indoor use -0.15 for outdoor use
Western Water	0 for the first tier (0-159 kL) -0.1 for the second tier (159-318 kL) -0.1 for the third tier (>318 kL)

[a] Figures based on 2004 study sponsored by the Water Services Association of Australia (WSAA).

Customer support

A number of businesses noted in their Water Plans that their customers had expressed support for increasing the proportion of revenue collected from variable charges in relation to that recovered from fixed charges.

Barwon Water stated that its customer consultative committee was supportive of its price changes.

North East Water noted that customers had provided feedback indicating that their tariff structures did not provide monetary incentives to conserve water. It also undertook a CUAC funded research project with LaTrobe University which provided clear evidence of customer support for increasing the variable component of tariffs.

Western Water contracted Ipsos to conduct research on customer preferences in relation to its tariff structure. Western Water noted that its customers were in favour of a greater price differential in its inclining block tariff to provide incentives for conservation.

Wannon Water stated that its proposed approach to adjusting the weighting of its charges in favour of variable charges was consistent with Government policy set out in the White Paper, the WIRO and customer preferences as expressed by its Customer Engagement Committee. Wannon Water also noted that its Customer Engagement Committee strongly supported the concept that for small communities with low volumes of water usage (due to rainwater tanks or seasonal populations) the fixed service charge should carry a greater weighting.

Central Highlands Water noted in its Water Plan that customer consultation had indicated that customers had a preference for low fixed charges and higher volumetric charges.[56] However, as noted above, Central Highlands Water is proposing to rebalance its water and sewerage tariffs such that more revenue is recovered via fixed access charges for water resulting in a reduction in the proportion of revenue recovered from variable water charges.

Customer impacts and mitigation

The Customer Service Code requires businesses to have a hardship policy in place to assists customers who have difficulty paying their bills. A number of businesses also recognised the impacts that their tariff restructuring proposals would have on customers.

Barwon Water noted that due to restructuring a number of non-residential customers would face substantial bill increases. In terms of mitigation, Barwon Water has allocated $0.5 million to water conservation programs in the non-residential sector and is proposing to provide recycled water to its largest non-residential customer (subject to government funding) to shelter it against the increase in the cost of potable water.

Barwon Water also noted that the government is proposing to extend the *Pathways to Sustainability Program*, a program to assist non-residential customers who consume more than 10 ML per annum to identify ways they can conserve water.

Coliban Water recognised in its Water Plan that its proposed price increases will impose a significant burden on families in hardship. Under the *Pathways to Sustainability Program* non-residential customers using more than 10 ML a year will be required to develop a water management action plan. Coliban Water stated that it would liaise with major non-residential customers to assist them in developing water management action plans and may contribute to costs of implementing water efficiency initiatives.

Central Highlands Water noted that Beaufort and Clunes customers had received new water treatment plants which had not yet been reflected in prices and it is appropriate that these customers are subject to equivalent tariffs to the other potable systems. Those customers who are currently on lower variable usage charges will face significant price increases due to the introduction of uniform usage charges. For example, from 2007-08 to 2008-09, residential customers in Beaufort and Clunes consuming 185 kL (the 2005-06 average) will see their yearly

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[56] Central Highlands Water 2007, *Water Plan*, October, p. 24

bills for water only increase from $231.43 to $408.15 (an increase of $176.72 or 76.4 per cent).

With regard to non-residential customers, Central Highlands Water stated that there are a small number of non-residential customers whose current price is at a discount to the residential price and is of the view implementing uniform prices will not create significant adverse operational impacts. Central Highlands Water is working with individual non-residential customers to help reduce their demand.

East Gippsland Water recognised that rebalancing its tariffs towards variable prices would have a greater impact on tenants, large families and other large water users such as large non-residential customers.

Gippsland Water charges a significantly reduced volumetric charge for major customers, however, this charge will be subject to the same increases as for other customers.

North East Water has recognised the impact that its proposed restructure is likely to have on tenants, with the average low-income tenant in Wodonga experiencing an increase of around $99 in their bill from 2007-08 to 2008-09. North East Water has modified its hardship policy to provide specific relief to these customers, allowing for a portion of the fees to be waived where hardship as a result of the reforms is established.[57]

Major customers of North East Water will be subject to a variable price increase of only 14.9 per cent over the course of the regulatory period (currently, major customers are on the same variable charge as other customers).

Wannon Water noted that it would directly correspond with all customers who are tenants holding concession cards, pay for audits for residential high water users and contribute to the costs of retrofitting water saving measures, assist customers with instalment payments and not apply the third tier volumetric price to customers in hardship (who apply on an annual basis).

9.4 Commission's assessment

9.4.1 Two part tariff structures

Inclining block tariff proposals

As noted above, the businesses proposing to introduce inclining block tariff structures are proposing to do so on the basis of providing incentives for conservation and to assist with demand management.

However, Lower Murray Water's seasonal inclining block effectively creates a discount for water during summer, which would generally be expected to be a period of high demand and/or constrained supply. This runs counter to the stated objectives of conservation and demand management.

[57] North East Water states that with its fee waiver, the impact on the average low-income tenant will be reduced by around half (from $24.76 per quarter to around $12 per quarter).

The price of water on the temporary market since August 2007 has fluctuated from between around $220 and $1,000 per ML ($0.22 to $1 per kL), with peak prices occurring roughly between August and December. While Lower Murray Water's variable usage charges are within the range of prices on the temporary market, the Commission is concerned that the higher consumption threshold of Lower Murray Water's inclining block applied from 1 October to 31 March runs counter to signals about the cost of water provided by the market.

The Commission has asked Lower Murray Water to provide further justification for its seasonal inclining block tariff, including conservation objectives and the relationship to price patterns on the temporary market.

Level of third tier charges

Third tier usage under inclining block tariff structures typically comprises more discretionary water uses and is thus more responsive to price than consumption within the first and second tiers. Therefore price plays a greater role in signalling supply costs and in balancing supply and demand than it does for the lower blocks. In its December 2007 Water Tariff Structures Review the Commission noted that prices above LRMC may be justified in the context of balancing supply and demand and incorporating the costs of negative environmental or other externalities.

As noted above, Coliban Water, Wannon Water and Western Water are proposing third tier usage charges significantly higher than other businesses and significantly higher than previous levels across the state.

Coliban Water's storages currently hold around 22 GL and are at around 15.9 per cent full. The investment in the Goldfields Superpipe will supply Coliban Water with up to 20 GL of water annually over the regulatory period. With forecast demand for 2008-09 at around 21.9 GL, rising to around 27.4 GL in 2012-13 (not including losses, which totalled around 3.3 GL in 2006-07), the Commission considers it prudent for Coliban Water to adopt prices providing incentives to reduce demand in order to balance demand and supply.

In regard to Wannon Water, both the Glenthompson and Hamilton systems require immediate supply augmentation and continued demand reduction policies to enable supply to meet demand. Therefore a high price for the third tier of Wannon's inclining block tariff in these areas appears justified.

Western Water is forecasting high levels of population growth, leading to a significant increase in water demand over the period, from 11.7 GL in 2008-09 to 14.9 GL in 2012-13. As noted in chapter 7 on demand, the Commission is of the view that Western Water's demand forecasts are reasonable, subject to minor adjustments as determined by the Commission's demand consultants.

Western Water has proposed purchasing up to 11.25 GL of bulk entitlement from Melbourne Water for each year of the regulatory period in order to meet the elevated level of demand, and to allow its storages to recover. Western Water is undertaking only minor supply augmentations over the period. The incremental cost of the purchase of the bulk entitlement amounts to around $1.38 per kL, significantly lower than the proposed third tier price. Given the stated objective of replenishing its major storages, the Commission is of the view that Western Water's proposal for implementing demand reduction strategies is justified.

The third tier prices above $3 per kL proposed by Coliban Water, Western Water and Wannon Water exceed most existing estimates of LRMC and also the incremental costs of supply augmentations undertaken by the respective businesses. However, given the current situations of Coliban Water, Wannon Water and Western Water, the Commission is of the view that their volumetric charges can be justified on the basis of conservation and in order to balance supply and demand in the short run.

Customer impacts and mitigation

As noted above, the Customer Service Code requires businesses to have a hardship policy in place to assists customers who have difficulty paying their bills.

With regard to Lower Murray Water's hardship provisions, the Commission is of the view that the pricing of comparable and complimentary services has no relevance when assessing a customer's capacity to pay. On 11 July 2007 clause 5.4 of the Customer Service Code was amended to provide guidance for businesses in terms of determining a customer's eligibility to have the business's hardship policy applied. Businesses' hardship policies should reflect the changes made to the Code and be published on their websites. The Commission notes that Lower Murray Water's hardship policy is available on its website, but only as part of its customer charter.

9.4.2 Altering the proportion of revenue collected from fixed and variable charges

Price signals

As noted above, the WIRO states that prices should provide customers with appropriate signals to customers about the costs of providing services, and also promote the sustainable use of Victoria's water resources. These principles are often seen as conflicting by businesses, as cost reflective prices based on LRMC suggest a low variable charge, while giving customers incentives to use water efficiently is typically achieved by increasing variable charges.

For businesses increasing the proportion of revenue recovered through variable usage charges, the level of variable charges proposed appears to exceed the LRMC of providing the services and hence may not be cost reflective under normal supply conditions. However, under circumstances where demand exceeds the supply of water, pricing on the basis of short run marginal cost (SRMC) may be consistent with the WIRO principle that prices signal the costs.

Increasing the proportion of revenue collected from variable charges provides a closer link between usage and price, and gives customers stronger incentives to reduce their water consumption. This may be important for businesses facing short term supply constraints, assisting them in balancing supply and demand.

Price elasticity

The Commission considers that the businesses' estimates of elasticity of demand are reasonable, reflecting a low level of elasticity for non-discretionary water use (first tier consumption) and conservative estimates of elasticity for higher levels of water use.

However, given that many customers have already reduced their consumption in response to demand restrictions, their ability to respond to stronger price signals might be limited.

Customer impacts and mitigation

The WIRO requires businesses to take the interests of customers into account when proposing prices. As a result of businesses restructuring their tariffs towards higher volumetric charges, customers for whom the volumetric charge makes up the majority of their bill will face significant price increases upon the implementation of these charges. In particular, tenants (who do not pay fixed access charges for water) and non-residential customers (for whom the volumetric component often makes up the majority of the bill) are likely to have significantly greater increases in their bills than the rest of the customer base.

The restructuring proposals put forward by Coliban Water, Goulburn Valley Water, North East Water, Wannon Water (groups 1,2 and 3 and Dartmoor customers in group 5) and Western Water are likely to have significant impacts on these customer groups.

Grampians Wool Industries, one of Wannon Water's non-residential customers in Hamilton (group 3 for water, group 3 for sewerage) has stated that their business would have substantial difficulty in adjusting to the proposed sudden increase in variable water charges combined with the imposition of trade waste charges. Wannon Water noted that it was working with the customer to assist it in assessing its water and waste water options.

The manner in which businesses are proposing to implement the restructuring of their tariffs will also have a significant impact on the ability of customers to adjust to the new structures. The shorter the time period over which businesses are proposing to restructure tariffs, the more difficult it will be for customers to adjust their behaviour and absorb costs.

Barwon Water, Central Highlands Water, Coliban Water, North East Water, Wannon Water and Western Water in particular have proposed tariff restructuring from 2007-08 to 2008-09 that may result in difficulties for some customers in adjusting to the increase in prices.

North East Water's proposal to introduce uniform fixed access charges for water across its region is not expected to have significant impacts, given that they currently exhibit only a minor variation and will not be subject to significant increases.

The combined effect of Central Highlands Water's restructuring proposals will vary significantly across its customer base. All residential and non-residential customers will be impacted by the increase in fixed access charges. This will have the greatest impact upon customers with low levels of water usage, such as small households.

Generally, for Central Highlands Water customers with both water and sewerage access the impacts of rebalancing will generally not be severe. However, customers for whom the volumetric component makes up only a small portion of their bill will face substantial increases.

Charges for large customers

The Commission notes that Gippsland Water and North East Water are proposing to levy significantly lower variable usage charges for major customers than for residential and other non-residential customers. South Gippsland Water levies a higher variable usage charge for its major customer, Murray Goulburn, than for the rest of its customer base.

The Commission is of the view that where customers are receiving the same service they should be subject to the same prices. North East Water, Gippsland Water and South Gippsland Water should provide an explanation as to why their major customers are subject to different prices to the rest of the customer base.

The Commission has received a number of submissions to this price review expressing concerns about how businesses have allocated costs between residential and non-residential customers, including suggestions that residential customers may be subsidising large non-residential customers. Any non-scheduled prices contained in contracts that were renegotiated, renewed or entered into during the first regulatory period must be consistent with the pricing principles set out in the determination. The businesses must apply these principles in determining non-scheduled prices contained in any future new, renegotiated or renewed recycled water contracts.

The Commission is obliged to ensure that businesses comply with the pricing principles and to follow up any reports of potential non-compliance. In addition to following up any such reports, the Commission will monitor businesses' compliance with the recycled water pricing principles as part of its annual audit processes.

Draft Decision

Inclining block tariff proposals

Inclining block tariff structures are broadly consistent with the WIRO which requires prices to be set to promote the sustainable use of Victoria's water resources. The Commission proposes to approve all of the businesses' inclining block tariff proposals, with the exception of Lower Murray Water's seasonal inclining block tariff.

The Commission proposes not to approve Lower Murray Water's seasonal inclining block tariff on the basis that it does not accurately reflects the costs of providing the service, or provide appropriate signals to customers about using water resources in a sustainable manner.

Lower Murray Water should provide further justification for its seasonal inclining block tariff, including conservation objectives and the relationship to price patterns on the temporary market.

Lower Murray Water should also ensure that its hardship policy is consistent with the requirements of the Customer Service Code and is readily available on its website.

The Commission has some concerns about the level of the third tier usage charges proposed by Coliban Water, Wannon Water and Western Water. However, the Commission considers that they appear warranted on the basis of managing supply and demand.

Altering proportion of revenue collected from fixed and variable charges

The Commission proposes to approve the businesses' proposals for increasing the proportion of revenue recovered from the usage component of their two part tariffs.

The businesses proposals are not inconsistent with the WIRO as they provide customers with incentives to conserve water. However, the Commission has concerns that there may be adverse impacts on some customers if restructuring proposals are not gradually implemented.

Barwon Water, Central Highlands Water, Coliban Water, North East Water, Wannon Water and Western Water are proposing significant restructuring and hence increases in the variable charges in the first year of the regulatory period. These businesses should provide further information on their proposals for mitigating customer impacts, particularly with regard to non-residential customers and tenants.

9.5 Commission's approach to assessing retail sewerage tariffs

Sewerage tariff structures

In its 2007 Water Tariff Structures Review the Commission noted that given the difficulties in metering sewage discharge, the capacity of water businesses to design and implement cost reflective sewerage charges is limited.

Businesses use various proxies to approximate some degree of cost reflectivity. These include using metered water use and cistern based charges as proxies for sewage discharge, and a number of other parameters in the case of Lower Murray Water.[58] Note that given that the marginal costs of providing sewerage services is typically very low, most businesses apply a variable usage component to non-residential customers only.

The Commission has previously concluded that the resulting wastewater tariff structures comply with the WIRO principles.

While a variety of methods are adopted by the businesses to allocate costs across customers the main objective pursued in wastewater charging is revenue adequacy. The businesses' proposals will be assessed by the Commission on this basis and also with reference to the customer impacts of any proposed changes and the ability of customers to understand the tariff structures.

In the 2005 Water Price Review, the Commission suggested that businesses applying cistern based charges to non-residential customers should investigate their removal in the next regulatory period.

In the 2006 Rural Water Price Review, the Commission approved Lower Murray Water's sewerage tariffs (discussed in section 9.6.1). However, the Commission raised concerns about the use of parameters such as cisterns, numbers of rooms and numbers of medical beds and stated that Lower Murray Water should consult with its customers to develop a simple and readily understandable sewerage tariff structure before the next price review.

9.6 Overview of businesses' retail sewerage proposals

For retail sewerage services, most businesses have proposed to levy fixed access charges only for residential customers and two part tariffs containing a variable usage component for non-residential customers (see table 9.6).

East Gippsland Water is the only business to have proposed usage charges for residential customers, and then only for Dinner Plain customers. Barwon Water, Wannon Water (Portland Coast region) and North East Water[59] which previously applied two part tariffs to residential customers have proposed to move to a fixed charge only for residential customers.

All of the businesses excepting Lower Murray Water, North East Water, Western Water and Westernport Water have proposed two part tariffs with a usage component for non-residential customers.

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[58] Lower Murray Water applies cistern factors, room and bed numbers, and a combined load factor/occupancy rate as applicable to its base charges for residential and non-residential customers.

[59] North East Water previously applied volumetric sewerage charges for Wangaratta, Bright, Yarrawonga, Benalla, Myrtleford and Porepunkah customers.

North East Water, Lower Murray Water, South Gippsland Water and Westernport Water are proposing to continue their respective practices of varying sewerage charges for non-residential customers based on the number of cisterns.

The majority of businesses (excepting Barwon Water, Coliban Water and North East Water) also levy fixed access charges for sewerage services for vacant or undeveloped land, although generally at a reduced rate.

Table 9.6 **Proposed retail tariff structures for sewerage services**

			Non-residential		
	Fixed	*Residential usage*	*Cistern*	*Usage*	*Vacant land*
Barwon	✓			✓	
Central Highlands	✓			✓	✓
Coliban	✓			✓	
East Gippsland	✓	✓**a**		✓**a**	✓
Gippsland	✓			✓**b**	✓
Goulburn Valley	✓			✓	✓
GWMWater	✓			✓	✓
Lower Murray	✓		✓**c**		✓
North East	✓		✓		
South Gippsland	✓		✓	✓	✓
Wannon	✓			✓**d**	✓
Western	✓				✓
Westernport	✓		✓**e**		✓

a Usage charges apply only to residential and non-residential customers in Dinner Plain. **b** Usage charge applies for discharge >100 kL over 4 months. **c** Charges based on a cistern factor – the number of cisterns divided by 5. **d** Usage charges apply only to non-residential customers with water consumption >750 kL per annum. **e** Charges apply for >2 cisterns

Restructuring of sewerage tariffs

In terms of restructuring proposals put forward by the businesses for the 2008-13 regulatory period:

- Barwon Water is proposing to remove its variable sewerage disposal charge for residential customers
- North East Water is proposing to reduce fixed sewerage charges in order to recover more revenue from its water customers and remove its variable sewerage charge for all non-residential customers and residential customers in Wangaratta, Bright, Yarrawonga, Benalla, Myrtleford and Porepunkah

- Wannon Water is grouping customers into five separate groups, each with its own particular price path and
- Central Highlands Water, East Gippsland Water, Goulburn Valley Water are proposing to bring fixed sewerage charges across their districts into line over the regulatory period.

Barwon Water is proposing to move from a two part tariff to a single fixed charge for residential customers, while maintaining its two part tariff for non-residential customers. In order to recover revenue that would otherwise have been obtained via sewerage disposal charges, Barwon Water is proposing to increase residential fixed sewerage charges by significantly more than non-residential charges over the regulatory period.

Residential fixed charges are proposed to increase significantly in first year (82.4 per cent), with smaller increases yearly thereafter (10.5 per cent). Non-residential fixed charges are proposed to increase by 10.5 per cent per annum over the period. Variable sewerage charges for non-residential customers are proposed to decrease by 0.2 per cent from 2007-08 to 2008-09, then increasing by 10.5 per cent for each subsequent year of the regulatory period.

North East Water is proposing to remove the variable sewerage charge that previously applied to non-residential customers and some residential customers. It is also proposing to reduce its fixed sewerage charges over the regulatory period to reduce the amount of revenue recovered from fixed charges and give customers more control over their bills.

North East Water currently charges a range of fixed sewerage charges for different towns across its region. It is proposing to continue this practice, however, the grouping of towns facing the same prices is proposed to be altered. The purpose of this reallocation of costs is to more accurately reflect the costs of service provision for each area.

North East Water is also proposing to continue levying cistern based charges (discussed in section 9.6.1).

Wannon Water is proposing significant restructuring of its tariffs in the 2008-13 regulatory period, grouping customers into five separate groups for water services and five separate groups for sewerage customers (note that the groups for water and sewerage are different). Each group has a different proposed price path based on the service requirements of the area. Current residential and non-residential volumetric tariffs applied in Heywood, Portland and Port Fairy will cease to be applied.

Some fixed sewerage charges are proposed to more than double over the period, while others will experience modest increases. By the end of the regulatory period, Wannon Water's sewerage charges will be roughly uniform across the region, being in the range of between $613.56 and $653.19 at 2012-13 (other than for Group 2 customers at $514.97). The percentage increase in prices over the period ranges from 32.6 per cent to around 152.1 per cent, with the greatest increases occurring for customers currently on the lowest charges.

Table 9.7 **Proposed retail sewerage charges 2012-13**
($ 1 January 2007 prices)

	Residential		Non-residential	
	Fixed charge $ p.a.	*Usage charge $ per kL*	*Fixed charge $ p.a.*	*Usage charge $ per kL*
Barwon	500.54		303.23	1.70
Central Highlands	615.14		615.14	0.89
Coliban[a]	509.17		472.57	0.62
East Gippsland	570.00	3.47[b]	570.00	3.47[b]
Gippsland	768.59		768.59	3.66[c]
Goulburn Valley	339.31		339.31	1.19
GWMWater	346.36		346.36	0.54
Lower Murray[d]	375.53		375.53	
North East [e]	155.31		155.31	
South Gippsland [f]	374.66		374.66	1.42
Wannon - Group 1	652.38		652.38	g
Wannon - Group 2	514.97		514.97	g
Wannon - Group 3	613.56		613.56	g
Wannon - Group 4	621.14		621.14	g
Wannon - Group 5	653.19		653.19	g
Western	440.35		440.35	
Westernport	481.01		481.01[h]	

[a] Excludes sewerage tariffs relating to small towns. [b] Usage charges apply only to Dinner Plain customers. [c] Depending on type of development/business customers are charged at either 95, 75, 50 or 25 per cent of the usage charge. Major clients may be charged a different usage charge, ranging from $1.01 to $3.90 per kL. [d] Plus an environmental levy of $15.24. Fixed charges are multiplied by a cistern factor and/or a load/occupancy factor according to customer class. [e] Tariff is for Wangaratta, Yarrawonga, Benalla, Wodonga and Baranduda regions. A cistern charge of $46.07 per cistern applies to non-residential customers. [f] Excludes sewerage tariffs relating to new town schemes. South Gippsland Water levies a cistern charge on non-residential customers, which increases as the number of cisterns increases (up to 36). [g] For large non-residential customers with water consumption greater than 750 kL per annum, discharge factors apply to determine a usage charge. [h] Non-residential customers with two or more cisterns are charged $174.73 per cistern.

Central Highlands Water is proposing to bring fixed sewerage charges across its districts into line over the regulatory period. Central Highlands Water currently applies a uniform fixed access charge for sewerage across all systems apart from Clunes and Beaufort.

Clunes charges are slightly lower than the predominant access fee due to historic reasons. Beaufort charges are significantly lower than those for the main customer base but will be increased after an upgrade to the Beaufort sewerage treatment plant during the period. Fixed access charges for sewerage in Beaufort are proposed to decrease by 2.7 per cent ($8.37) from 2007-08 to 2008-09, increase by 5.6 per cent ($16.46) from 2008-09 to 2009-10 and then increase by $100.88 each year for the final three years of the regulatory period.

East Gippsland Water is proposing to move to common sewerage pricing in aid of simplify the charging structure across the region, reducing administration costs and to make service delivery comparisons more meaningful. The proposal will also achieve consistency with water tariffs which are currently uniform.

East Gippsland Water is proposing to adjust tariffs gradually over the regulatory period in order to minimise customer impacts. As noted by East Gippsland Water, the greatest impact of moving to common sewerage pricing will be on customers currently facing the lowest charges. For example, Bairnsdale customers (around one third of the customer base) will undergo a price increase of 62 per cent or $217.14 for fixed sewerage charges over the course of the regulatory period.

Goulburn Valley Water is proposing to equalise its fixed access charges for sewerage gradually over the course of the regulatory period. This is in aid of simplification and to make charges readily understandable and stable over time.

9.6.1 Allocation of costs

As noted above, there are a variety of ways in which businesses can allocate the fixed costs of the provision of sewerage services among their customers.

Barwon Water, Central Highlands Water, Coliban Water, Gippsland Water, Goulburn Valley Water, GWMWater, South Gippsland Water and Wannon Water are proposing to continue applying variable usage charges to non-residential customers. The volume of sewage discharged may be metered for large customers or trade waste customers, but are typically estimated based on the volume of water consumed.

Central Highlands Water, Gippsland Water, Goulburn Valley Water and GWMWater levy the same fixed charges for residential and non-residential customers and also apply a variable usage charge to non-residential customers. The implication of this is that non-residential customers with low discharge face significantly higher prices than residential customers with similar levels of discharge.

North East Water, South Gippsland Water and Westernport Water are proposing to continue to apply cistern based charges to non-residential customers. Lower Murray Water is proposing to continue to apply cistern based charges to residential and non-residential customers.

The majority of businesses (excepting Barwon Water, Coliban Water and North East Water) also levy fixed access charges for sewerage services for vacant or undeveloped land, although generally at a reduced rate.

North East Water is proposing to continue to apply a flat per-cistern charge to non-residential customers, with charges falling roughly by half from 2007-08 to 2008-09, then remaining constant over the period ($94.45 to $46.07 per cistern in 1 January 2007 dollars).

South Gippsland Water is proposing to continue to apply a schedule of eight cistern charges based on the number of cisterns to non-residential customers (beginning with $121.69 for 1-2 cisterns, up to $3,315.77 for >35 cisterns in 2012-13 in 1 January 2007 dollars).

Westernport Water is proposing to continue to apply a flat per-cistern charge to non-residential customers with two or more cisterns ($174.73 per cistern in 2012-13 in 1 January 2007 dollars).

Lower Murray Water is proposing to continue to apply cistern factors, room and bed numbers, and a combined load factor/occupancy rate as applicable to its base charges for residential and non-residential customers.

Lower Murray Water currently applies fixed charges to residential and non-residential customers that vary according to customer class. The applicable charges are derived from the 'base charge' multiplied by either a cistern factor or a cistern factor and a factor derived from room or bed numbers, a load factor and an occupancy rate. Charges depend upon the number of rooms for hotels, motels or guesthouses, the number of powered sites for caravan parks and the number of medical/surgical beds and the number of nursing psychiatric and geriatric beds for hospitals or nursing homes.

The cistern factor is defined as the number of cisterns divided by five (with a minimum of 0.5 for vacant land and 1 for other customers). It is not clear from Lower Murray Water's plan how the load factors or occupancy rates for different customer classes are determined.

Lower Murray Water also identifies an 'environmental levy' separately in its sewerage charges. This levy reflects the environmental contribution made by the water businesses consistent with the requirements of the Water industry Act 1994. Lower Murray Water has stated that the environmental levy is designed to reflect the environmental impacts of providing water.

9.7 Commission's assessment

The businesses are not proposing significant restructuring of sewerage tariffs for the 2008-13 regulatory period. Given the lack of metering of sewage discharge, the capacity of water businesses to design and implement cost reflective sewerage charges is limited. Therefore the Commission's assessment of the businesses' proposals is largely based around the customer impacts of any changes proposed.

The Commission has concerns about the implementation of some of the businesses' tariff restructuring proposals. Where tariff restructuring is proposed to take place over the course of a single year, or a few years, rather than spread evenly over the period, customers may have difficulties in absorbing price increases and adjusting their behaviour in response to the new tariffs. The

Commission also notes that there is no imperative for price increases to fall precisely when capital expenditure is undertaken.

In order to minimise customer impacts Central Highlands Water should consider implementing smooth year on year increases to fixed sewerage infrastructure charges for Beaufort customers.

Barwon Water should consider implementing its tariff restructure more gradually over the period rather than from 2007-08 to 2008-09.

Goulburn Valley Water's fixed sewerage access charges currently exhibit only minor variation across customers and so the customer impacts of implementing uniform tariffs will not be significant.

9.7.1 Allocation of costs

The businesses use various proxies to approximate some degree of cost reflectivity. However, the main objective pursued in sewerage pricing is revenue adequacy and a variety of methods are adopted by the businesses to allocate costs across customers. The Commission has previously concluded that the resulting wastewater tariff structures comply with the WIRO principles.

The WIRO requires that customers be able to readily understand prices or the manner in which they are determined. The Commission has concerns about Lower Murray Water's sewerage charges based on cisterns, room or bed numbers, load factors and discharge factors. Lower Murray Water's sewerage tariff structure is complex and may not be able to be readily understood by customers, thereby diminishing the effectiveness of any price signals to customers regarding the sustainable use of Victoria's water resources.

Lower Murray Water's proposal to combine the load factor and occupancy rate into a single figure will not have an impact on prices or the complexity of its tariff structure.

Preliminary assessments by the Commission indicate that the customer impacts of Lower Murray Water, North East Water, South Gippsland Water and Westernport Water removing cistern charges for non-residential customers would not be severe. If revenue formerly obtained through cistern (and other) charges was to be recovered via fixed sewerage charges from the general customer base, the businesses' fixed sewerage charges would undergo increases in the order of $5 to $7 per annum greater than those proposed in their Water Plans for the regulatory period.

With regard to non-residential variable charges, the Commission is concerned that for those businesses that levy the same fixed charges for residential and non-residential customers, non-residential customers may face significantly higher charges for essentially the same level of service. The Commission notes that Wannon Water does not apply volumetric charges for discharge volumes of less that 750 kL per annum (where volume is determined via discharge factors).

The Commission also has a number of concerns in relation to the environmental levy charged by Lower Murray Water.

The Water Industry Act 1994 requires water businesses to pay an environmental contribution each financial year into the consolidated fund. The purpose of the contribution is to fund initiatives that seek to promote the sustainable management of water or address adverse water-related environmental impacts.

Lower Murray Water's proposed 'environmental levy' is an attempt to recover the environmental contribution through a customer based charge. It does not represent a charge for the provision of a service. Further, the environmental levy is a fixed nominal amount and does not vary with changes in customer numbers. Therefore, the recovery of the contribution through a customer based charge may not accurately reflect the cost incurred by Lower Murray Water, and may lead to over or under recovery of costs.

Lower Murray Water should treat the environmental contribution as an overhead cost and incorporate it into its general tariffs. The Commission also notes that this advice is the same as that provided to urban water businesses before the 2005 Water Price Review.

Draft Decision

The Commission proposes to approve the businesses' restructuring proposals for retail sewerage charges as they are not inconsistent with the WIRO.

However, Central Highlands Water should consider amending its price path such that Beaufort customers are subjected to smooth year on year price increases, rather than a small decrease followed by a small increase and then three substantial increases. Barwon water should also consider implementing its tariff restructure more gradually over the period rather than from 2007-08 to 2008-09 to minimise customer impacts.

Lower Murray Water should amend its tariff schedule to remove its environmental levy. It should treat the environmental contribution as an overhead cost and incorporate it into its general tariffs.

10 RECYCLED WATER

10.1 Introduction

A number of factors determine the price 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).

While regional businesses are not subject to explicit recycling targets, there is a general obligation in their Statements of Obligations to optimise the use of recycled water.[60] Businesses are also subject to Environment Protection Authority (EPA) licensing conditions for the discharge of treated wastewater.

10.2 Commission's approach

In the 2005 Urban Water Price Review Decision, the Commission did not approve maximum prices for recycled water. Instead, it suggested that businesses should be encouraged to recover through charges as much of the costs of supplying recycled water as they can, noting that prices would generally be bounded by prices for alternative water supplies (such as potable water) and customers' willingness to pay. The Commission outlined a set of pricing principles to guide businesses in setting recycled water prices. Recycled water prices should be set so as to:

- maximise revenue earned from recycled water services having regard to the price of any alternative substitutes and customers' willingness to pay
- cover the full cost of providing the service
- include a variable component.

However, new government initiatives and policies relevant to recycled water use since the 2005 Review require reconsideration of these principles.

10.2.1 Recycled water provision in new developments

As noted in the Commission's *2008 Water Price Review Framework and Approach Paper* (released December 2006), the Government has, since the 2005 Urban Water Price Review, instituted a number of initiatives and policies that directly

[60] Clause 15.1 of the Statement of Obligations.

affect recycled water. These include changes to the Statement of Obligations (including new obligations to develop strategies to balance supply and demand and set conservation targets) and a new power for businesses to mandate recycled water zones.[61]

The Commission outlined its proposed treatment of recycled water prices for the 2008 Price Review in its *Framework and Approach Paper* and its *2008 Water Price Review Guidance Paper* (released March 2007). The Commission noted that, since businesses are now able to compel certain customers to take up recycled water services, the principles outlined in the 2005 Urban Water Price Review may no longer be appropriate. In particular, the principle of allowing businesses to maximise revenue from recycled water services should no longer be applied.

The Commission considers that for the forthcoming regulatory period, prices for recycled water services provided through third pipe systems to residential customers be subject to the annual price approval process. Since the provision of recycled water through third pipe systems is a relatively homogenous service, the inclusion of recycled water services in the tariff schedule is the most appropriate form of regulation, as is the practice for other water and sewerage services.

In setting prices for recycled water, businesses will need to take account of the cost drivers of service provision, include a variable component to provide signals about costs and sustainability, and ensure prices conform to the regulatory principles set out in the WIRO. Businesses would 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 have regard to prices of recycled water substitutes (such as potable water). In setting recycled water prices, businesses should consider whether pricing arrangements might create incentives for inappropriate substitution of recycled water for potable water.

For developments completed during the regulatory period, pricing 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 (one-off) customers (see section 1.2.2) and the WIRO pricing principles.

10.2.2 Major recycled water customers

Currently most recycled water sales by the non-metropolitan businesses are made under contract to non-residential users, including golf courses, bowling clubs and other sporting grounds, school grounds, local government parks and gardens, and agricultural irrigation. Demand for recycled water has increased in recent years as

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[61] From 9 October 2006, clause 56 of the Victoria Planning Provisions allows water businesses to mandate third pipe systems for the provision of recycled water for identified areas to assist in balancing supply and demand.

a result of water restrictions and concerns about improving supply security in the current extended drought conditions.

Where recycled water services are provided to large non-residential or unique (one-off) customers, the Commission has suggested that businesses adopt a principles approach to setting prices. In its previous guidance, the Commission proposed that pricing principles should ensure that recycled water prices are set so as 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 balance of supply and demand)
- include a variable component.

For customers on contracts, prices should be reviewed when contracts are renewed to ensure consistency with the pricing principles and adjusted if necessary.

10.2.3 Allocation of costs and recovery of revenue shortfalls

In determining the allocation of wastewater treatment costs among wastewater dischargers and recycled water customers, the Commission noted, in the 2007 Tariff Structures Review,[62] that the costs of treating trade waste to a level above that required for safe discharge into the environment should be borne by the beneficiaries of the treated water to give these users accurate signals about their use of recycled water. Pricing recycled water below its marginal cost (including externalities) would create incentives for excessive use of recycled water, with shortfalls recovered from other customers.

In the 2005 Urban Price Review Decision, the Commission recognised that there may be some cases where businesses have proposed to set prices that do not recover the full costs of providing recycled water services. It stated that the basis on which any expenditure or revenue should be recovered from customers should have regard to the drivers or beneficiaries of the proposed project. The principal drivers for businesses to undertake recycling projects were broadly classified as:

- least cost — water recycled as a least cost alternative to treating and discharging waste or complying with discharge standards
- specified obligations and demand supply balancing — water recycled to comply with specified recycling obligations set by government or to maintain the balance between supply and demand
- discretionary — water that is recycled to meet social, environmental or economic objectives that are not directly related to specified government targets.

The businesses should identify the drivers for their recycling projects. The key driver for a particular project will determine the most appropriate basis for recovering the project's costs. However, in some cases, particularly for projects

[62] Essential Services Commission 2007, Water Tariff Structures Review Final Report, December.

with multiple drivers, the key driver may be difficult to identify. The implications of each main driver for cost recovery are discussed below.

Least cost

Where water is recycled as a least cost alternative to treating and disposing of effluent or complying with discharge licence standards, recycling should be pursued by businesses and the costs met on a ‘polluter pays’ basis through sewerage and trade waste charges.

However, where third parties can use, and are willing to pay for, recycled water, businesses may be able to derive some revenue from the beneficial reuse of treated effluent. Any such revenue should be used to offset the fixed charges levied on sewerage and trade waste customers. Volumetric sewerage and trade waste charges should continue to provide incentives for efficient discharge levels based on the ‘polluter pays’ principle and to provide appropriate conservation signals in sewerage usage charges.

Specified obligations

As noted in the Commission’s March 2007 *Guidance Paper*, where businesses invest in recycled water initiatives in order to meet Government obligations for recycling or to balance supply and demand, they may be able to recover the full cost of providing the service from recycled water charges. Revenue shortfalls may occur, particularly where all opportunities to pursue commercial recycling projects have been exhausted.

Where the beneficiaries of these projects are water customers — through improved availability or security of potable water supplies — it may be appropriate to recover any revenue shortfall from the general customer base through variable water charges. Doing so would increase the price of potable water and thereby strengthen incentives for customers to use water sustainably and enhance the commercial viability of recycled water projects.

Discretionary

Recycled water projects driven by customer demand should have no revenue shortfall because prices should cover the project’s costs. Other discretionary projects may be undertaken to achieve broad policy objectives or for environmental or social reasons. Regional businesses have a general obligation in their Statements of Obligations to identify opportunities to substitute fit for purpose recycled water for potable water supplies and to promote the sustainable use of recycled water.

Recovery of revenue shortfalls

In some cases, the use of recycled water can generate positive externalities from managing supply and demand or improving environmental values. To the extent that the broader customer base benefits from the availability of recycled water, there may be a case for spreading an appropriate share of treatment costs across all customers. In such cases, businesses should consult with affected customers about their willingness to pay for the benefits of increased recycling.

Where a business does not propose to fully recover the costs associated with a recycled water project, it 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.

10.3 Overview of business proposals

Most businesses propose to provide recycled water to third parties over the regulatory period. Businesses have proposed to undertake 111.8 million of capital expenditure on additional recycling projects over the regulatory period (see table 10.1)..

Table 10.1 **Proposed capital expenditure on major recycling projects, 2008–13**
$ million in January 2007 prices

	Project	*Capital expenditure*
Barwon	Northern Water Plant and other recycled water facilities	79.0
Central Highlands	Ballarat recycled water scheme	1.5
Coliban	Recycled water pipeline – Harcourt Valley	17.0
	Third pipe systems – Jackass Flat, Huntly	2.5
Lower Murray	Koorlang Wastewater Treatment Plant treatment upgrade	5.0
Wannon	Recycled water delivery infrastructure	1.5
Western	Melton recycled water scheme	5.3

Note: Reported values and timing associated with projects may change in response to this Draft Decision (see chapter 5).

Of the urban businesses, only Western Water currently supplies recycled water to residential customers through reticulated third pipe systems. Coliban Water and Westernport Water are proposing to develop the capacity to provide reticulated recycled water during the regulatory period.

Only Western Water has proposed to include recycled water prices in its tariff schedule. The majority of businesses providing recycled water services do so to large unique or non-residential customers and have proposed to continue using pricing principles to determine charges on a case-by-case basis (see table 10.2).

Wannon Water set out a number of principles, which include:

- seasonal charges such that customers face higher charges in the summer when demand is at its peak, reflecting the costs of storing water to meet peak demand
- a scarcity pricing regime where prices faced by customers depend on volumes in Wannon Water's recycled water storages.

North East Water proposed a lower charge for off-peak (winter) customers. Western Water also proposed seasonal volumetric prices for recycled water purchased outside contracts, with a higher price for water purchased between November and March.

Table 10.2 **Recycled water – proposed provision and pricing**

	Customer group		*Pricing approach*	
	Residential	*Large unique/non-residential*	*Pricing principles*	*Annual approval of prices*
Urban businesses				
Barwon		✓	✓	
Central Highlands		✓	✓	
Coliban		✓	✓	
East Gippsland		✓	✓	
Gippsland	✓	✓	✓	
Goulburn Valley		✓	✓	
GWMWater		✓	✓	
Lower Murray		✓	✓	
North East		✓	n.p.	
South Gippsland		✓	✓	
Wannon		✓	✓	
Western	✓	✓	✓	✓
Westernport	✓	✓	✓	
Rural businesses				
FMIT		n.a.	n.a.	
Lower Murray		n.a.	n.a.	
Goulburn-Murray		n.a.	n.a.	
GWMWater		✓	✓	
Southern Rural		✓	✓	

n.a. Not applicable. n.p. Not provided.

Western Water noted that revenue shortfalls from the provision of recycled water projects would be met from the general customer base. Wannon Water also noted that some treatment or supply costs may be recovered from the wider customer base where the use of recycled water generates community-wide benefits.

Of the rural businesses, GWMWater provides recycled water services to large unique customers, while Southern Rural Water provides recycled water to irrigation customers via the Werribee Irrigation District Recycled Water Scheme (7431 GL in 2006-07). Southern Rural Water has noted that its indicative tariffs for the Werribee Irrigation District Recycled Water Scheme are yet to be developed.

10.4 Commission's assessment

10.4.1 Cost allocation

Most of the regional businesses indicated that they would recycle water as a least cost means of treating and disposing of waste to meet EPA discharge licence requirements. As previously noted, most of the costs related to least cost recycling projects should be reflected in sewerage and trade waste charges (section 11.2.3).

Many businesses' proposals were not detailed enough to enable the Commission to identify the extent to which they have appropriately allocated the costs not recovered from recycled water customers to sewerage and waste charges. However, Lower Murray Water stated that the costs of recycling are included in disposal costs for water and wastewater products.

Four businesses have adopted discretionary targets for recycling, identifying sustainability objectives and substitution for potable water as the main drivers of recycling initiatives. Regional businesses proposing recycling targets are Barwon Water (25 per cent by 2015), Southern Rural Water (20 per cent by 2010), Wannon Water (45 per cent by 2015), and Western Water (100 per cent by 2013). Coliban Water identified water security as the driver for its recycled water scheme.

As noted in section 10.2.3, the Commission expects prices for discretionary recycled water initiatives to reflect the full costs of providing those services (excluding the costs incurred in the provision of sewerage and trade waste services), except where positive externalities from the availability of recycled water (such as improved water supply security) benefit the broader customer base.

Barwon Water stated that recycled water prices would cover the full cost of service provision and that it did not consider cross-subsidising recycled water from the general customer base to be appropriate.[63] Wannon Water stated that the costs of treatment up to discharge standard would be allocated to sewerage and trade waste customers on the basis of 'polluter pays' with the costs of further treatment and supply to be allocated on the basis of 'beneficiary pays', except when there are clear benefits to the broader customer base and there is customer support for sharing some of the costs. However, Wannon Water did not give details of any assessment of costs and benefit or of the allocation of costs for current recycling projects. Western Water stated that any revenue shortfalls are met from the broader customer base but did not give details of the extent of these shortfalls.

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[63] Barwon Water 2007, *2008 Water Plan Final*, October, p. 131.

Southern Rural Water did not state how the costs associated with discretionary recycled water projects were allocated.

In response to this Draft Decision, the Commission requires Coliban Water, Southern Rural Water, Wannon Water and Western Water to specifically identify the magnitude of any revenue shortfall associated with discretionary recycling projects, how these shortfalls are proposed to be recouped, and the extent to which customers have been consulted on their willingness to pay for the benefits of greater recycling.

Wannon Water proposed to charge non-residential sewerage and trade waste customers a charge for high salt loads, to recover the cost of treating effluent to a standard suitable for reuse, when there is a demand for re-use of that water. The Commission considers that the costs of treating sewerage and trade waste to a level above that required for safe discharge into the environment should be borne by the beneficiaries of the treated water to give these users accurate signals about their use of recycled water. [64] The proposed salt charge appears inconsistent with the Commission's pricing principles and also with Wannon Water's own principles requiring 'beneficiary pays' for treatment beyond discharge standard. Therefore the Commission proposes not to approve the proposed salt charge for trade waste customers (see chapter 11) or the associated recycled water charges without evidence that the allocation of costs complies with the pricing principles.

10.4.2 Pricing

Most businesses propose to set recycled water prices according to a set of pricing principles. Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, South Gippsland Water, and Westernport Water have adopted the principles set out by the Commission in the 2005 Water Price Review Decision. Wannon Water has formulated a more detailed set of principles – its principles are largely consistent with those set out in this Draft Decision.

While North East Water did not list the principles it used to set recycled water prices, its pricing arrangements appear consistent with the principles set out by the Commission in the 2005 Water Price Review Decision.

Six businesses proposed specific prices for recycled water – Coliban Water, North East Water, Southern Rural Water, Western Water, and Westernport Water – ranging from $215–320 per ML for Class B water. Where specific prices were proposed by businesses, they were generally related to treatment costs or the price of alternatives. Westernport Water stated that indicative prices were based on treatment costs although no cost calculations were provided. Several businesses proposed to calculate recycled prices as a percentage of the price of an alternative water source:

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[64] Essential Services Commission 2007, Water Tariff Structures Review Final Report, December.

- Coliban Water proposed to charge an access fee equal to the fixed charge for metered urban water supply and to set the volumetric rate at 75 per cent of the non-residential volumetric charge
- North East Water proposed that the price for premium (Class A) recycled water be set at 50 per cent of the potable water price for major customers not on ongoing contracts and the price for general reuse (Class C) water be set at 30 per cent of the potable water price and $50 per ML for off-peak (winter) use
- Western Water proposed that its Class A variable price be set equal to the lowest tier potable water variable charge.

The Class A variable price proposed by Western Water applies to recycled water supplied to residential customers through reticulated third pipe systems. As the price proposed for this supply is a variable charge and is related to the price of the relevant substitute, the Commission plans to approve the proposed price.

The proposals for seasonal and scarcity pricing reflect storage costs, including the costs of expanding storage capacity, and are therefore consistent with the pricing principles. Some contracts for recycled water provision are awarded to major customers following an auction or tender process. These processes result in contract prices that reflect customer willingness to pay.

Since the prices proposed by businesses include a variable charge to provide incentives for efficient and sustainable use of recycled water, and the level of prices is related to treatment costs, the price of substitutes and/or customer willingness to pay, the Commission considers that they are consistent with the principles outlined in section 10.2.1.

Several businesses did not explain the basis by which they propose to determine recycled water prices –Lower Murray Water, Southern Rural Water, and Western Water. These businesses should adopt the pricing principles set out in section 10.2.1.

The Commission has proposed that prices for recycled water services provided to large non-residential or unique (one-off) customers under contract should be set according to the same pricing principles as apply to other recycled water customers.

The Commission has received a number of submissions to this price review expressing concerns about how businesses have allocated costs between residential and non-residential customers, including suggestions that residential customers may be subsidising large non-residential recycled water customers. Any non-scheduled prices contained in contracts that were renegotiated, renewed or entered into during the first regulatory period must be consistent with the pricing principles set out in the determination. The businesses must apply these principles in determining non-scheduled prices contained in any future new, renegotiated or renewed recycled water contracts.

The Commission is obliged to ensure that businesses comply with the pricing principles and to follow up any reports of potential non-compliance. In addition to following up any such reports, the Commission will monitor businesses' compliance with the recycled water pricing principles as part of its annual audit processes.

Draft Decision

The Commission proposes to approve the price proposed by Western Water to be charged for Class A recycled water supplied to residential customers through reticulated third pipe systems.

For new third pipe developments completed during the regulatory period, businesses should apply pricing principles to determine the prices charged and then add these prices to the tariff schedule for approval during the annual price approval process. Prices for recycled water services provided to large non-residential or unique (one-off) customers under contract should be set according to the same pricing principles as apply to other recycled water customers.

The Commission proposes not to approve Wannon Water's proposed recycled water charges based on charging trade waste customers an additional salt charge to treat the effluent to a standard suitable for reuse without evidence that the allocation of costs complies with the pricing principles.

The Commission proposes to approve the pricing principles outlined in Water Plans, or otherwise advised to the Commission, by Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, South Gippsland Water, Wannon Water, and Westernport Water provided the principles are modified to reflect the Commission's revised principles set out in this Draft Decision. The revision would require removal of references to maximising revenue earned from recycled water services.

The following businesses – Lower Murray Water, North East Water, Southern Rural Water, and Western Water – are required to reflect the following principles in their tariff schedule:

Prices should be set so as 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 balance of supply and demand)
- include a variable component.

Where a business does not propose to fully recover the costs associated with recycled water, it 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.

11 TRADE WASTE

11.1 Introduction

Trade waste involves the discharge of waste other than normal domestic sewage into the sewerage system. Customers seeking to discharge trade waste into the sewerage system must obtain the consent of the relevant water business. The regional businesses establish acceptance limits for trade waste, which depend in part on individual treatment plant capabilities. Waste that does not fall within acceptance limits, for example, due to high concentrations of particularly harmful contaminants (such as heavy metals or toxic substances), must be pre-treated by customers prior to discharge into the sewer.

Businesses are obliged under their Statements of Obligations to develop policies to manage trade waste to protect their sewerage systems, safeguard their workers' health and safety, minimise negative environmental impacts, and improve the quality of trade waste entering sewerage systems. The Environment Protection Authority (EPA) is responsible for licensing sewerage treatment discharges and thus has a key role in determining the cost of treating and disposing of trade waste.

The Department of Sustainability and Environment (DSE) commenced a state-wide review of trade waste management in December 2005. The Victorian Competition and Efficiency Commission's (VCEC) Draft Report recommended finalisation of the review 'within twelve months, clarifying accountabilities and regulatory arrangements, with scope for consideration of the use of market instruments to continue beyond this date'.[65] The outcome of the review may have implications for the basis on which trade waste charges should be set in future.

Trade waste is subject to separate charges to normal sewerage charges. The urban businesses take a variety of approaches to trade waste pricing. Trade waste charges are often 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). In the case of the regional businesses, charges and discharge conditions for trade waste customers with particularly large or unique loads are sometimes determined on a case-by-case basis.

Trade waste charges typically comprise:

- fixed one-off and annual fees, such as application and agreement fees based on customer risk classes and discharge volumes

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[65] Victorian Competition and Efficiency Commission 2007, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector*, draft report, December, draft recommendation 5.4.

- variable charges based on volume and strength of trade waste discharge, with the latter typically only applying to major customer categories (see table 11.1).

Table 11.1 **Approach to trade waste charges**
Urban businesses

	Charging Components							
			Pollution load based charges					
	Annual fixed	*Flow*	*BOD/COD*	*SS*	*N*	*TOS*	*TDS*	*Other*
Barwon	✓	✓	✓	✓	✓	✓		Phosphorous
Central Highlands	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	
Coliban	✓	✓	✓	✓	✓			Phosphorous
East Gippsland	✓	✓	✓	✓				Phosphorous
Gippsland	✓	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	
Goulburn Valley	✓**a**	✓	✓		✓			Phosphorous, sodium
GWMWater	✓**a**	✓	✓	✓	✓		✓	
Lower Murray	✓	✓		✓				Organic load
North East		✓	✓	✓	✓	✓	✓	Phosphorous, ammonia, sodium, oil and grease, pH
South Gippsland	✓	✓	✓	✓	✓	✓		Cistern charges. Oil and grease, sodium
Wannon	✓	✓	✓	✓			✓	Ammonia
Western		✓	✓	✓	✓	✓		Phosphorous, heavy metals, arsenic
Westernport		✓						Greasy waste, cartage

Notes: Most businesses also charge an initial application fee. **BOD** Biochemical oxygen demand. **COD** Chemical oxygen demand. **SS** Suspended solids. **N** Nitrogen. **TOS** Total oxidised sulphur. **TDS** Total dissolved solids (salt). **n.p.** Not provided [a] Fixed charges apply to minor trade waste customers.

Westernport Water noted that it does not have any trade waste customers as they are traditionally defined in the water industry, but instead charges customers for a greasy waste service comprising a volumetric charge, a minimum charge and a cartage fee.

In the 2005 Urban Water Price Review, the Commission generally supported the inclusion of trade waste services in the pricing schedule. However, it also noted that where trade waste services are unique in nature (for example, due to discharge strength or volume), it may be appropriate for prices to be set on a case-by-case basis with reference to pricing principles included in a business's Determination.

11.2 Commission's approach

The Commission highlighted, in the 2005 Price Review, that trade waste 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.

A number of issues relevant to trade waste pricing are discussed below.

11.2.1 Measurement of LRMC

Charges that reflect the long-run marginal cost (LRMC) of disposal will promote efficiency in water use and discharge decisions. However, the efficiency benefits of cost-reflective pricing must be balanced against the complexity of estimating LRMC and the practical difficulties involved in designing and implementing cost-reflective tariff schedules. In particular, accurately measuring pollution loads can be difficult and there are questions about the extent to which risk ranking, volume and pollutant load parameters drive costs.

Another important factor in implementing cost-reflective pricing is the extent to which customers can understand and respond to price signals. Where trade waste customers are unable to respond appropriately to changed price signals, customer impacts could be substantial and would need to be addressed. Stronger price signals could, however, encourage technological innovation to reduce pollution loads.

11.2.2 Allocation of costs among customers

Where variable charges based on LRMC do not fully recover the cost of providing trade waste services, the remaining costs must be recovered through fixed charges. There are three important issues in determining how the fixed costs of the sewerage collection, treatment and disposal system are allocated among customers.

The first issue involves determining the proportion of revenue that should be recovered from trade waste services relative to sewerage services. Since trade waste and sewerage services are generally provided through common infrastructure assets, clearly separating trade waste costs from standard sewerage collection, treatment and disposal costs is not feasible. For an efficient allocation of costs, revenue received from trade waste customers should be greater than the costs that would be avoided by not providing trade waste services, and less than the stand alone cost of collecting, treating and disposing of trade waste. Allocating costs within these boundaries ensures that trade waste customers would not be subsidised by other customers, and would not face an incentive to pre-treat waste when it would be less costly to discharge to the sewer. Further, it is desirable to ensure that there is parity between charges for domestic sewerage customers and trade waste customers that have the same volume and strength of waste.

Second, the businesses need to determine how to allocate the fixed costs recovered through trade waste charges among their individual trade waste customers. An efficient allocation of costs requires that the revenue received from each customer is greater than the costs avoided by not servicing that customer, and less than the stand alone cost of serving the customer.

The third issue concerns the extent to which trade waste customers — rather than other customers, such as recycled water customers or general water customers — should bear the costs of treating trade waste to standards that are fit for reuse. To ensure efficient cost allocation, the costs of treating trade waste to a level above that required for safe discharge should be borne by the beneficiaries of the treated water to give these users accurate signals about their use of recycled water (see chapter 10).

11.2.3 Differences in tariff structures

The structure and level of trade waste charges varies significantly across the sector (table 11.1). The Commission has previously taken the position that it is not appropriate to require all businesses to adopt the same charging parameters in their trade waste charges, or to apply exactly the same standards for discharge, given differences in cost structures, EPA obligations and customer profiles. Where differences in tariff structures and in the level of charges reflect different treatment and disposal costs among regions, incentives for efficient water use, waste discharge and location decisions would be improved.

However, much of the variation in trade waste pricing structures appears to reflect historical factors rather than cost differentials or differences in trade waste composition or load parameters. The Commission noted in its 2005 Price Review Draft Decision that it would be appropriate for businesses to review the basis for their trade waste charges.

11.2.4 Customers paying non-scheduled trade waste prices

For clarity and transparency in trade waste charging arrangements, the Commission’s preference is that all trade waste customers are charged according to a scheduled set of trade waste prices. This would allow existing and new customers to calculate their potential charges and respond appropriately to price signals. However, in certain instances, such as where a customer’s trade waste discharge falls outside normal acceptance parameters or has specific characteristics that impact on treatment processes and costs, the Commission recognises that it may be appropriate for trade waste charges to be set on a case-by-case basis.

In these cases, it is important that clear pricing principles guide the setting of prices for non-scheduled trade waste customers. This will improve transparency and limit the scope for uncertainty and dispute between the business and existing or potential customers. The Commission considers that each business should publish clear pricing principles as part of their schedule of tariffs to be used during the regulatory period to determine trade waste charges where scheduled prices do not apply.

The Commission has developed a number of pricing principles for non-scheduled trade waste customers for inclusion in businesses' tariff schedules. The principles included in businesses' tariff schedules should provide, at a minimum, that:

- volumetric and load based prices should, to the extent practicable, reflect the LRMC 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
- prices 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 prices should be consistent with those adopted by the Commission in this Determination
- customers should be provided with full details of the manner in which prices have been calculated
- where applying these principles results in significant changes to prices or tariff structures, arrangements for phasing in the changes may be considered and any transitional arrangements should be clearly articulated.

11.3 Overview of business proposals

Most businesses have included in their Water Plans schedules of proposed trade waste charges and fees to apply over the 2008–13 regulatory period. Coliban Water, East Gippsland Water, Lower Murray Water (urban), Wannon Water and Westernport Water are proposing to keep their trade waste charges fixed in real terms. Barwon Water, Goulburn Valley Water, North East Water, South Gippsland Water and Western Water have proposed to increase their trade waste charges over the period, generally in line with proposed price increases for water and/or sewerage.

Some businesses have reviewed, or are reviewing, their trade waste tariffs, in some instances reflecting preliminary findings from the DSE trade waste review:

- South Gippsland Water is proposing to replace its cistern based charge for major trade waste customers with an application fee, a fixed service fee, a variable volume charge and pollution load based charges.
- Wannon Water, which previously only applied pollution load based charges to the Portland and Warrnambool regions, is proposing revised trade waste charges for

all customers comprising an application fee, annual fee, volumetric pollution load based charges and penalty charges for non-compliance with obligations.

- Coliban Water is planning to conduct a major trade waste review during the regulatory period, covering trade waste agreements, cost drivers, and incentives for pre-treatment.
- Western Water is currently reviewing its trade waste strategy.
- North East Water is reviewing the Wangaratta trade waste plant and considering whether to introduce a salt charge.

Forecasts of trade waste revenue for the urban businesses are provided in table 11.2. Most businesses do not expect significant increases in trade waste revenue.

Table 11.2 **Forecast revenue for trade waste services**
Urban businesses ($ million 1 January 2007 prices)

	2007-08	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Total*
Barwon	4.24	4.33	4.74	5.20	5.24	5.23	24.75
Central Highlands	1.18	1.18	1.18	1.18	1.18	1.18	5.88
Coliban	3.64	3.71	3.68	3.64	3.60	3.56	18.20
East Gippsland[a]	0.07	0.07	0.08	0.08	0.09	0.10	0.42
Gippsland	7.42	7.47	7.78	7.86	7.90	7.94	38.96
Goulburn Valley	3.32	3.43	3.65	3.87	4.12	4.38	19.45
GWMWater	0.04	0.06	0.07	0.08	0.09	0.10	0.39
Lower Murray	0.57	0.58	0.58	0.59	0.59	0.60	2.93
North East	2.10	2.37	2.51	2.65	2.78	2.90	13.20
South Gippsland	1.72	1.80	1.81	1.82	1.83	1.84	9.10
Wannon	2.00	2.09	2.23	2.38	2.43	2.50	11.64
Western	0.21	0.24	0.26	0.27	0.29	0.31	1.37
Westernport	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.

n.p. Not provided [a] Does not include revenue from pollution load based charges.

Westernport Water does not currently provide conventional trade waste services. However, it provides a greasy waste service to customers, with charges based on actual service costs. The Commission understands that customers may choose to contract directly with a competing service provider.

11.4 Commission's assessment

Key issues arising from the Commission's review of the regional businesses' proposed trade waste prices are:

- the level of detail provided on proposed trade waste charges
- changes in tariff structures for trade waste

- the allocation of treatment and disposal costs among trade waste customers and recycled water customers
- pricing principles underpinning trade waste charges for major trade waste customers and new and unique customers.

11.4.1 Tariff details

Most businesses have set out full details of their scheduled trade waste tariffs for the regulatory period. Barwon Water has provided details of its variable trade waste charges but not its fixed service charge. The Commission proposes that Barwon Water provides this information in response to this Draft Decision to enable the Commission to assess the extent to which Barwon Water's proposed tariffs are consistent with the WIRO provisions. The Commission proposes to approve the tariff schedules proposed by the other businesses.

Some businesses have indicated that proposed tariffs may be subject to change. Coliban Water is planning to conduct a major trade waste review during the regulatory period and Western Water is currently reviewing its trade waste strategy. North East Water has noted that a salt charge may be introduced during the period following a review of the Wangaratta trade waste plant. Barwon Water noted that it may revise its trade waste prices when DSE's trade waste review is completed.

The Commission is unable to assess the extent to which businesses' proposals would be consistent with the WIRO provisions without detailed information about how businesses might propose to vary their trade waste tariffs over the regulatory period. Any proposals to vary trade waste charges or their calculation method would need to consistent with the form of price control discussed in chapter 15.

11.4.2 Tariff structure changes

The Commission has previously stated, in relation to sewerage charges, that cisterns are not a reasonable proxy for actual sewerage discharge. Further, customers are not able to readily change their behaviour in response to cistern based charging. The same considerations apply to trade waste charging. The Commission proposes therefore to approve South Gippsland Water's proposal to cease cistern based charging. The proposed charging arrangement is more cost reflective and is consistent with other businesses' charging arrangements. The Commission therefore proposes to approve the proposed change.

Wannon Water's proposal to apply the same charging arrangements to customers in the Portland and Warrnambool regions as apply to other customers will improve parity between customers. Consistency in pricing arrangements across the supply region will generate better incentives for efficient location decisions. The Commission therefore proposes to approve the proposed tariff structure change.

11.4.3 Cost allocation

Wannon Water proposed to include in its trade waste charges a charge for high salt loads, to recover the cost of treating effluent to a standard suitable for reuse, where there is a demand for re-use of that water. The Commission considers that the costs of treating trade waste to a level above that required for safe discharge into the environment should be borne by the beneficiaries of the treated water to give these users accurate signals about their use of recycled water (see chapter 10).

The proposed salt charge appears inconsistent with the Commission's pricing principles and also with Wannon Water's own principles requiring 'beneficiary pays' for treatment beyond discharge standard. Therefore the Commission proposes, at this stage, not to approve the proposed salt charge for trade waste customers without evidence that the allocation of costs complies with the trade waste pricing principles.

11.4.4 Pricing principles

Some businesses – Gippsland Water, Lower Murray Water, South Gippsland Water, and Wannon Water – listed the principles underpinning their trade waste charges. The principles proposed by these businesses were consistent with those proposed by the Commission in its 2005–08 Decision. The following business have confirmed that they have adopted the Commission's proposed pricing principles (or propose to adopt them when long-term contracts come up for renewal): Central Highlands Water, Coliban Water, East Gippsland Water, Goulburn Valley Water, GWMWater, and Western Water. Westernport Water also advised that it has adopted the Commission's trade waste pricing principles (although they are not currently applied in determining charges for their greasy waste service). North East Water stated that its non-scheduled trade waste charges were based on cost recovery. Barwon Water has not provided pricing principles.

The Commission has received a number of submissions to this price review expressing concerns about how businesses have allocated costs between residential and non-residential customers, including suggestions that residential customers may be subsidising large trade waste customers. Few businesses have provided details of individual trade waste contracts where scheduled prices do not apply. However, any non-scheduled prices contained in contracts that were renegotiated, renewed or entered into during the first regulatory period must be consistent with the pricing principles set out in the determination. The businesses must apply these principles in determining non-scheduled prices contained in any future new, renegotiated or renewed trade waste contracts.

The Commission is obliged to ensure that businesses comply with the pricing principles and to follow up any reports of potential non-compliance. In addition to following up any such reports, the Commission will monitor businesses' compliance with the trade waste pricing principles as part of its annual audit processes.

11.4.5 Customer impacts

Some businesses are proposing significant increases in trade waste charges over the regulatory period, including, in some cases, large increases in the first year. The Commission has concerns about the capacity of trade waste customers to manage significant bill increases.

Businesses proposing significant increases in trade waste charges should consider phasing-in arrangements, subject to satisfactory rebalancing of other tariffs to meet the business's approved revenue requirement. Where customer impacts can be adequately addressed, a short phasing-in period, such as two years, may be appropriate. For larger price increases, a longer phasing-in period may be more appropriate.

Draft Decision

The businesses that have not provided full tariff schedules in their Water Plans – Barwon Water – should provide this information.

Each business is required to set out and apply specific trade waste pricing principles to apply to those customers for whom scheduled prices do not apply. The Commission proposes to approve the pricing principles outlined in Water Plans, or otherwise advised to the Commission, by: Central Highlands Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater, Lower Murray Water, South Gippsland Water, Wannon Water, and Westernport Water. The following businesses – Barwon Water, Coliban Water, North East Water and Western Water – are required to reflect the following principles in their tariff schedule:

- volumetric and load based prices should, to the extent practicable, reflect the LRMC 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
- prices 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 prices should be consistent with those adopted by the Commission in this Determination
- customers should be provided with full details of the manner in which prices have been calculated
- where applying these principles results in significant changes to prices or tariff structures, arrangements for phasing in the changes may be considered and any transitional arrangements should be clearly articulated.

12 NEW CUSTOMER CONTRIBUTIONS

12.1 Introduction

In certain circumstances new customers may be required to make an upfront contribution to the costs of connecting to a water business's existing water, sewerage and recycled water networks. Existing non-serviced property owners are also required to make upfront contributions for the cost of connection. A water business may also charge a new customer or developer a new customer contribution that will recover the financing costs associated with bringing forward the provision of shared distribution assets. One of the Commission's responsibilities is approving or determining capital contributions or the method by which they are calculated for new and existing customers.

The key aspects of the current arrangements for new customer contributions are:

- new customers are responsible for providing assets that are to be installed specifically to service their property or development (reticulation assets)
- water businesses may charge a per lot charge up to the scheduled charge for each new property connected. The maximum per lot charge was set at $500 for 2005-06 and will remain constant in real terms until the end of the regulatory period
- water businesses are responsible for assets that are generally provided to service more than one development (shared assets) and
- water businesses may apply to the Commission to levy a charge above the scheduled charge where shared assets must be constructed ahead of schedule to service a new property or development. In these cases and subject to approval by the Commission, the water business may recover the capital financing costs that are attributable to bringing forward construction of the shared assets.

The current arrangements were adopted by the Commission as interim arrangements.

12.2 Commission's approach

In the 2005 Urban Water Price Review, the Commission took the view that the businesses' methods for calculating new customer contributions at the time were not consistent with the WIRO and that the determination of new customer contributions should:

- reflect the incremental costs associated with connecting new customers (which at a minimum should not include the costs associated with sunk or shared assets) and

- provide locational signals to encourage new customers to connect where there is existing infrastructure and reflect the higher costs associated with servicing out of sequence developments.

In order to minimise the administrative costs associated with assessing and approving all new customer contributions, the Commission decided to accept all businesses' proposed new customer contributions up to a maximum charge of $500 per lot (in January 2006 dollars).

Where a business proposes to seek a charge higher than the scheduled $500 per lot charge, it must provide the Commission with details of the proposed charge and demonstrate that it has calculated the charge on a basis consistent with the principles. Further guidance on how the principles contained in the determination should be applied was provided in the Water Industry New Customer Contributions Guideline, released in December 2005.[66]

Under the Commission's New Customer Contributions Guideline, new customers are responsible for providing reticulation assets and water businesses are responsible for shared assets.

The guideline defines reticulation assets as assets that are explicitly provided in relation to prescribed services for one development and are not required to be upsized to support other future developments. A water main that is 150 mm or less and a sewerage main that is 225 mm or less in diameter and all associated assets (including pipeline, storage tanks, treatment plants, pumping stations, rising mains, flow control facilities, pre-treatment systems and booster disinfection plants) are generally considered to be reticulation assets.

Infrastructure assets that are provided to service more than one development and associated with water mains greater than 150 mm or sewerage mains greater than 225 mm in diameter are considered shared distribution assets.

Further guidance

In consultation in the lead up to the 2008 Water Price Review, the Commission raised concerns that the relatively low number of applications and associated revenue may indicate that the administrative costs and regulatory burden of the current arrangements may outweigh the benefits. The Commission suggested that there may be merit in increasing the scheduled maximum per lot charge to $1000 to reduce the administrative burden on businesses. This approach would be accompanied by principles to ensure that businesses would not levy the scheduled charge on customers where associated costs were immaterial or did not exist (such as for infill development).

The Commission also raised a number of issues regarding the classification of assets, the determination of bring forwards periods for shared assets and the

[66] The Guideline and other relevant information on the Commission's role in regulating new customer contributions is available on the Commission's website, http://www.esc.vic.gov.au.

contribution arrangements surrounding compulsory dual pipe recycled water schemes. In particular:

- the current method of using size thresholds to classify assets as either reticulation or shared is a relatively simple mechanism. The Commission sought feedback from stakeholders on the value of pursuing more detailed criteria for classifying assets
- the Commission sought feedback from stakeholders on the form and content of a possible set of high level principles to provide guidance in the estimation of bring forward periods and
- the Commission also noted that the current arrangements for recycled water may need to be amended to reflect recent policy developments — in particular, the ability of water businesses to mandate water recycling in specific areas.

In response to the consultation most businesses stated a preference to increase contributions. The Victorian Water Industry Association suggested an alternative framework for levying new customer contributions based on the water use efficiency of particular developments (discussed below).

In relation to the regulatory classification of assets as either reticulation or shared most businesses stated that the current arrangements were adequate and did not need to be amended. Most businesses also responded that developers in dual pipe areas should also be required to install the additional reticulation assets for the recycled water.

In its December 2007 Issues Paper the Commission noted its concerns about instances where developers have been required to pay for significant amounts of reticulation infrastructure from which they only receive a small portion of the benefit.

For example, a case in Yarrawonga involving multiple developers and North East Water involved significantly higher costs for one of the developers in relation to infrastructure of reticulation size due to the fact that a pump station required to service the developments was located on that particular developer’s property. Despite only requiring the use of a portion of the capacity of the pump station, the developer was obliged to pay for its entirety under the current methodology.

Therefore, the Commission believes that the current method may require amendments to ensure that it takes into account the interest of customers and customers are given appropriate signals about the costs of providing services.

12.3 Overview of businesses’ proposals

12.3.1 Scheduled charges

In their Water Plans, the majority of businesses noted their support for the Victorian Water Industry Association proposal for levying new customer contributions based on water use and efficiency. The Victorian Water Industry Association proposal is to base the scheduled charge for new customer contributions on the potential impact on future water demand of the new development, generally by using lot size as a determinant. Essentially there would be three levels of contribution:

1. a minimum $550 per lot per service for water, sewerage and dual pipe recycled water (total $1,650 per lot) for developments which are designed in a manner that will have minimal impact on future water resource demands and 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 meters.
2. $1,100 per lot per service for water, sewerage and dual pipe recycled water (total $3,300 per lot) for water sensitive urban developments which will require further investment in infrastructure within a six year period to serve these developments. Or, where shared assets must be constructed ahead of schedule to service a new property or development and the calculated 'bring-forward' costs are greater than $1000 per lot for water and sewerage the calculated charge shall apply. These developments are typically traditional Greenfield urban developments with lot sizes between 450 square meters and 1,350 square meters.
3. $2,200 per lot per service for water, sewerage and dual pipe recycled water (total $6,600 per lot) — for developments designed in such a way that properties will create demand for water resources over and above high-density, water efficient homes. These developments are typically Greenfield developments with lot sizes exceeding 1,350 square meters, for example, lots with potentially large outside water use, no recycled water and which will influence near term investment in infrastructure decisions.

In the event of disputes over the categorisation of a particular development or the substantiation of particular costs where the schedule does not apply, the Association proposed that the customer has the ability to contest the contribution by applying to the Commission, which will then make a binding decision on the matter.

Western Water, while supporting the Victorian Water Industry Association's proposal for scheduled charges, is proposing to continue to apply pricing principles to the calculation of new customer contributions for large unique recycled water customers. Western Water is proposing to charge a $300 per ML once off new customer contribution charge for class B and class C recycled water schemes where the Victorian Water Industry Association model would not apply.

The Commission notes that under clause 2.4 of its determination, if Western Water enters into a new contract relating to the provision of a prescribed service it must provide the Commission details of the new contract and information which demonstrates the way in which the prices in the new contract reflect the relevant pricing principles.

12.3.2 Allocation of costs for reticulation assets

Under the Victorian Water Industry Association proposal, the current arrangements for determining responsibilities for provision of and the procedures for allocating costs for shared and reticulation infrastructure assets would continue.

In their Water Plans, most businesses noted that they were satisfied with the Commission's current procedure for the classification of assets into shared and reticulation as set out in the Guideline. A number of businesses also made submissions in response to the Commission's December 2007 Issues Paper in favour of retaining the current approach to the classification of shared infrastructure.

Gippsland Water stated that it would strongly oppose any proposal to change the current asset definitions, on the basis that it would:

- significantly increase the number of shared assets that businesses would be responsible for, increasing capital expenditure and jeopardising other capital projects
- add confusion to the industry and
- make the calculation of the brought forward percentage difficult as there are potentially many developments happening at once.

12.3.3 Allocation of costs for shared assets

Since the introduction of the interim arrangements, a number of developers have raised the issue of the allocation of costs for shared assets with the Commission.

In its submission to the Draft Decision, SM Urban Pty Ltd noted that where a developer contributes to the costs of shared infrastructure via a non-scheduled charge, future developers connecting to the infrastructure in question are liable only pay the current scheduled charge.

SM Urban proposed that there should be a mechanism through which developers can be reimbursed for their investment in shared infrastructure from which other developers benefit.

12.4 Commission's assessment

12.4.1 Scheduled charges

The Commission is of the view that the Victorian Water Industry proposal for scheduled charges is consistent with the WIRO on the basis that the determinants for different levels of contributions provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to water users about the costs of providing services.

The Commission is proposing to approve the Victorian Water Industry proposal subject to an amendment clarifying that customers not be subject to a scheduled charge for new customer contributions for recycled water. The Commission proposes that new customer contributions for recycled water customers be regulated via pricing principles.

Recycled water assets are often likely to be unique assets, where the unique characteristics of supply impact on the cost of connection. Factors that should betaken into consideration when determining the appropriate recovery of costs for the provision of recycled water are set out in chapter 10, and include:

- whether the uptake of recycled water is discretionary, mandated or required by specified obligations

- whether recycling water is a least cost alternative to treating and disposing of effluent or complying with discharge licence standards and
- whether the uptake of recycled water increases the security of supply for potable water customers or creates other positive externalities such as environmental benefits.

The Commission has proposed that pricing principles should ensure that recycled water prices are set so as 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 balance of supply and demand) and
- include a variable component.

The Commission considers that these principles are broad enough to satisfy the requirements of the WIRO when determining new customer contributions to apply to recycled water customers.

12.4.2 Allocation of costs for reticulation assets

The Commission notes that it is not seeking to amend the current classification of assets, under the possible approach outlined above developers would still be responsible for assets of reticulation size.

The Commission agrees that changing asset classification procedures may add confusion to the industry and is cognisant that the benefits of any such change should outweigh the costs. It is not clear that the Commission's suggested amendment will have any effect on the calculation of bring forward periods, however, there may be difficulties in determining the proportion of assets constructed attributable to each development.

The Commission is of the view that developers should only be required to provide funding proportional to the amount of capacity created in the new infrastructure attributable to their development. Residual capacity could be funded by the business up until such time as subsequent development used up that capacity.

This approach would provide appropriate signals to customers about the costs of services and take into account the interests of customers. Since the assets constructed by the businesses would still eventually be paid for by subsequent developers, this approach would also continue to provide businesses with a sustainable revenue stream that does not reflect monopoly rents and or inefficient expenditure.

The Commission's suggested approach is similar to the rules for calculating customer contributions employed under pioneer schemes in the electricity industry.[67]

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[67] For more information on pioneer schemes see the Electricity Industry Guideline no. 14: Provision of Services by Electricity Distributors available on the Commission's website http://www.esc.vic.gov.au/public.

12.4.3 Allocation of costs for shared infrastructure

The bring forward period is an estimate of the difference between when the water business had planned to service the customer as a normal part of servicing growth as opposed to the when the customer wants to be serviced. For example, as part of orderly development a water business may have planned to develop a particular sewerage catchment in three years' time. However, a developer may decide to develop the land now; in this instance bringing forward the development to service the land will impose a cost on the business in excess of its forecasted costs.

The purpose of the non-scheduled charge is to provide a price signal for this out of sequence development. The Commission is of the view that the current allocation of costs in relation to shared infrastructure is appropriate.

One of the issues that has arisen during the implementation of the last price review is the estimation of the bring forward period for unplanned developments. The bring forward period is relatively easy to determine in instances where there are existing infrastructure plans, or when the water business has provided prior signals of its intention to service areas. However, for a lot of urban residential and non-residential customers such plans may not be available. This is especially true for smaller sized shared infrastructure or in places that experience inconsistent growth.

Currently businesses use a number of methods to determine the bring forward period. These include timing estimates given in the Urban Development Program, timing stated in backlog programs, other growth forecasts and council demand estimates.

A number of businesses have sought further guidance from the Commission in determining the appropriate basis for calculating the amount of time that unplanned works are brought forward.

Draft Decision

Scheduled charges

The Commission proposes to approve the businesses' proposals to adopt the Victorian Water Industry Association's suggested scheduled charges on the basis that they provide customers with price signals promoting the sustainable use of Victoria's water resources. Note that approval is subject to an adjustment clarifying that contributions in relation to recycled water will not be subject to a scheduled charge, but rather will be regulated by the Commission's proposed pricing principles for recycled water and assessed on a case-by-case basis.

Allocation of costs for reticulation assets

The Commission considers that in light of apparent anomalies created by the current method of classifying infrastructure for new developments, an appropriate response may be to allocate costs for reticulation infrastructure to developers based on the portion of infrastructure required to service their particular development, with water businesses making up the balance, to be recovered from future development or over time through prices. The Commission requests the businesses provide their viewpoints on the possible application of this approach, including:

- the incidence of situations where developers pay for a greater capacity in reticulation than is required by their development and
- possible mechanisms for allocating costs to developers based on system capacity requirements.

Allocation of costs for shared assets

The Commission requests the views of businesses and other stakeholders on possible alternatives to the calculation of bring forward charges for shared infrastructure. Given that the estimation of bring forward periods is typically imprecise, the Commission considers that there may be merit in creating a scale of bring forward periods with a general application, for example:

- 0-5 years – no bring forward
- 6-10 years – contribution defined as 35 per cent of the as constructed cost of shared assets
- 11-15 years – contribution defined as 50 per cent of the as constructed cost of shared assets.
- >15 years – contribution defined as 70 per cent of the as constructed cost of shared assets.

13 RURAL SERVICES

13.1 Introduction

The total revenue that water businesses may recover through providing rural services is specified in Part II of this Draft Decision. This chapter sets out the Commission's Draft Decision on whether to approve the structure of rural tariffs proposed by water businesses.

Rural services are mostly supplied by Victoria's three dedicated rural water businesses (Goulburn-Murray Water, Southern Rural Water and First Mildura Irrigation Trust) and two rural urban water businesses (Lower Murray Water and GWMWater). Coliban Water and Wannon Water also supply services to a small number of rural customers. Bulk water, irrigation, drainage, domestic and stock and diversion services are all prescribed services under the WIRO, for which the Commission has the power to regulate prices. Rural water businesses also provide a number of other important services, including salinity management, recreational facilities, property management and services relating to water trade, that are non-prescribed and hence not subject to price regulation.

In the 2006 Rural Water Price Review, the Commission had power to regulate tariff structures for urban services, but in the case of rural tariffs, was restricted to approving the total revenue that water businesses could recover from rural services. In other words, while it was responsible for approving the average price level for rural services, the Commission did not have power to regulate individual rural tariff components. The Commission's role in regulating rural services has been expanded for this price review to include rural tariff structures.

The Commission has assessed tariffs for all rural services provided by Lower Murray Water, First Mildura Irrigation Trust and GWMWater. It has also assessed all prices proposed by Goulburn-Murray Water for pumped irrigation, surface water and groundwater diversions, domestic and stock services and bulk water. However, due to uncertainty around the scope and funding arrangements of the Food Bowl Modernisation Project, the review of prices for gravity irrigation and drainage services provided in gravity irrigation districts has been deferred. The Commission proposes to approve 2008-09 prices for these services with a review of the remaining prices to take place once the scope of the Foodbowl Modernisation Project and funding arrangements are clarified.

Southern Rural Water did not provide information on individual tariffs in its Water Plan, but proposes to submit this information in response to this Draft Decision following consultation with its customer committees. The Commission expects Southern Rural Water to propose tariffs that show consideration of the issues raised in this chapter and are consistent with the Draft Decision on revenue requirement and demand.

13.2 Approach to assessing rural tariff structures

In assessing the proposed rural tariffs, the Commission must be satisfied that the proposals are consistent with a number of regulatory principles contained in the WIRO. These principles are that tariffs 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 of the regulated entity, including low income and vulnerable customers
- provide the regulated entity with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria's water resources and
- 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.

The Commission has previously identified a number of factors it would consider during the current price review to ensure that rural tariffs are consistent with the above principles. These factors are outlined in the sections below.

Cost allocations and rural tariff structures

A key feature of the rural water sector is differential pricing between customer groups. The groups to which differentiated tariffs apply are usually identified by the district where the service is provided. For example, Goulburn-Murray Water has a standard tariff structure for its gravity irrigation services but applies different tariff levels in each district. This method of district level pricing is used by some urban businesses for retail water and sewerage services, but the practice is applied broadly in the rural sector.

The Commission considers that district level pricing is consistent with the WIRO to the extent that the differentiated prices reflect different costs incurred in each district. District level pricing in this regard provides effective signals to customers about the costs of providing services and prevents any cross-subsidies between districts. Conversely, district level pricing can create complex tariff structures which may be difficult for customers to understand. Cost allocation issues can also arise as costs not only occur on a strictly district basis but also on a basin-wide or authority wide basis. For prices to be cost reflective, these shared costs must be allocated on a basis that reasonably reflects the costs of servicing each district or customer group.

However, the Commission recognises that district pricing and the current structure of rural tariffs is the result of customer preference and consultation over an extended period. It also notes that apart from a small number of issues relating to tariff levels for particular services or districts, the Commission has not received many submissions or correspondence that raise concerns with rural tariff structures more generally. Therefore, the Commission does not propose major adjustments to rural tariff structures in themselves.

Instead, the Commission has focused its review of rural tariff structures on changes in individual tariff components over the regulatory period and also in cases where a change to a tariff structure has been proposed. Where there are disproportionately large increases (or decreases) in individual tariff components that are likely to impact a particular customer group or groups, the Commission must be satisfied that the price changes are driven by changes in cost and that customer impacts have been adequately considered.

Fixed and variable charges

Variable consumption based charges play an important role in the urban sector in both signalling to customers the variable costs of providing water services and providing incentives for customers to use water efficiently. However, the importance of variable rural charges in providing incentives for the efficient use of water is generally not as significant compared to urban services. Rural customers typically receive water by holding a water right. The tradable nature of water rights provides effective incentives to use water efficiently. If the benefits of using the water are less that the market price of water, holders of water rights are able to trade all or part of their right to a buyer who places higher value on the water, leading to an efficient allocation of water.

However, the Commission still considers that variable charges have an important role to play for rural services where customers hold entitlements to the extent that they reflect the variable costs of providing rural services (for example, pumping costs). They are also important in providing incentives for efficient water use in domestic and stock systems where customers do not hold tradable water rights. It is noted that costs in the rural sector are largely fixed, in that they do not vary with the actual volume of water consumed. Most businesses include a variable component for most services. In assessing the balance between fixed and variable charges the Commission must generally be satisfied that any large change in this balance is caused by changes in costs.

Unbundling of water tariffs

The recent unbundling of irrigation water entitlements into water rights, delivery shares and water use licences provides a number of benefits including flexibility to customers and increasing the efficiency of the water market. It also reduces adverse impacts on customers, as a customer that sells their water right on a permanent basis is still required to contribute to the costs of maintaining the infrastructure serving their property instead of moving the costs onto remaining customers.

The benefits from unbundling rights can only be realised if irrigation tariffs are also unbundled. Goulburn-Murray Water, Lower Murray Water and First Mildura Irrigation Trust implemented tariff reforms to facilitate unbundling during the current regulatory period. Southern Rural Water intends to introduce unbundled irrigation tariffs from 1 July 2008 and has indicated that it will propose such tariffs in response to this Draft Decision.

13.3 Assessment of rural tariffs

Rural businesses have generally proposed to continue their existing tariff structures and to apply increases to individual tariff components that are close to the average increase for their business. In these cases and where tariffs for the service or district in question have not been the subject of submissions or customer concern, the Commission proposes to approve these tariffs.

However, due to the large number of individual tariff components proposed by businesses, the Commission has not been able to note its proposed approval of each tariff explicitly. Instead, the remainder of this chapter sets out the Commission's Draft Decision on rural tariffs in cases where:

- a change in tariff structure was proposed
- certain tariffs have been a source of customer concern or may be difficult for customers to understand
- tariffs for a particular service or in a particular district have increased by significantly more than the business average without sufficient explanation in its Water Plan
- the Commission otherwise has concerns that aspects of a particular tariff are not consistent with the WIRO.

This rest of this chapter presents the Commission's Draft Decision on an issue-by-issue basis. The Commission proposes to approve all other rural tariff structures that have not been referred to explicitly in this chapter. There is also scope to consider these businesses' tariffs as part of the annual tariff approval process.

13.4 Bulk water

A storage operator and bulk water service is defined as a service provided by a regulated entity in connection with the provision of water supply to another regulated entity.

Goulburn-Murray Water pricing proposals

Previously, Goulburn-Murray Water operated a system for bulk water pricing where costs were pooled and averaged into two system prices – the Murray and Goulburn systems – before being charged to Goulburn-Murray Water's retail customers.

Goulburn-Murray Water stated in its Water Plan that independent reviews have recommended that it move to basin pricing at a retail level in order to support effective decision-making on asset investments and customer water trading activities. These basins are contained within the systems, thereby meaning that the new prices are at a more detailed level than previous. It went on to note that the unbundling of water entitlements and the expansion of trade interstate further reinforces the need to clearly identify the real costs of bulk water services for different water entitlements.

Goulburn-Murray Water outlined these new costs in the first appendix of its Water Plan. These new costs showed the variance in prices between the basins, and that these variances are increasing across the period. The Commission notes that the bulk water prices are much the same as the entitlement storage fees for customers without land.

In further discussions with Goulburn-Murray Water, it informed the Commission that the significant differences in the prices with regard to entitlement holders with land and without land in the Water Plan, was due to the transitioning from the system from of pricing to the basin form of pricing. It stated that this was a temporary difference, based on the phasing in of the basin pricing approach.

The Commission is of the understanding that these variances will begin to decrease as the next phasing of the basin pricing approach is implemented and the costs for entitlement holders with land begin to have similar increases. The Commission is seeking further detail on Goulburn-Murray Water's bulk charges.

Within its schedule of bulk water prices, Goulburn-Murray Water has proposed a Regional Urban Storage Ancillary Fee of $8.24 per ML over the regulatory period. The Commission seeks further information from Goulburn-Murray Water to clarify the nature of this fee and to ensure that it is reasonable.

GWMWater pricing proposals

GWMWater stated that bulk water is generally governed by the principles of the bulk water entitlements at the headworks level. The cost of distribution and reticulation is then added in the event that the water is delivered using GWMWater distribution and reticulation infrastructure.

GWMWater is of the view that its proposed tariff basket approach will provide it with the flexibility to resolve issues that relate to the relative sharing of bulk water costs and headworks use over the term of the regulatory period.

The Commission notes GWMWater's Water Plan does not outline any proposed prices for its bulk water charges. GWMWater's proposed prices are contained within the financial templates submitted to the Commission, however these are not available to the public.

The Commission is proposing that GWMWater's bulk charges be subject to individual price caps with access to a tariff basket during the regulatory period (see chapter 15), however it is of the opinion that more detail is necessary in order to form an informed opinion on the appropriate price for the first year of the regulatory period.

Southern Rural Water pricing proposals

Southern Rural Water stated in its Water Plan that there is no standard unit of measure applicable to this part of its business. The Commission noted in its Issues Paper that Southern Rural Water had not provided bulk water prices in its Water Plan.

In response to the Issues Paper, Southern Rural Water submitted that:

> *… whilst our role in headworks management is often misconstrued as that of a wholesaler providing bulk water to retail water business, in fact our role is more akin to a facilities manager, and*

> *the 'product' of our headworks business is the operation and maintenance of the dams under our stewardship. The various Bulk Entitlement Orders under which we operate, specify the manner on which the costs of operating and maintenance the storages are determined and apportioned amongst the entitlement holders. As such we do not have, and do not propose, a 'bulk water tariff'. Where table 4.10, which lists proposed prices for bulk water services in $/ML, identifies our data as 'not provided', it would be better described as 'not applicable'.*[68]

The Commission notes that in Schedule 1 of the WIRO, storage operator and bulk water service is defined as a means of service provided by a regulated entity in connection with the provision of a supply of water to a regulated entity. The Commission is of the view that Southern Rural Water's provision of bulk water to other water businesses is captured by this definition. With regard to Southern Rural Water's definition of its activities as being those of a facilities manager, the Commission is of the view that this definition is not dissimilar to that which could be applied for a storage operator. Furthermore, section 6 of the WIRO states that these services are services in which the Commission has the power to regulate prices.

The Commission also notes that both Goulburn-Murray Water and GWMWater have provided bulk water prices to the Commission even though they also operate within the Bulk Entitlement Orders.

The Commission needs to ensure that the proposed prices satisfy the Bulk Entitlement Order, it can not do this if the prices, or the methodology used in calculating the prices, are not provided to the Commission. Therefore the Commission requests that Southern Rural Water comply with the WIRO by providing a price, or methodology for calculating the price, that the Commission can approve or disapprove.

The Commission understands that Southern Rural Water has applied to the Minister for Water for approval for the recovery of a 'cost of debt'. This cost of debt relates to the repayment of 'sales' deficits for the irrigation district, resolving urban pricing arrangements and to recover the accumulated deficits associated with the Werribee Irrigation District Recycled Water Scheme. The Commission is of the understanding that this cost of debt will be phased out at the end of the regulatory period.

For the purposes of establishing prices for the Draft Decision, the Commission has included the costs associated with the repayment of deficits to the irrigation district and resolving urban pricing arrangements.

The Commission notes that the prices for the WID Recycled Water Scheme will be equal to the river water price until 30 June 2009. It is also noted that the price for recycled water post 2009 will be dependant on a number of factors, not least of all the pricing arrangements for Melbourne Water. The government's deferral of the

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[68] Southern Rural Water response to Essential Services Commission Issues Paper, January 2008, p. 4.

pricing arrangements has meant that Melbourne Water's prices are not part of this price review. Therefore the Commission considers that it would be prudent to defer any decision on the arrangements for the WID Recycled Water Scheme until this time.

If the Minister, at a later date, approves something that is contrary to the Commission's current position, this can be adjusted for in the future. In the absence of further guidance by the Minister, the Commission has accepted $1.458 million as the cost of debt for the Draft Decision.

Pass-through of bulk water costs for urban businesses

The Commission notes the concern that some of the urban water businesses have over the cost of bulk water and the lack of control they have over its cost.

The Commission is therefore proposing that there be a pass-through mechanism for these bulk water costs for the urban businesses. This means that the urban businesses will not bear any increase in costs over the period, as there will be a mechanism that will allow the businesses to pass the true costs for bulk water on to their customers, leaving the business indifferent. As the Commission is the authority that approves the bulk water prices that the rural businesses can charge the urban businesses, it is of the opinion that this is an appropriate use of such a mechanism.

13.5 GWMWater rural pipeline tariffs

The Wimmera Mallee Pipeline will bring about a significant change in the nature and levels of service received by many GWMWater domestic and stock customers. The change in service will also require that customers are charged in a different manner than they are currently. GWMWater has proposed a new tariff structure for pumped domestic and stock services that will apply on both the Wimmera Mallee Pipeline and the Northern Mallee Pipeline.

Currently, domestic and stock customers on the GWMWater channel system pay a fixed area charge and a charge for each dam fill. A number of supply by agreement customers also use water from the channel system and are charged on a per ML litre basis. Existing channel customers will continue to pay under the current channel tariffs until they connect to the Wimmera Mallee Pipeline. It is expected that the channel system will cease operating from 2011-12. GWMWater also supplies water to domestic and stock customers through the Northern Mallee Pipeline. Northern Mallee Pipeline customers currently pay a per hectare area charge, a meter charge for each meter servicing a property and a usage charge.

13.5.1 Proposed pipeline tariffs

GWMWater's proposed rural pipeline tariff structure consists of three components – a primary service or 'meter' charge, a capacity charge, and a volumetric charge.

The standard meter charge will be applied to each meter servicing a property. A property with no house will attract the standard meter charge while properties with houses will attract the primary meter charge.

The capacity charge will be applied to each ML of a property's standard water allowance. The standard water allowance will initially be determined by property size, with each hectare corresponding to 2.5 kL of standard water allowance per year. Properties that have a house and are charged the primary meter charge will also receive an additional water allowance of 730 kL per year, but this additional allowance will not attract the capacity charge. A minimum capacity charge will also apply. Intensive water users that meet certain technical requirements will be eligible for a discounted capacity charge for taking water during off peak periods.

The volumetric charge will be applied to each kilolitre consumed. A first step usage charge will apply for all water consumed within the standard water allowance and additional allowance for houses. A second step usage charge applies for all water consumed between 100 per cent and 125 per cent of this combined allowance, with all water consumed above 125 per cent of this amount attracting the excess usage charge.

The major proposed pipeline tariffs to apply in 2008-09 are set out in table 13.1 below.

Table 13.1 **GWMWater rural pipeline tariffs**
2008-09 (nominal prices)

Primary meter charge (per meter)	$229.00
Standard meter charge (per meter)	$114.50
Capacity charge (per ML) – standard water allowance	$652.55
Off-peak capacity charge (per ML) – off peak water allowance	$229.00
Minimum capacity charge – standard water allowance	$230.00
First step usage charge (per kL) – consumption within allocation and allowance	$0.75
Second step usage charge (per kL) – consumption over 1st step and within 125 per cent of combined allocations and allowances.	$1.03
Excess usage charge (per kL) – consumption over 125 per cent of combined allocations and allowances.	$2.63

A key element in GWMWater's proposed pipeline tariff structure is the sale of 'growth water'. Growth water is additional water that has become available to customers through the construction of the Wimmera Mallee Pipeline and the water savings it generates. GWMWater has indicated that 5,000 ML of growth water will be available for general use in the pipeline each year, while another 5,000 ML will be available in the pipeline during off-peak periods and 10,000 ML will be available for future use outside of the pipeline.

By purchasing growth water, pipeline customers will increase their standard allowance (and hence incur higher capacity charges), but will be able to consume more water at the lower variable rate. GWMWater proposes to initially allow each customer to purchase up to 5 ML of growth water for $1,000 per ML, with additional units of growth water over 5 ML being available through an auction process with a reserve price of $2,500 per ML[69].

GWMWater has indicated that all growth water sold to customers will become ‘allocations’, which the customer will hold as a property right and will be able to trade to other users in the future. All initial ‘allowances’ will initially remain the property of GWMWater, but these property rights will be transferred to customers in the future if unbundling occurs. All growth water bought at the discount rate will remain as allowances for five years, after which time they will become allocations.

GWMWater’s Water Plan only provided a brief description of the proposed tariff structure and indicated that it was designed to accommodate water trading and unbundling within the pipeline should such reforms be introduced in the pipeline systems.[70] However, the Water Plan did not include sufficient detail for the Commission to assess whether it is consistent with the WIRO. It is also noted that the proposed tariff structure is unlike other tariff structures currently in place for pipeline services in Victoria. The Commission therefore sought further information from GWMWater on its proposed tariff structure, including the reasons for adopting the proposed approach instead of other commonly used tariff structures for pipeline services.

In response, GWMWater indicated that since the inception of the Wimmera Mallee Pipeline project, there has been a strong preference by customers that the new pipeline system should be able to accommodate a system of tradable water rights. This preference was also mirrored by Northern Mallee Pipeline customers, many of whom indicated a desire to reduce their fixed charges, which are currently based on property size, through trading away parts of their entitlements. Further, GWMWater indicated that in its initial business case for the Wimmera Mallee Pipeline project it foreshadowed a system of tradable rights.

GWMWater expressed a preference for differentiating the fixed charges to customers based on the capacity utilised by each customer. GWMWater currently levies differential service charges to its urban customers based on meter size and to its rural customers based on property size as approximations for capacity utilised. However, as the majority of customers on the pipeline systems have the same sized connection, it was unable to differentiate on the basis of meter size. Further, GWMWater and its customers have noted that property size is not an accurate indicator of capacity utilisation and prefer not to continue recovering fixed costs on this basis. By using a system of allowances and allocations, GWMWater is able to allocate fixed costs based on an annual entitlement as a proxy for capacity utilised.

GWMWater indicated that affordability was a key issue for the region, and was able to address the customer impacts of transitioning from a channel to a pipeline system more effectively through a system of allowances and allocations, than it could through a uniform fixed and variable charge.

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[69] GWMWater fact sheet, ‘Pipeline tariff products’. www.gwmwater.org.au.

[70] GWMWater Water Plan, p. 125.

13.5.2 Assessment of pipeline tariffs

The Commission supports the use of fixed charges based on capacity that each customer requires and variable charges based on actual use as key features of GWMWater's tariff structure for pipeline services. It also supports the distinction between standard and primary meter charges and the additional allowances for households to target essential water use, and designing tariffs for compatibility with a tradable system in the future.

The WIRO requires that prices must signal to customers the costs of providing services, and the Commission has some reservations about the proposed second and third tier variable charges not being cost reflective. It is understood that the Wimmera Mallee Pipeline will initially operate with excess capacity. In the absence of capacity constraints, it can be reasonably expected that the costs of providing additional units of water would be fairly constant, in which case a uniform usage charge would be most effective in signalling variable costs to customers.

However, the Commission generally supports the allocation of fixed costs based on capacity utilised, and considers that GWMWater's proposal to allocate fixed costs based on each customer's allowance is appropriate, given the unavailability of more suitable measures of capacity (such as peak daily consumption). The Commission also recognises that the excess consumption rate is essential for the proposed tariff structure to operate effectively and to allocate fixed costs in the manner that it proposes.

On this basis, and considering that the proposed tariff structure has been the subject of customer consultation, appears to be capable of accommodating a future system of tradable rights, which is in line with customer preference, the Commission in principle proposes to approve GWMWater's proposed pipeline tariff structure.

However, the Commission has a number of concerns about certain details of GWMWater's proposal. These are discussed is the sections below. The Commission seeks further information from GWMWater that addresses these concerns. The Commission proposes to approve GWMWater's proposed pipeline tariff structure if it is satisfied that its concerns have been adequately addressed.

Growth water

GWMWater has indicated that it intends to allocate growth water to customers through an auction process. The new tariff structure is proposed to come into place on 1 July 2008, but at this stage GWMWater has not made public any details regarding the auction process. Further, the Commission is not aware of the extent to which GWMWater has finalised the timing and process for the auction. Given that growth water is a unique product and is a core component of the proposed allocation of water in the area, GWMWater should make public all details of the timeframes and process as soon as practical. This information will also be required to satisfy the Commission that growth water will be allocated to customers in an efficient and equitable manner.

The Commission considers that an auction process is an equitable and efficient method of allocating scarce resources, but has some concerns with the reserve price of $2,500. In particular, it is concerned about how growth water will be allocated to customers if not all of it is sold through the auction process. The Commission considers that a reserve price is appropriate in cases where there are alternative uses for the good in question. In this case, it is not clear whether GWMWater has an alternative beneficial use for the additional water (such as making the water available to urban customers) that would be available if the growth water is not sold. The Commission understands that GWMWater has made significant capital investments in the Wimmera Mallee Pipeline which has resulted in the growth water being available. However, the Commission considers that if the market price of growth water is lower than the reserve price proposed by GWMWater, it may be more appropriate to recover these costs over the longer term through tariffs than upfront.

Finally, one objective of the tariff structure is designed to provide incentives to customers to purchase growth water. However, the Northern Mallee Pipeline is supplied from the Murray System instead of the Grampians System, where the growth water has been made available. As such, it is not clear on how the tariff structure is proposed to operate on the Northern Mallee Pipeline.

Timelines for introducing trade in pipeline systems

GWMWater's proposed tariff structure foreshadows a system of tradable rights in its pipeline systems. GWMWater has indicated that all 'allocations' will be made tradeable in the future. Further, it has also indicated that it is possible for 'allowances' to be converted to 'allocations' in the future and hence also be able to be traded. However, the Commission is not clear on the timing of these changes. As such, GWMWater should indicate what changes need to take place (legislative or otherwise) and the likely timeframes for making allocations tradeable. This information should also be clearly communicated to customers, as customers will value growth water more if they know (or are at least reasonably confident) that the allocations will be tradeable. GWMWater should also indicate the likelihood of allowances being converted to allocations, the changes that are required and the associated timeframes.

Supply by agreement customers

The WIRO requires that prices must signal to customers the costs of providing services but also take the impact on customers into account. The Commission considers that customers that consume the same product should pay the same amount or be subject to the same tariff structure. Therefore, the Commission approves GWMWater's proposal to transition supply by agreement customers onto the standard pipeline tariff over the regulatory period.

However, the price supply by agreement customers currently pay per ML is much lower than the price paid by other channel customers. The Commission understands that the price increase required to move supply by agreement customers onto the standard pipeline tariff is significant, and may be in the order of a four fold increase.

The Commission notes that these price increases may be offset by a number of factors. GWMWater has indicated that large intensive users that meet certain requirements will be eligible to pay discounted capacity charges for taking water during the off-peak period. In addition to receiving standard water allowances, supply by agreement customers will also receive the allocations that they currently have on the channel system.

The price impact on supply by agreement customers is therefore difficult to understand. Despite this, GWMWater's Water Plan does not provide details on how supply by agreement customers will be moved onto the standard pipeline tariff, nor does it provide any details on off-peak discounts. The Commission is therefore concerned about the extent to which supply by agreement customers have been consulted about the price increases or may be unaware of the size of the increases.

While supporting the transition of supply by agreement customers to the pipeline tariff, the Commission considers that any large increases should be made known with as much notice as possible to allow customers sufficient time to plan and adjust their consumption in response to the price change. Further, any large price increases should be implemented over time to reduce adverse customer impacts.

The Commission therefore seeks further information from GWMWater regarding:

- how it proposes to phase in the proposed price increases for supply by agreement customers
- how supply by agreement customers have been consulted about the price increases and
- whether all current supply by agreement customers will be eligible for off peak discounts.

Draft Decision

The Commission proposes to approve in principle GWMWater's proposed pipeline tariff structure.

The Commission seeks further information from GWMWater on its proposed process for allocating growth water to customers, timeframes for introducing tradable rights in its pipeline systems and the impacts of significant price increases for supply by agreements customers.

The Commission proposes to approve GWMWater's proposed pipeline tariff structure if satisfied that its concerns have been addressed.

13.6 Wimmera Irrigation Area tariffs

GWMWater supplies irrigation services to about 230 customers in the Wimmera Irrigation Area. Customers in this area have not received any water for several years because of severe drought conditions.

GWMWater has a standard irrigation tariff structure that consists of a fixed supply charge and a volumetric charge based on water entitlements. However, due to the drought and unavailability of irrigation water, GWMWater currently does not apply the standard tariffs and instead charges a special drought charge of $1,000 per year for customers with entitlements of over 50 ML and $600 per year for customers with entitlements of less than 50 ML.

GWMWater has proposed a new tariff structure for the Wimmera Irrigation Area. The proposed tariff structure is comprised of a fixed service charge that is applied to each service regardless of entitlement, a capacity charge based on the size of entitlement and a sales water charge for all water consumed above entitlement in years where allocations are above 100 per cent.

The key feature of the proposed tariff structure is that the capacity charge varies depending on the size of allocations in each year. The rationale behind this system is that customers will pay more for water in years where they receive higher allocations and are better able to meet the payments. Likewise, customers will pay less in years of low allocation when their income may be adversely affected.

GWMWater has indicated that it proposes to introduce the new tariff structure as soon as allocations in the Wimmera Irrigation Area are over 15 per cent, before which the current special drought tariff will continue to apply. However, the Wimmera Irrigators Association has raised concerns about the continuation of the current drought tariff and the extent to which irrigation sector debt will accrue before the new tariff is put in place.[71]

The proposed tariff levels to apply in 2008-09 are set out in table 13.2

Table 13.2 **Wimmera Irrigation Area tariffs**
2008-09 (nominal prices)

Service charge (per service)	$1000.00
Capacity charge (per ML entitlement / 100 per cent allocation)	$56.00
Capacity charge (per ML entitlement / 50 – 100 per cent allocation)	$28.00
Capacity charge (per ML entitlement / <15 per cent allocation)	$8.50
Sales water charge (per ML used above entitlement / >100 per cent allocation)	$35.00

GWMWater has indicated that over time the proposed tariff structure is expected to recover the total revenue required to operate the Wimmera Irrigation Area. This suggests that the proposed tariff structure is expected to lead to an under-recovery of revenue in years of low allocation and an over-recovery in years of high allocation.

The Commission considers that GWMWater's proposed tariff structure for the Wimmera Irrigation Area is cost reflective in that it is designed to recover the full costs of its operation. Further, it is expected to ease customer impacts of drought by requiring customers to pay more in years when water is available and less when it is not. On this basis, the Commission is satisfied that it is consistent with the WIRO and proposes to approve the proposed tariff structure.

[71] Wimmera Irrigators Association, Submission to Water Price Review Issues Paper.

In relation to the concerns of the Wimmera Irrigators Association, it is suggested that GWMWater explicitly note the revenue shortfall that it expects in each year the current special drought charge remains, and the extent of price increases required to recover this shortfall in future years. GWMWater should provide this information in response to the Draft Decision. If the revenue shortfalls are significant, GWMWater may consider introducing the new tariff structure from the first year of the regulatory period to reduce the future impacts of under-recovery.

> **Draft Decision**
>
> The Commission proposes to approve GWMWater's proposed Wimmera Irrigation Area tariff structure.
>
> The Commission requests further information from GWMWater on the extent of revenue shortfalls from continuing the special drought charge and its expected impact on future prices

13.7 Termination fees

Termination fees are payments made by irrigation customers that no longer require access to a water business's irrigation network. Upon paying the relevant termination fee, a customer can surrender the delivery entitlements linked to their property, including the associated obligation to pay infrastructure access charges on an ongoing basis. In return, the water business would no longer be required to provide delivery services to that customer. Alternatively, customers that still require access to an irrigation network but no longer require the same level of delivery capacity can pay a termination fee to surrender part of their delivery entitlement. The customer would pay less in infrastructure access fees, in return for receiving a smaller share of delivery capacity.

In 2006 the Australian Government requested the Australian Competition and Consumer Commission (ACCC) to develop a consistent approach for the pricing of irrigation services in the Murray-Darling Basin, including principles for calculating termination fees.

ACCC principles

In its report,[72] the ACCC noted that the purpose of a termination fee is to recover a share of the fixed costs that cannot be avoided upon termination of a delivery entitlement. Further, it recommended that termination fees be based on infrastructure access charges, which are generally levied to recover the fixed network costs. More specifically, termination fees should generally be calculated as a multiple of the infrastructure access charge.

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[72] Australian Competition and Consumer Commission, 'A regime for the calculation and implementation of exit, access and termination fees charged by irrigation water delivery businesses in the southern Murray-Darling Basin', 6 November 2006.

A number of factors should be considered when calculating an appropriate termination fee. If termination fees were set at zero, remaining customers would be required to pay more in infrastructure charges to cover the fixed network costs when a customer surrendered their delivery entitlement. In this regard, customers would bear the entire risk of other customers surrendering their delivery entitlements.

However, if termination fees were set high to insulate remaining customers from these risks, customers who would have otherwise terminated their delivery entitlements would be less likely to do so, thus preventing opportunities for the water business to rationalise their networks. Further, the ACCC suggested that the highest possible termination fee (based on the net present value of future infrastructure access charges, calculated into perpetuity) is not appropriate, as there are likely to be fixed costs that are avoidable in the future, but can not be identified as avoidable at the time of termination.

In balancing these factors, the ACCC considered that a termination fee of 8 times the infrastructure access fee is appropriate as an upper limit in the medium to long term. However, in recognising the potential for significant changes in demand for delivery services in the short term as new trading opportunities are created, it recommended a maximum termination fee set at 12 times the infrastructure access charge in 2007-08, and gradually transitioning to a ‘factor’ of 8 over an eight year period.

The Commission has considered the principles recommended by the ACCC for calculating termination fees. It considers that these principles are consistent with the WIRO in that they strike an appropriate balance between protecting remaining customers from the impact of other customers surrendering their delivery entitlements, providing incentives to water businesses to configure their networks in an efficient manner and reducing the potential for future avoidable costs being included in termination fees. Further, the Commission supports a consistent approach to calculating termination fees between jurisdictions to prevent any distortion in the market for water once trading opportunities are created.

The Commission therefore proposes to adopt the ACCC principles in approving termination fees for the next regulatory period. In this regard, the principles suggest maximum termination fees of 11.5 times the infrastructure access charge in 2008-09, decreasing by 0.5 in each year of the regulatory period to a factor of 9.5 in 2012-13.

Assessment of termination fees

Goulburn-Murray Water introduced termination fees in July 2007, calculating them at 15 times the infrastructure access charge in each of its irrigation districts. The Commission notes that these termination fees were first introduced during the first regulatory period, when it was confined to assessing total rural revenue and not individual tariffs. Goulburn-Murray Water proposed to continue calculating termination fees in this manner in each year of the next regulatory period.

However, the Commission notes that Goulburn-Murray Water’s proposed termination fees exceed the maximum termination fees suggested by the ACCC principles. The Commission will seek further clarification from Goulburn-Murray Water as to the reasoning for this inconsistency.

Lower Murray Water introduced termination fees in January 2008, calculating its termination fee at 8 times its shadow access fee. However, it did not provide information on its proposed termination fees for the next regulatory period. The Commission seeks confirmation from Lower Murray Water on whether it continues to calculate termination fees in its current manner.

First Mildura Irrigation Trust refers to termination fees in its Water Plan, but did not propose any explicit prices or methodology for calculating termination fees. Southern Rural Water and GWMWater did not provide information on termination fees in their Water Plans. The Commission seeks confirmation from these businesses on whether they intend to introduce termination fees, and if so, the manner in which they will be calculated.

Draft Decision

The Commission requests clarification from Goulburn-Murray Water on the inconsistency with the ACCC principles.

The Commission requests clarification on whether First Mildura Irrigation Trust, GWMWater, Lower Murray Water or Southern Rural Water proposes to charge termination fees in the next regulatory period. Any termination fees proposed by these businesses should be consistent with the principles recommended by the ACCC.

13.8 Goulburn-Murray Water price changes

Goulburn-Murray Water has proposed on average to increase prices by 2.2 per cent per annum across all of its services.[73] However, it does not propose to increase prices for all services proportionately. Instead, it has generally proposed different price increases for different services and different districts. In some cases the differences in the proposed price changes are significant. The WIRO requires that prices must be set in order to signal to customers the costs of providing services. The Commission must therefore be satisfied that differences in price changes proposed by Goulburn-Murray Water are based on differences in cost changes.

In order for it to be satisfied that the proposed price changes are reflective of changes in cost, the Commission has sought further clarification on a number of matters. These were cases where significant price changes were proposed but the Water Plan did not contain enough information to satisfy the Commission how the price increases were based on changes in cost, and cases where disproportionate price changes were proposed for seemingly similar services. The issues that the Commission sought further clarification on are listed below.

[73] Average annual increase also includes five years of prices for gravity irrigation and drainage.

- Prices for pumped irrigation services are proposed to increase by around 3.1 per cent per annum in Woorinen and 1.7 per cent per annum in Nyah, but decrease by around 5.5 per cent in Tresco. It is noted that the three pumped irrigation districts are located in the same area and a similar service is provided in each district. The Commission required further information explaining the cost drivers behind the differences in price changes between districts.
- Prices for surface water diversions are proposed to increase by about 10 per cent in each year of the regulatory period, while the annual average increase for groundwater prices is around 8 per cent. The Commission understands that this is in part due to increased metering, monitoring and resource management obligations, but required further information on how the changes in cost translates to the proposed price increases.
- Gravity irrigation prices are proposed to remain constant in real terms for four of the seven gravity irrigation districts in 2008-09 as the scope of the Food Bowl Modernisation Project is finalised. However, prices are proposed to increase by 4.6 per cent in 2008-09 for Torrumbarry and Pyramid-Boort and decrease by 7 per cent in Campaspe. The Commission required further information on the reasons for the disproportionate changes in gravity irrigation prices in 2008-09.
- Significant price increases have been proposed for subsurface drainage charges in 2008-09 for Central Goulburn, Murray Valley, Rochester and Shepparton and for surface drainage services in Pyramid-Boort. The Commission required further information on the drivers behind these large price increases.

In response to the Commission's requests for clarification, Goulburn-Murray Water provided the following explanations.

- Differences in pricing adjustments between pumped irrigation districts are predominantly due to changes in Advanced Maintenance Program (AMP) expenditure between districts and issues regarding recovery of revenue from previous periods. Prices that applied in 2006-07 and 2007-08 in Tresco were set to recover deficits from previous years. The recovery of this revenue in the first regulatory period and the reduction of AMP expenditure to zero in the second regulatory period have resulted in price decreases for Tresco. AMP expenditure in Nyah has also been reduced to zero, but started at a lower level compared to Tresco, which corresponds to smaller price decreases. No AMP expenditure was incurred in Woorinen during the first regulatory period. This, combined with the recovery of a small revenue shortfall from the first regulatory period, has resulted in price increases in the second regulatory period.
- Relatively large price increases for surface water and groundwater diversions are mainly due to the expected metering maintenance costs as meters are commissioned across the various districts. Some small differences in price changes between regulated and unregulated systems are due to returns of bank surpluses.
- Price increases for Torrumbarry and Pyramid-Boort in 2008-09 are due to the recovery of revenue shortfalls from the first regulatory period and because prices in 2007-08 are lower due to smooth annual price decreases in the first regulatory period. Price decreases for Campaspe in 2008-09 are due to the completion of AMP activities in the area during the first regulatory period.

- Relatively large price increases for subsurface drainage are mainly due to the recovery of revenue shortfalls from the first regulatory period. These revenue shortfalls were due to lower than expected water consumption, on which subsurface drainage charges are largely based. The price changes required to recover the shortfall is further magnified by the small amount of revenue received through subsurface drainage and by applying the increase in 2008-09 only, with prices remaining constant over the final four years of the regulatory period.

The Commission considers that the information provided by Goulburn-Murray Water provides a reasonable explanation of the drivers behind the relatively larger price increases and of disproportionate price changes between districts for gravity and pumped irrigation. It is also noted that Goulburn-Murray Water has consulted on the proposed price changes with its customer committees before submitting its final Water Plan.[74] Further, Goulburn-Murray Water's expenditure forecasts have been assessed by Cardno Atkins, which did not propose significant changes to its expenditure forecasts. On this basis, the Commission considers that the proposed price increases by Goulburn Murray Water are likely to be cost reflective and provisionally proposes to approve its tariffs.

However, the Commission would like to understand in more detail how Goulburn-Murray Water determines its prices for different services and districts from first principles, including how Goulburn-Murray Water determines a 'revenue requirement' for each service and district, how these are expected to change over the regulatory period and subsequent effects on prices. The Commission will seek this information between the Draft and Final Decisions to confirm the relationship between the cost drivers suggested by Goulburn-Murray Water and the proposed price changes.

Draft Decision

The Commission provisionally proposes to approve Goulburn-Murray Water's proposed tariffs for pumped irrigation, diversions, groundwater, and domestic and stock services for the five year regulatory period and gravity irrigation and drainage tariffs for 2008-09.

The Commission proposes to approve these prices subject to it receiving more detailed information confirming the relationship between the underlying cost drivers and proposed price changes.

13.9 Lower Murray Water tariffs

The Commission has previously indicated that customer impacts of price changes can be managed effectively through gradual or smooth price changes over the regulatory period.

[74] Goulburn-Murray Water, Water Plan, pp. 71 – 72.

This can be achieved by increasing each individual tariff component by the same rate in each year of the regulatory period. This rate is set in order to ensure that the total revenue requirement over the regulatory period is recovered, even though revenue generated in any single year may not match the revenue requirement of that year. It is noted that businesses are not required to set prices such that revenue earned in each year of the regulatory period exactly matches the approved revenue requirement for that year. The Commission only requires that total revenue earned equals the total revenue requirement for entire regulatory period, in net present value terms.

However, businesses have flexibility in setting price paths for individual tariff components. For example, businesses may prefer a relatively larger increase in the first year of the regulatory period followed by more moderate rises in cases where there is significant initial expenditure. The Commission considers price paths such as these are appropriate provided they are justified on the basis of cost or are intended to negate larger price changes at the start of the following regulatory period. Further, single year price changes should not be so large that they cause unnecessary and adverse customer impacts. However, price paths where significant increases are followed by significant decreases should be avoided.

For a number of its services, Lower Murray Water has proposed tariffs that include price paths with significant volatility over the regulatory period. To illustrate, table 13.3 sets out Lower Murray Water's proposed tariffs and associated price paths for irrigation delivery shares and usage charges. Price paths for several other Lower Murray Water services also exhibit similar volatility.

Table 13.3 **Lower Murray Water – irrigation price paths**
2008-09 (January 2007 prices)

		2007-08	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Merbein	Delivery share	215.04	216.00	216.00	216.00	216.00	216.00
	% change	-	0.44	0.0	0.0	0.0	0.0
	Usage charge	33.92	40.00	40.00	33.00	33.00	33.00
	% change	-	17.9	0.0	-17.5	0.0	0.0
Red Cliffs	Delivery share	308.28	246.17	256.28	297.52	339.14	373.32
	% change.	-	-20.2	4.1	16.1	14.0	10.1
	Usage charge	40.35	41.65	45.72	36.30	36.30	36.30
	% change	-	3.2	9.8	-20.6	0.0	0.0
Robinvale	Delivery share ($)	464.98	422.62	538.86	548.38	541.09	534.81
	% change		-9.1	27.5	1.8	-1.3	-1.2
	Usage charge	37.83	41.86	60.01	49.45	50.35	49.96
	% change		10.7	43.3	-17.6	1.8	-0.8

The Commission has concerns about cases where significant price increases for a particular tariff component are followed by significant decreases (and vice versa), which is the case for a number of Lower Murray Water services. Specifically, it is concerned that such price volatility is not likely to be based on changes in cost and that significant single year increases are likely to cause adverse impacts for some customers. Further in the absence of customer support, price paths that contain significant volatility are also likely to be difficult for customers to understand. The Commission therefore requests that when it resubmits its proposed tariffs in response to this Draft Decision, that Lower Murray Water ensures that the price paths are smoothed and do not contain unnecessary volatility.

Draft Decision

The Commission requests that Lower Murray Water ensure that its price paths do not contain unnecessary volatility when it resubmits its proposed tariffs in response to this Draft Decision.

14 MISCELLANEOUS CHARGES

14.1 Introduction

In addition to water, sewerage, rural water and other ‘core’ services, businesses also provide miscellaneous services, which are supplied in connection with these core services. In the case of urban services, miscellaneous services include new connections, special meter reads and meter testing, providing property information statements and reviewing applications to build over easements. Some examples of rural miscellaneous services include licence application and licence transfer fees. Like core services, miscellaneous services are also prescribed services under the WIRO and are subject to price regulation by the Commission.

14.2 Approach to regulating miscellaneous services

Current arrangements

At present, miscellaneous services are generally regulated through individual price caps. In some cases, where the price for a service varies on a case-by-case basis or where the price represents a transfer of a third party cost to a customer (such as bank dishonour fees or debt recovery fees), miscellaneous charges are set on an ‘actual cost’ basis. Businesses are currently not able to charge for miscellaneous services that were not approved in their determinations, but may introduce charges for new services, subject to approval by the Commission.

The 2005 Urban Water Price Review and the regulation of miscellaneous services over the current regulatory period have highlighted a number of issues. One area of concern is that prices for many miscellaneous services differ significantly between businesses, despite the apparent similarity in services. While recognising that businesses operate in different environments and face different costs, it is also likely that differences in price may also be explained by differences in terminology. Another issue is that the range of miscellaneous services varies significantly between businesses, with some businesses having as little as 20 scheduled miscellaneous charges and other businesses having several hundred. This further highlights the differences in approach between businesses.

Businesses’ approved price schedules only list the name of each service and a maximum price and do not indicate the circumstances in which the charges apply. While this is not a concern with core services such as water and sewerage, some confusion may occur about when a scheduled miscellaneous service does or does not apply. The Commission is also aware of a number of cases where the application of a scheduled miscellaneous charge has been the source of customer confusion or complaint.

Miscellaneous services also only generate a small percentage of total revenue. It is also likely that a small number of important miscellaneous services constitute a significant proportion of miscellaneous revenue, meaning that many miscellaneous services generate only a very small amount of revenue. For some businesses, it is highly likely that some scheduled miscellaneous charges have not been applied at all during the current regulatory period. Most scheduled charges are regulated through individual prices caps and are subject to the annual tariff approval process. Businesses must also apply to the Commission to add new scheduled charges, whether it is a new service or if the charge was omitted during the initial submission and approval process. Given their relative immateriality, the Commission considers that the current approach to regulating miscellaneous services may not be the most appropriate.

To address these issues, the Commission proposed an alternative approach to regulating miscellaneous services.

Proposed approach

Under the Commission's proposed approach, each business would identify a 'core' set of miscellaneous services. The core set would consist of the business's most important miscellaneous services and would be expected to generate a significant proportion of total miscellaneous revenue. Core miscellaneous services would be included in the business's approved price schedule (which forms part of the determination) and would be subject to individual price caps and the annual tariff approval process. To improve customer understanding about the nature of the service and the circumstances in which the charge would apply, each core miscellaneous service would also have a clear definition included with it in the approved price schedule.

Unlike the previous approach, businesses will be able to charge for miscellaneous services that are not included in their approved price schedule. Businesses would be required to set prices for all other 'non-core' miscellaneous services consistent with a pricing principle related to actual cost. The Commission has previously advised that prices for non-core miscellaneous services should:

- reflect the direct costs of service provision (including materials and/or costs associated with contractors)
- reflect the internal costs incurred by the water businesses such as labour, transport and general overheads
- for new miscellaneous services, exclude costs previously accounted for in approved prices and
- be transparent.

In charging for non-core miscellaneous services, businesses have flexibility to either set a standard price for a service based on the principle of actual cost, or to apply actual cost on a case-by-case basis. For many services (for example, a meter accuracy test), it would be appropriate to set a standard price and to review that price on an annual basis to ensure that it still represents actual cost. In other cases where the service is not frequently provided (such as larger meter installations) it would be appropriate to apply actual cost on case-by-case basis.

The Commission considers that businesses are best placed to decide on these matters.

Businesses may also continue to charge the same prices that are in their existing approved price schedules, provided that all prices continue to represent actual cost. The difference between the current and proposed approach is that non-core charges would not be included in businesses' approved price schedules and not be subject to the annual price approval process. Instead, the Commission may monitor the pricing of non-core miscellaneous services in a more general review of compliance with pricing principles as part of the annual audit process.

The Commission sees merit in developing more consistency between businesses in their approach to providing and charging for miscellaneous services. However, it is also recognised that the time and resources required to achieve such consistency would not be immaterial. Lower Murray Water indicated in its Water Plan that it and five other water businesses recently compared miscellaneous services. It was found that even prices for property information statements (which is a miscellaneous service common to all businesses) were not easy to compare as each business includes different components in that service.[75] Recognising the difficulty in achieving broader consistency, the Commission does not propose that businesses adopt a standard core set of miscellaneous services or price core services at the same level in the forthcoming regulatory period. However, the Commission proposes that a consistent method for calculating actual cost should be used by businesses from the start of the regulatory period.

In their Water Plans, most businesses set out their proposals for miscellaneous charges. However, businesses proposed a wide range of approaches to setting miscellaneous charges and adopted the Commission's previous guidance to varying extents. South Gippsland Water nominated a core set of eight miscellaneous services including definitions. Gippsland Water proposed a core set that was significantly reduced from its current schedule, while Central Highlands Water proposed a set of five core miscellaneous services, but did not propose definitions. Conversely, North East Water and Goulburn Valley Water proposed to retain their current schedule of miscellaneous services. Barwon Water and Coliban Water did not include detailed information on miscellaneous services in their Water Plans, but indicated that they were developing a core set.

The Commission therefore sought further information from businesses in order to achieve some consistency in approach. Specifically it requested businesses to identify a core set of miscellaneous services, definitions of each core service and a proposed method for calculating actual cost. This information has been received from all businesses except Barwon Water, GWMWater, Lower Murray Water, and North East Water. Barwon Water and Lower Murray Water have indicated that they will provide this information in response to the Draft Decision. The Commission will consult with GWMWater and North East Water between the Draft and Final Decisions.

[75] Lower Murray Water, Water Plan (Part B), p. 51.

The Commission proposes that this approach to regulating miscellaneous services be adopted on a state-wide basis from the first year of the regulatory period. The Commission will consult with the metropolitan water businesses in adopting the proposed approach in 2008-09.

14.3 Assessment of miscellaneous services

Identification of core miscellaneous services

Businesses have generally used a selection of key miscellaneous services from their current price schedules for inclusion in their core sets. The Commission generally proposes to approve the miscellaneous charges that businesses have proposed to include. However, the Commission suggests that the following charges not be included in businesses' core sets:

- Coliban Water rental and grazing licence charges
- Coliban Water and East Gippsland Water debt collection charges
- East Gippsland Water contract management fees and South Gippsland Water administration developer fees and
- Wannon Water water tapping and water meter dirt box charges for connections greater or equal to 75mm.

Grazing licences and rental services are both non-prescribed services and hence not subject to price regulation by the Commission. Debt collection fees are set on an actual cost basis, and do not require scheduled charges like other core services. Contract management fees and developer administration fees are levied as a percentage of contract value or cost of works, which also do not require scheduled charges. Wannon Water has indicated in its response that it does not expect any new connections that are 75mm or greater. As such it is suggested that these charges be included as non-core services.

The Commission proposes to approve the inclusion of all other core miscellaneous services proposed by Coliban Water, Central Highlands Water, East Gippsland Water, Goulburn Valley Water, South Gippsland Water and Wannon Water. The core miscellaneous services that the Commission proposes to approve, and the definitions proposed by businesses are set out in table 14.1 at the end of this section.

Western Water and Westernport Water have proposed miscellaneous price schedules that include some minor revisions from their existing schedules. However, neither business proposed a set of core miscellaneous services or provided any definitions for the services. The Commission therefore requests that Western Water and Westernport Water nominate a core set of miscellaneous services and provide definitions in response to the Draft Decision.

The Commission's preference is for businesses to recover a significant percentage of their miscellaneous revenue through their core services. In providing their additional information, Coliban Water, East Gippsland Water and Wannon Water indicated that they expected their core set to generate 75 per cent of all miscellaneous revenue, while Central Highlands Water indicated that its core set would recover 80 per cent. The Commission considers that a percentage of greater that 75 per cent constitutes a significant amount.

In response to this Draft Decision, Gippsland Water, Goulburn Valley Water and South Gippsland Water should confirm the percentage of total miscellaneous revenue they expect to receive through their core services. The Commission also suggests that Coliban Water and East Gippsland Water include additional core services to ensure that the percentage is at least 75 per cent.

In regards to definitions for core miscellaneous services, the Commission considers that they should be clear and provide sufficient detail for customers to understand the nature of the service and the circumstances in which the charge will apply. The Commission notes that the level of detail in the proposed definitions differs between businesses. Wannon Water's definitions include the most detail, but the Commission considers that most of the proposed definitions are sufficient. However, the Commission suggests that East Gippsland Water review its definitions to indicate more clearly the nature of the service being provided and the situations in which they will be applied.

The Commission notes that definitions for core miscellaneous services will be included in the approved price schedules. Businesses are therefore invited to revise their definitions between the Draft and Final Decisions if they believe that improvements can be made. Any proposed revisions will be reviewed by the Commission before the Final Decision.

Adjustment of core miscellaneous services

Most of the businesses proposed to keep prices for miscellaneous services constant in real terms over the regulatory period. Goulburn Valley Water and South Gippsland Water have proposed to increase their standpipe water charges at the same rate as their water usage charges. Western Water has proposed to increase its miscellaneous charges by 4 per cent per annum in real terms. Wannon Water has proposed to increase its miscellaneous services at the same rate as its Group 2 water charges, which the Water Plan indicates are proposed to increase by 9.5 per cent per annum in real terms.

The Commission proposes to approve all proposals to maintain core miscellaneous charges constant in real terms over the regulatory period and also Western Water's proposed price increases. The Commission proposes to accept these price changes on the basis that they are based on prices that were approved during the 2005 Urban Water Price Review and are proposed to increase by less than the average price increases. The Commission also proposes to approve Goulburn Valley Water's and South Gippsland Water's proposals for increasing standpipe water charges over the regulatory period.

However, the Commission is not satisfied that the increases proposed by Wannon Water are reflective of increases in costs. It is noted that proposed increases for miscellaneous services exceed the average annual increase for the whole business. Wannon Water is invited to provide further cost information in support of its proposals. If it is then not satisfied that the price changes are cost reflective, the Commission proposes to limit the price increases to Wannon Water's average price increase.

Calculation of actual cost

The Commission requested that businesses propose a method for calculating actual cost for non-core miscellaneous services. In response, businesses proposed a variety of methods for calculating actual cost. Businesses generally proposed that actual cost should include any third party costs incurred in providing the miscellaneous service and direct internal costs (such as labour and materials). Most businesses also proposed to include a margin for overheads. Some businesses nominated a contribution for overheads in percentage terms, ranging from 10 per cent for Westernport Water to 50 per cent for East Gippsland Water.

All businesses currently provide a small number of miscellaneous services on an actual cost basis, with each business's determination specifying the method for calculating actual cost. However, the current methods also vary significantly between businesses. As a larger number of miscellaneous charges will be based on actual cost in the next regulatory period, the Commission considers that it is appropriate if a standard method for calculating actual cost is adopted. Further, this will assist any future review of miscellaneous charges aimed at gaining consistency across the state.

The Commission proposes that actual cost is based on:

> direct third party or contractor invoice cost
>
> *plus*
>
> direct marginal internal costs (including labour, materials and transport)
>
> *plus*
>
> a 25 per cent contribution to overheads.

In the case of bank dishonour, debt collection and legal fees, the third party costs shall be charged directly to the customer without a contribution for internal costs or overheads.

This methodology is concise, easy to apply, and captures the key direct costs of providing the miscellaneous services. The Commission does not consider that miscellaneous services should contribute a significant amount to fixed corporate overheads, as these costs are not likely to vary significantly with changes in the volume of miscellaneous services provided.

Draft decision

The Commission proposes to approve all core services nominated by Central Highlands Water and Goulburn Valley Water. The Commission generally proposes to approve the core services nominated by Coliban Water, East Gippsland Water, South Gippsland Water and Wannon Water with some minor adjustments.

The Commission suggests that East Gippsland Water review its proposed definitions of core miscellaneous services to better describe the nature of the service being provided and the circumstances when the charge will apply. The Commission proposes to approve definitions proposed by other businesses for their core miscellaneous services.

The Commission proposes to not approve Wannon Water's proposed increases for core miscellaneous services, but invites Wannon Water to provide further costs information on its proposals. The Commission proposes to approve the price changes proposed by all other businesses.

The Commission proposes that actual cost is based on:

direct third party or contractor invoice cost

plu*s*

direct marginal internal costs (including labour, materials and transport)

plus

a 25 per cent contribution to overheads.

In the case of bank dishonour, debt collection and legal fees, the third party costs shall be charged directly to the customer without a contribution for interrnal costs or overheads.

Table 14.1 **Core miscellaneous services and definitions**

	Service	*Definition/Description*	*2007-08 price (current $)*
Coliban	Project management charge (per project)	Fees charged to developers who install water and sewer reticulation assets (through subdivisions)	293.47
	Project management charge (per meter)	Fees charged to developers who install water and sewer reticulation assets (through subdivisions)	1.56
	Information statements	Property information statement as required under Section 158 of the Water Act 1989.	44.47
Central Highlands	Special meter reading fees	Reading of water meter by member of Central Highlands Water staff upon request of customer.	21.52
	Meter cost – 20mm	Sale of a new 20mm water meter over the counter to a registered plumber.	86.10
	Tariff certificates	Information statement upon request to prepare for the sale of land or property that shows outstanding monies at settlement and incumbencies of Central Highlands Water interests.	39.29
	Plumbing consent fee	Certificate that allows plumbing work to be done that affects Central Highlands Water infrastructure on a land block or building lot.	96.87
	Tapping fees – 20mm standard	Central Highlands Water maintenance staff to attend to and install a 20mm water tapping at plumbers, land developers or property owner's request.	182.99
East Gippsland	Property information statement	Information pertaining to water and wastewater fees and charges service (each)	44.04
	Water tapping fees	Customer tapping into mains (20mm each)	118.92
		Water meter connection fee (20mm each)	168.48
	Sewerage connection application fee	Provision of plans and sewer connection details to customer	118.92

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Table 14.1 (continued)

	Service	*Definition/Description*	*2007-08 price (current $)*
Goulburn Valley	Information statement	The provision of property information to solicitors and others to assist with property conveyancing.	39.30
	Special meter read	Meter read requested by property owner to facilitate property conveyancing or tenancy changes	21.50
	Water sales via standpipes (per kL)	This service provides water to water cartage contractors via standpipes. Water is then delivered by the Cartage Contractor to rural properties and other users including road making.	1.26
	Sewer connection fee	Application fee to connect a new property to sewer reticulation.	120.80
	Meter fee – 20mm meter	The supply of a meter for the connection of new property or to replace damaged meter.	128.40
South Gippsland	Property information statements	Fee imposed for providing a certificate issued in accordance with Section 158 of the Water Act 1989.	39.05
	Special meter readings	Fee imposed for providing a certificate which indicates water usage charges up to a specified date. Generally provided, on application, for property sales.	20.01
	As constructed charge	Fee for preparing as constructed asset information from the field then transferring to maps, for both water and sewerage systems.	53.69
	20mm tapping fee	Fee imposed for meter and labour associated in providing a tapping to the water main.	295.79
	Plumbing industry commission (PIC) fee	Fee imposed for providing sewer plans and processing applications to connect or modify plumbing.	166.50
	Septic tank waste receival (per kL)	Fee imposed on septic tank waste carters, for the disposing of sewage and/or other acceptable waste.	20.00

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Table 14.1 (continued)

	Service	*Definition/Description*	*2007-08 price (current $)*
	Standpipe water sales fee (per kL)	Imposed for the sale of water via a metered standpipe. 300 per cent of uniform volumetric rate per kL for registered users, 400 per cent of uniform volumetric rate per kL for unregistered users	
Wannon	Water tapping fees (including fire service connections)	This charge provides for the attendance of Wannon Water personnel to the site to complete an under pressure water tapping of the water main. The excavation is to be prepared by the customer's plumber to the standards specified by Wannon Water to ensure safe access by Wannon Water personnel to the water main. The charge includes the provision of a tapping band, ferrule and ferrule bend (where required). The same charge applies for fire service tapping.	
		20mm connection	182.57
		25mm connection	205.07
	Water meter & dirt box	This charge provides for a standard water meter assembly with single check valve. It does not include back flow prevention devices. Larger diameter meters may be an electronic type meter at the discretion of Wannon Water. The fitting of the water meter is the responsibility of the customer's plumber. The meter will be issued on site.	
		20mm connection	65.92
		25mm connection	219.71
	Water disconnection fee	This charge applies where a water service is no longer required and the tapping is to be decommissioned. The charge provides for the attendance of Wannon Water personnel to the site to decommission the water service. The excavation is to be prepared by the customer's plumber to the standards specified by Wannon Water to ensure safe access by Wannon Water personnel to the water main. The charge includes all materials and fittings.	100.00

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Table 14.1 (continued)

Service	Definition/Description	2007-08 price (current $)
Sewer cut-in	The sewer cut in charge provides for the attendance of Wannon Water personnel to the site to complete a cut into a sewerage main. The excavation is to be prepared by the customer's plumber to the standards specified by Wannon Water to ensure safe access by Wannon Water personnel. Included in the charge is the provision of a fitting on the sewer main which enables the customer's plumber to connect the property drain to.	
	20mm connection	470.00
	25mm connection	600.00
Sewer connection applications	The sewer connection application charge provides for processing of an application for a sewer connection or alteration. Once the application has been approved a Plumbing Industry Commission (PIC) number will be issued. Note that the application charge does not include the PIC fee.	
	Residential	80.00
	Non-residential	120.00
Sewer disconnection applications	Where a sewerage connection is no longer required, the connection point needs to be decommissioned. The charge provides for the attendance of Wannon Water personnel to the site to seal the connection point. The excavation is to be prepared by the customer's plumber to the standards specified by Wannon Water to ensure safe access by Wannon Water personnel. The charge includes all materials and is for a single connection, multiple disconnections receive multiple charges.	80.00
Information statement	Wannon Water is required by law to prepare and issue information statements where requested. The charge includes undertaking a special meter read and provision of an asset location plan where required.	70.00

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Table 14.1 (continued)

Service	Definition/Description	2007-08 price (current $)
Special meter reading	Wannon Water is required in a number of circumstances to attend a property to read the water meter to establish the water use at a specific point in time. The charge includes Wannon Water's time to attend the site and record a meter reading. This charge applies in all circumstances except where a tenant commences a new tenancy at a property, whereby the Tenant Meter Reading Fee applies.	40.00
Tenant meter reading	This charge applies where a tenant commences a tenancy arrangement at a property. It includes Wannon Water's time to attend the site and record a meter reading.	15.00

15 ADJUSTING PRICES

15.1 Introduction

Typically under incentive regulation, a price path is set for the regulatory period based on assumptions about the services to be provided, their associated costs and demand levels. The cost and demand forecasts are often subject to some uncertainty.

The Commission does not normally adjust approved prices for prescribed services during the regulatory period to reflect differences between actual and forecast costs of service provision. Businesses must manage any differences between actual and forecast costs during the period and either bear the loss (or retain the benefit) from higher (or lower) than forecast costs. This approach provides businesses with an incentive to manage their costs efficiently during the regulatory period. Similarly, businesses are generally expected to manage any divergences between actual and forecast demand levels.

Businesses have several options for dealing with differences between actual and forecast costs and demand. Businesses may, for example, re-prioritise their capital projects or programs. In consultation with customers, a business could decide to defer or cancel certain projects, or to bring other projects forward, to cope with changes in circumstances over the regulatory period.

However in some cases, it may be appropriate to adjust prices to reflect the impact of specific events that are outside the control of the water businesses and have a significant impact on the businesses' financial viability.

15.2 Commission's approach

The Commission has previously set out its guidance on dealing with uncertainty and unforeseen events in its *2008 Water Price Review Framework and Approach Paper* (released December 2006) and *2008 Water Price Review Guidance Paper* (released March 2007). The Commission noted that it accepted the need to include in Water Plans provisions to deal with different sources of uncertainty, particularly those that are beyond the control of businesses. The Commission recognised that, due to significant uncertainty in the timing and cost of major capital projects and the continuing impact of drought, one or more of the following mechanisms would be used:

- adopting an appropriate form of price control
- making end of period adjustments during the subsequent price review process and

- other mechanisms for dealing with uncertainty, such as establishing pre-determined pass throughs or adjusting prices during the period when particular materiality thresholds or triggers are satisfied.

The Commission recognised that particular mechanisms may be best suited to dealing with particular types of uncertainty. For example, predetermined pass throughs may be the most effective means of dealing with known but uncertain major capital projects while adopting an appropriate form of price control may best assist businesses to deal with demand uncertainty. The Commission asked businesses to clearly identify the likely areas of uncertainty affecting them and to propose mechanisms for dealing with that uncertainty in their Water Plans.

Any option involving a price adjustment by the Commission would need to be carefully defined so that the costs of making the adjustment did not outweigh the benefits. These costs include the costs to the business of identifying and assessing the impact of a particular event, the Commission assessing such an application and the weakening of the regulatory regime’s incentive structure. The adjustment mechanism would need to be symmetric so that both positive and negative impacts are taken into account. Customers would bear additional costs from negative events and benefit from lower costs resulting from positive events.

15.2.1 Form of price control

The form of price control adopted can assist businesses to offset the impacts of uncertainty. The various forms of price control have differing advantages and disadvantages in terms of risk sharing between businesses and their customers, price certainty for customers and business flexibility to adjust prices to reflect changes in circumstances. In determining an appropriate form of price control, businesses and the Commission have to weigh up a number of factors, including the nature and magnitude of relevant uncertainties, potential impacts of unforeseen events on business costs and financial viability, customer preferences and potential customer impacts.

Individual price caps or a tariff basket may be more appropriate when fixed costs are relatively low and operating costs vary significantly with the quantity of water or sewerage services provided. Under a price cap, revenues would increase with higher sales to recover higher operating costs. When sales of water or sewerage services and the total cost of providing those services were less than forecast, revenues would also be lower than forecast.

When fixed costs comprise a significant part of businesses’ total costs, individual price caps may still be appropriate when customers place a high value on certainty in prices over the regulatory period. Businesses will bear the risk of revenue volatility (and potential impacts on financial viability) when actual levels of demand or supply vary significantly from forecast levels.

Under a tariff basket, businesses can adjust some prices more than others, provided the weighted average price increase is within the cap set for the basket of regulated prices. Customers are therefore exposed to some risk of price volatility over the period. Setting a rebalancing constraint will place a limit on businesses’ flexibility to change relative prices and reduce potential price volatility for customers.

A revenue cap is often an effective mechanism for assisting businesses to deal with demand and supply uncertainty. This form of price control is more appropriate when most of a business's costs are fixed and do not vary significantly with the level of demand or supply. The revenue cap would be set to recover the business's efficient costs. Under a revenue cap, businesses would raise prices to offset the impact of lower than forecast sales of water services – due to lower than expected demand or supplies of water (due, for example, to drought and the imposition or tightening of water restrictions) – to ensure approved revenues are achieved. Conversely, when sales of water services are higher than expected, businesses would reduce prices to ensure revenues stayed within the cap. However, a revenue cap exposes customers to the risk of price volatility and potential customer impacts from higher (or lower) price levels than forecast.

In the 2005 Urban Price Review, the Commission expressed a preference for individual price caps for the first regulatory period. The Commission argued that price caps were preferred because of the period's short duration, data unavailability, and the need for confidence that businesses would implement tariff structures that complied with the WIRO. In addition, price caps would provide greater certainty to customers about the prices that would apply and minimise administrative costs.

The Commission stated that it was willing to consider business proposals for a tariff basket provided the business demonstrated that:

- it had clearly articulated in its Water Plan a well defined tariff strategy consistent with the WIRO
- prices will be set consistent with that tariff strategy
- it will adequately consult with customers and consider their interests in proposing any price changes during the regulatory period and
- the impact of price adjustments to customer categories will be limited by an approved rebalancing constraint specified in the business's Water Plan.

The Commission approved individual price caps for most urban businesses. A tariff basket approach was approved for the water and sewerage services provided by South East Water and Portland Coast Water, subject to a 3 per cent rebalancing constraint.

A different approach was taken for the rural businesses. In the 2006 Rural Price Review, the Commission determined that revenue caps would provide strong incentives for businesses to minimise costs, while taking into account the rural businesses' historically greater revenue variability and allowing for unbundling of water entitlements and introduction of new tariffs over the period.

Due to significant uncertainty about expected conditions during the forthcoming regulatory period, the Commission has decided to introduce a hybrid form of price control (individual price cap with tariff basket). The proposed approach combines individual price caps with opportunities for businesses to adjust their tariff strategies (and associated prices), at the time of the annual price approval process, to suit prevailing conditions. Price adjustments would have to be consistent with the approach proposed for a tariff basket, including limiting average annual price increases across the range of tariffs to the average increase for the tariff basket. 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 considers this approach balances an appropriate degree of business flexibility with price certainty for customers.

15.2.2 Adjustments from the first period

In its previous price reviews, the Commission introduced mechanisms to deal with changes in legislative obligations and catastrophic events. End of period adjustments relating to the first regulatory period are discussed in chapter 7.

The Commission proposes for the forthcoming regulatory period to implement specific mechanisms, such as pass throughs for uncertain capital projects and licence fees and within-period reviews for differences between actual and forecast demand levels (see chapters 4 and 5 and section 15.2.3). Therefore the Commission expects end of period adjustments will be less likely for the second regulatory period as most significant impacts from uncertain events will be dealt with during the period. End of period adjustments will continue to be made in respect of unforeseen changes in legislative and other Government-imposed obligations during the period.

15.2.3 Other mechanisms for dealing with uncertainty

In its previous guidance, the Commission considered other mechanisms for dealing with uncertainty, including establishing pre-determined pass throughs or adjusting prices during the period when particular materiality thresholds or triggers are satisfied.

Pass through mechanisms

Pass through mechanisms are most appropriate for uncertain events that can be identified but for which the impacts cannot be predicted with any certainty prior to making a price determination. Such events should be clearly observable and verifiable and outside the control of the business. In previous price reviews, the Commission established a mechanism for passing through differences between actual and estimated licence fees levied by the Environment Protection Authority (EPA), Department of Human Services (DHS) and the Commission at the end of the period (see chapter 4). Chapter 5 discusses a proposed pass through mechanism for uncertain major capital projects.

Within-period review

Due to continuing significant uncertainty around demand and supply levels, the Commission proposes for the second regulatory period to monitor the level of demand and water restrictions over the period. Where the Commission considers actual demand levels are sufficiently different from those assumed at the time of the price determination, it proposes to conduct a within-period review to assess the impact on businesses' revenues. Such a review could be initiated by the Commission or requested by a business. Where the Commission finds a material impact on revenue, prices may be adjusted during the period.

Low demand forecasts result in higher prices than those based on higher demand forecasts. If demand forecasts are shown to have been too conservative, prices will have been higher than necessary to meet the businesses' revenue requirement and customers will have paid too much. Conversely, if demand forecasts are shown to have been too optimistic, prices will have been set too low to cover the businesses' revenue requirement. Without an adjustment mechanism to deal with demand uncertainty, the businesses would have an incentive to forecast conservative demand levels to reduce the risk of not recovering their reasonable costs.

The Commission considers that, in the context of continuing significant uncertainty about the demand forecasts for the second regulatory period, providing for within-period review is the most appropriate means of striking a balance between protecting customers and ensuring businesses can recover their reasonable costs. If demand forecasts prove to be significantly too conservative (too optimistic), the Commission will adjust prices downwards (upwards). Thus, each business and its customers will share the risk from uncertainty in the demand forecasts.

Any within-period review would focus solely on the impact of any significant divergences between actual and assumed demand levels. The review would not constitute a full re-opening of the determination.

Other price adjustments during the period

For other unforeseen events, such as catastrophic events and natural disasters, the Commission noted in its previous guidance that it would consider business applications to adjust prices during the period where those events had a material impacts on costs. Where the impact on costs was so significant as to prevent a business from meeting its service requirements and obligations without compromising its financial viability, prices may be adjusted during the period to reflect these additional costs.

In assessing any applications for price adjustments, the Commission will consider whether the unforeseen event can be dealt with through other mechanisms and whether the application appropriately balances customer interests, business viability and minimising administrative costs.

15.3 Overview of business proposals

In its guidance for this price review, the Commission asked businesses to clearly identify the likely areas of uncertainty affecting them and to propose mechanisms for dealing with that uncertainty in their Water Plans, including their preferred form of price control.

15.3.1 Form of price control

The majority of urban businesses proposed to remain under price cap regulation (table 15.1). However, Barwon Water, Coliban Water, Goulburn Valley Water, Lower Murray Water (urban) and Wannon Water proposed to move to a tariff basket approach. Goulburn Valley Water proposed a tariff basket approach with individual price caps for some services (without specifying those services in its Water Plan). Coliban Water and Wannon Water proposed a set of price caps within a tariff basket.

Of the rural businesses, only Goulburn-Murray Water proposed to remain on a revenue cap (table 15.1). Southern Rural Water proposed to remain on a revenue cap for most services but to have individual prices caps (or a tariff basket) for recycled water and fee based applications (that is, for diversions). Lower Murray Water (rural) proposed to move to a tariff basket approach. FMIT did not propose a form of price control for the coming period; however it was subject to a revenue cap in the first period.

GWMWater proposed to move to a tariff basket within a revenue cap for both its rural (formerly revenue cap) and urban (formerly price cap) services.

It is not clear how the combinations of price controls proposed by Coliban Water, GWMWater and Wannon Water would work in practice.

Table 15.1 **Proposed form of price controls**
Urban and rural businesses

	Individual price caps	*Tariff basket*	*Revenue cap*
Urban businesses			
Barwon		✓**a**	
Central Highlands	✓		
Coliban	✓	✓**a**	
East Gippsland	✓		
Gippsland	✓		
Goulburn Valley	✓	✓	
GWMWater		✓**ab**	✓
Lower Murray		✓**ab**	
North East	✓		
South Gippsland	✓		
Wannon	✓	✓**a**	
Western	✓		
Westernport	✓		
Rural businesses			
FMIT			✓d
Goulburn-Murray			✓
Southern Rural	✓**c**	✓**bc**	✓

a Barwon Water, Coliban Water, GWMWater (urban), Lower Murray Water (urban) and Wannon Water previously operated under individual price caps. **b** Lower Murray Water (rural), GWMWater (rural) and Southern Rural Water previously operated under a revenue cap. **c** Southern Rural Water has indicated an intention to move to a combination of revenue cap and individual price caps or revenue cap and tariff basket. **d** FMIT did not propose a form of price control in its Water Plan. It was subject to a revenue cap in the first period.

Businesses gave a number of reasons for proposing a specific form of price control:

- Those on individual price caps stated that this form of price control provides greater certainty for customers, is easy to understand and is administratively simple.
- Businesses proposing a tariff basket argued that it would provide them with greater flexibility to adjust prices in response to changing costs and demand and to continue adjusting their tariff structures.
- Goulburn-Murray Water proposed to continue on a revenue cap due to water supply uncertainty and continuing tariff reform.
- Southern Rural Water proposed to adopt price caps or a tariff basket for recycled water and fee based applications which are characterised by large variable costs and high demand uncertainty. Its other services, for which it has proposed a

revenue cap, are generally entitlement based exhibiting high fixed costs and low demand variability.

In terms of rebalancing constraints for a tariff basket, Coliban Water and Wannon Water proposed not to increase prices above the overall price cap by more than 2 per cent in any given year. Barwon Water proposed a rebalancing constraint of 3 per cent and Lower Murray Water 11 per cent. Goulburn Valley Water did not nominate a rebalancing constraint.

15.3.2 Other mechanisms for dealing with uncertainty

Most businesses highlighted uncertainty from potential changes in legislative or other Government-imposed obligations, natural disasters and catastrophes (including earthquakes, dam bursts, major sewer collapses, and terrorist acts), and demand uncertainty associated with continuation of drought conditions and water restrictions. Some businesses identified uncertainty about major capital projects.

Other sources of uncertainty identified by some businesses included demand uncertainty resulting from potential changes in the customer base (such as loss of major customers), worse than expected outcomes from certain projects (such as Barwon Water's biosolids management scheme), and changes in input costs (such as electricity costs).

Most businesses proposed to deal with the impacts of these sources of uncertainty by re-opening the price determination or applying for pass throughs or end of period adjustments.

15.4 Commission's assessment

15.4.1 Form of price control

The Commission proposes to approve individual price caps for all of the urban businesses. Each business may apply during the period to adjust its prices or tariff strategy under the hybrid approach proposed for the forthcoming period (see section 15.2.1). Changes in tariff strategy may include variations to thresholds of inclining block tariff structures (as suggested by Wannon Water).

For its rural customers, Lower Murray Water proposed a tariff basket to allow it to introduce new tariffs into the irrigation districts. However, the Commission proposes not to permit businesses to introduce new tariffs under a tariff basket. A revenue cap would allow the business to introduce new tariffs for rural services, provided sufficient customer consultation takes place and the new tariffs are consistent with the WIRO.

The Commission proposes not to approve Lower Murray Water's proposal for a tariff basket for its rural services. The Commission proposes to impose a revenue cap to give it scope to introduce new tariffs into its irrigation districts.

The Commission has previously stated that it does not consider a revenue cap to be an appropriate form of price control for urban services because the customer bears all the risk from demand and supply fluctuations.[76] With the completion of the Wimmera Mallee Pipeline, GWMWater will take on more of the characteristics of an urban business. Therefore, the Commission proposes to approve individual price caps for GWMWater's rural and urban services.

The Commission proposes to approve a revenue cap for Goulburn-Murray Water, and Southern Rural Water's services excluding recycled water and fee-based (diversions) applications. The Commission proposes to approve individual price caps for Southern Rural Water's recycled water services and fee-based (diversions) applications. As FMIT did not nominate a form of price control, the Commission proposes to continue to apply a revenue cap.

Draft Decision

The Commission proposes to approve individual price caps for Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, GWMWater's urban services, Lower Murray Water's urban services, North East Water, South Gippsland Water, Wannon Water, Western Water, and Westernport Water.

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 a revenue cap for FMIT, Goulburn-Murray Water, GWMWater's rural services, Lower Murray Water's rural services, and Southern Rural Water's services excluding recycled water and fee-based (diversions) applications. The Commission proposes to approve individual price caps for Southern Rural Water's recycled water services and fee-based (diversions) applications.

15.4.2 Other mechanisms for dealing with uncertainty

As noted in section 15.2.3, the Commission proposes in the second regulatory period to implement mechanisms to deal with specific sources of uncertainty:

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[76] As noted in section 1.2.3 above, the Commission proposes to conduct within-period reviews to address significant divergences between actual and forecast demand levels. This mechanism reduces the risk to businesses from demand and supply variations under individual price caps.

- For licence fees levied by the EPA, DHS and the Commission, the Commission proposes to pass through differences between actual and estimated fees at the annual price approval (instead of at the end of the period as previously).
- For catastrophic events, such as fire, earthquake or acts of terrorism, the Commission proposes to adjust prices during the regulatory period.
- For costs associated with uncertain capital projects, the Commission proposes to assess and approve pass throughs during the period for specific projects identified in the price determination (see chapter 5).
- In respect of unforeseen changes in legislative and other Government-imposed obligations during the period, the Commission proposes to make end of period adjustments for the additional net operating costs associated with meeting the changes.
- In respect of demand uncertainty associated with continuation of drought conditions and water restrictions, the Commission proposes to monitor the level of demand and restrictions. Where the Commission considers actual demand levels are sufficiently different from those assumed at the time of the price determination, it proposes to conduct a within-period review to assess the impact on businesses' revenues and, where the Commission finds a material impact, prices may be adjusted during the period.

The Commission expects that these mechanisms will limit the need for any other price adjustments during the period and any additional end of period adjustments for the second regulatory period. The Commission expects businesses will manage the impacts from sources of uncertainty not identified above, including changes in input costs (such as electricity and labour costs) over the period, other changes in demand (such as changes in the customer base), and better or worse than expected outcomes from capital and other projects.

Draft Decision

The Commission proposes to pass through differences between actual and estimated licence fees levied by the EPA, DHS and the Commission at annual price approvals.

For catastrophic events, such as fire, earthquake or act of terrorism, the Commission proposes to adjust prices during the regulatory period.

The Commission proposes to assess and approve pass throughs during the period in respect of the costs associated with uncertain capital projects identified in the price determination.

The Commission proposes to make end of period adjustments for the additional net operating costs associated with meeting unforeseen changes in legislative and other Government-imposed obligations during the period.

The Commission proposes to monitor the level of demand and water restrictions during the period. Where the Commission considers actual demand levels are sufficiently different from demand forecasts made for the purposes of the price determination, it proposes to conduct a within-period review to assess the impact on businesses' revenues and may adjust prices during the period.