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2008 WATER PRICE REVIEW GUIDANCE PAPER

MARCH 2007

An appropriate citation for this paper is:

Essential Services Commission 2007, *2008 Water Price Review Guidance Paper*, March.

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1.1 The 2008 Water Price Review

The Commission will commence reviewing the prices to apply to water and sewerage services provided by Victoria's 20 water businesses for the second regulatory period in 2007. This will be the first time that proposed prices for the rural and urban businesses will be reviewed at the same time.

Each business is required to release an exposure draft Water Plan for public comment in May 2007, before formally submitting its final Water Plan to the Commission in September 2007.

The key role of the Water Plan is to clearly articulate and commit to a set of outcomes and prices to be delivered over the regulatory period. Informed public debate on the exposure draft Water Plans has an important role to play in ensuring that the outcomes and prices that are ultimately committed to in the final Water Plan are robust and understood by customers. The exposure draft Water Plans provide a mechanism for businesses to resolve tradeoffs with customers ahead of the submission of final plans.

The Commission is required to assess the Water Plans against certain principles outlined in the Water Industry Regulatory Order (WIRO). On the basis of this assessment the Commission must decide whether to approve or specify the prices or the manner in which prices are to 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. 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 Department of Sustainability and Environment (DSE) and customer preferences for service improvements.

Step two involves the Commission assessing each of the key revenue components and proposals against the WIRO principles. The Commission's assumptions are used solely 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 to 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.

Urban prices were previously reviewed in 2005 and rural prices in 2006. An important aspect of these reviews was to establish a firm foundation for economic regulation in the future.

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*.¹

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.

¹ The WIRO is available from the Commission's website.

The Water Industry Act 1994 contains the following additional objectives that the Commission must meet in regulating the water sector:

- wherever possible, ensure that the costs of regulation do not exceed the benefits
- regulatory decision making and regulatory processes have regard to any differences in the operating environments of regulated entities and
- regulatory decision making has regard to the health, safety, environmental sustainability (including water conservation) and social obligations of regulated entities.

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

Alternatively, the Commission may specify the prices that a business may charge or the manner in which those prices are to be calculated or otherwise determined if it is not satisfied that the arrangements proposed in the Water Plan were developed in accordance with the procedural requirements and comply with the regulatory principles. The procedural requirements include the need for businesses to consult with customers and relevant regulatory agencies before submitting the Water Plan to the Commission for assessment.

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 in a manner or at an amount 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.

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 regulatory 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 the level and structure of prices provide incentives for the sustainable use of Victoria's water resources.

1.3 Commission's approach to consultation

In deciding on various regulatory matters, the Commission aims to be open and transparent and to consult with as many stakeholders as practical. The Commission's general approach to consultation is set out in its *Charter of Consultation and Regulatory Practice*.² It also generally provides stakeholders with a number of opportunities to be involved in its processes and tailors its consultation approach to reflect stakeholder comments.

In line with its charter, the Commission intends to keep stakeholders informed of progress through regular website updates (www.esc.vic.gov.au) and the newsletter *Essential Water News*. Copies of its consultation papers and any submissions received in response will also be made available on its website or from Commission staff. If there is information that you do not wish to be disclosed publicly on the basis that it is commercially sensitive or confidential, you should discuss the matter first with Commission staff before providing the information.

In undertaking its role as economic regulator, the Commission will also consult with other regulators such as the EPA, DHS and other government agencies such as DSE and the Energy and Water Ombudsman (Victoria) (EWOV).

The Commission released initial guidance on the 2008 Water Plans in September 2006 and a Framework and Approach consultation paper in December 2006. The initial Water Plan guidance provided high level guidance on the structure and content of Water Plans for the second regulatory period. The framework and approach paper set out 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. The Commission also visited each business to discuss issues related to the Framework and Approach paper.

An indicative timetable for the consultation process for the remainder of the price review process is set out in table 1.1.

² The Charter can be found on the Commission's website.

Table 1.1 **Indicative consultation timetable**

<i>Indicative dates</i>	<i>Activity</i>
1 May 2007	Exposure draft released for public comment
May to August 2007	Public consultation by businesses
1 September 2007	Final Water Plans submitted to ESC
September 2007 to January 2008	ESC assessment of Water Plans
late January 2008	ESC releases Draft Decision
February to April 2008	Consultation on Draft Decision
May 2008	ESC releases Final Decision

1.4 Purpose and structure of this paper

The purpose of this paper is provide further guidance to businesses on a number of issues identified by the Commission in its Framework and Approach paper. The Commission will also update the initial Water Plan guidance (content and structure of plans) to reflect the views expressed in this paper. This guidance paper and the final water plan guidance should assist businesses in ensuring that their Water Plans clearly set out proposed outcomes, revenues and prices for the 2008 regulatory period.

This paper is structured as follows:

- chapter 2 — discusses the length of the regulatory period and dealing with uncertainty
- chapter 3 — discusses the Commission’s approach to regulating service standards and guaranteed service level schemes
- chapter 4 — discusses the Commission’s approach to assessing expenditure
- chapter 5 — discusses issues related to the financing of capital investments
- chapter 6 — identifies key issues related to the incentive mechanism, including efficiency carryover and S-factor mechanisms
- chapter 7 — identifies key issues associated with the development of tariff structures
- chapter 8 — discusses issues related to the setting of customer contributions.

2.1 Length of regulatory period

The WIRO sets out the length of the first regulatory period for the urban review (three years) and the rural review (two years). The WIRO provides for the Commission to set future regulatory periods. A key issue for the Commission is whether it should retain a three year regulatory period or move to a five year regulatory period similar to some of the other sectors it regulates.

In the Framework and Approach paper the Commission outlined a preference for moving to a five year regulatory period. It identified a number of advantages from moving to a longer regulatory period, including:

- reduced administration costs for the Commission, water businesses and ultimately customers
- greater certainty for customers about the outcomes to be delivered over a longer period and the future direction of prices
- greater opportunity for the incentive properties of the regulatory framework to work
- strengthened incentives for businesses to develop proposals with a longer term planning horizon and
- encouraging regulators to also take a long term approach to identifying and imposing obligations on the business.

The Framework and Approach paper also identified a number of challenges in moving to a longer regulatory period, including:

- the ability of businesses to provide robust forecasts particularly for the fourth and fifth years of the period
- dealing with the impact of uncertain or unforeseen events that may have significant implications for revenue — there is potentially less scope for businesses to carry additional costs over longer periods and
- ensuring that all of the obligations and outcomes to be delivered are identified at the outset of the regulatory period.

The Commission sought feedback from businesses and other stakeholders on the merits of moving to a longer regulatory period and potential challenges. In response to the Framework and Approach paper, stakeholders were generally supportive of the move to a five year regulatory period. A number of businesses, while in support of the move to a longer regulatory period, raised concerns about how the Commission would deal with uncertainty and unforeseen events.

It is important to make a distinction between the opportunity for businesses and the Commission to take a longer term view about the outcomes to be delivered and the implication for prices versus locking in specific projects or prices over the period. A Water Plan that covers a five year period will assist businesses, regulators and customers in taking that long term view.

Having considered the comments received the Commission is of the view that the Water Plan should cover a five year period from 1 July 2008. In reaching this view, the Commission accepts the need to include provisions to deal with different sources of uncertainty, particularly those that are beyond the control of businesses (such as drought, changing climate and changes in obligations). A number of mechanisms for dealing with uncertainty are discussed in section 2.2.

The businesses' demand and expenditure forecasts will need to be consistent with the five year regulatory period. Forecasts should be based on best known estimates for the period given known obligations. The Water Plans will also need to identify the projects, programs and other outcomes to be delivered over the five year regulatory period. Businesses should also identify sources of uncertainty and propose alternative projects in response to those events. For example, businesses could identify different contingencies for different rainfall scenarios, linked to the level of restrictions or some other pre-determined trigger point. This would also provide valuable information to customers about the future demand supply situation and the different contingencies under different scenarios.

2.2 Dealing with uncertainty

Once prices are set, the regulator does not typically adjust them within the regulatory period to reflect differences between the 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 the impact of certain events that are outside the control of the water businesses. Prices can either be adjusted within or at the end of the regulatory period. In making adjustments it is important to consider the incentives that businesses have to plan for, manage and mitigate the costs associated with such events and the administrative costs associated with assessing the need for and extent of any adjustment. 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.

In its previous water price reviews the Commission introduced mechanisms to deal with changes in legislative obligations and catastrophic events. In the Framework and Approach paper the Commission outlined an initial position that:

- it expects businesses to reprioritise projects and programs in consultation with customers should priorities change over the regulatory period or as the need arises to offset the impacts of unforeseen events

- there should be limited pass throughs, although there may be scope for a reopening of the determination where a significant impact on financial viability can be shown and
- there may also be merit in having pass throughs for predetermined major projects that were under consideration by Government or other regulators at the time of the determination.

The Commission sought feedback on

- the events during the first regulatory period that have had a significant impact on the businesses' costs
- what should be included in any adjustment mechanism for the second regulatory period and
- appropriate materiality thresholds.

2.2.1 Sources of uncertainty

A key issue in the design of the adjustment mechanism relates to the types of uncertainty or events that should be included. In defining the nature of events that could potentially result in an adjustment to prices within the regulatory period it is important that:

- the event be clearly outside of the control of the business and not predictable with any certainty
- customers are not unduly exposed to risk or price fluctuations
- the event is clearly observable and verifiable
- the administrative and other costs associated with approving adjustments to prices are minimised
- regulators and other external parties are encouraged to provide as much certainty as possible for the regulatory period and
- businesses have an incentive to, wherever possible, mitigate and plan for such events through appropriate risk management planning processes.

The pricing determinations for the first regulatory period provide scope for end of period adjustments for changes in legislative obligations (subject to a materiality threshold) and within period adjustments where it is necessary to avoid an unintended consequence of the determination. The Commission indicated that it would use this mechanism to adjust prices if a business's financial viability was threatened as the result of a catastrophic event such as an act of terrorism, major fire or flood, significant chemical spills into storages, dam bursts or the collapse of major sewers.

In response to the Framework and Approach paper a number of businesses sought to identify potential sources of uncertainty. Melbourne Water also stressed the importance of distinguishing between risks for which a business may be expected to have some understanding of the likelihood of the event occurring and uncertainties, which are essentially unknowns.

Most businesses suggested that the impact of the continuing drought on demand and costs is likely to be the most significant uncertainty facing the industry in the

forthcoming regulatory period. For example, Goulburn Valley Water argued that given the current drought there is a high degree of uncertainty associated with forward planning of water availability and forecasts of revenue and costs.

A number of businesses also suggested that there should be mechanisms in place to deal with uncertainties around obligations and major capital projects. For example, GWMWater suggested that there should be a pass through mechanism for uncertainty associated with major projects or new compliance projects that exceed a materiality threshold.

Goulburn-Murray Water argued that in addition to changes in legislation and obligations, unforeseen events need to include Government directions, drought, significant unforeseen asset management costs (for example water savings projects, changes in asset standards and major asset failures), customer supported changes in service standards and Murray Darling Basin Commission (MBDC) contributions or changes to MDBC arrangements under the Federal Government's proposal.

On the other hand, the Consumer Action Law Centre stated that the impact of climate change and the ongoing drought has become a way of operation for water businesses in Victoria and should not be used as an excuse to reopen price determinations.

Previously the Commission has expressed a view that the businesses are in the best position to deal with the uncertainty associated with forecasts and changes in priorities. However, given the unprecedented severity of the drought it would also be reasonable for customers to bear some of those risks through increased prices during the regulatory period.

The Commission accepts that there is a case for adjustment mechanisms that deal with:

- uncertainty associated with urban demand restrictions and rural water allocations due to the continuing drought
- predetermined major projects that were under consideration by Government or other regulators at the time of the determination but not yet decided upon
- material changes to or the introduction of legislative obligations during the regulatory period.

The mechanisms that could be used to deal with the impacts of these uncertainties are discussed in section 2.2.2.

2.2.2 Approaches to dealing with uncertainty

In the Framework and Approach paper the Commission identified a number of options for dealing with the impacts of uncertainty, including:

- re-prioritising capital projects or programs. In consultation with its customers a business could decide not to undertake certain projects or bring other projects forward to cope with changing circumstances
- reflecting any uncertainty in forecasts (either implicitly or explicitly), particularly for events that may be known but uncertain in scope

- allowing for material changes for unforeseen events to be assessed and prices adjusted within the regulatory period. Under this scenario adjustments could be made at the time that annual tariffs are approved or businesses could come to the Commission at any time within the regulatory period to seek an adjustment to prices subject to a predetermined process and
- adjusting prices at the end of the regulatory period to reflect any significant cost increases or decreases.

Stakeholder responses

In response to the Framework and Approach paper a number of businesses identified a number of mechanisms for dealing with uncertainty.

City West Water argued that mechanisms for re-opening the determination should be more clearly defined. At present discretion rests with the Commission which introduces an unnecessary element of regulatory risk for the business and customers. It also argued that the 'list of events' (changes in legislative obligations and catastrophic events) should be itemised and a materiality threshold defined for each business.

Goulburn-Murray Water argued that there should be a process each year for the Water Plan to be amended for unforeseen events within the regulatory period for implementation within the regulatory period and that the definition of 'unforeseen events' should be widened.

Yarra Valley Water also suggested that a mid term review could be used to assess the impact of pre-defined factors such as variations between actual and forecast expenditure exceeding a defined material threshold and variations between actual and forecast demand and revenue. It also argued that objective off-ramps or triggers for the reopening of the determination at any time should be adopted.

Most businesses agreed that there should be a within period pass through for major capital projects. Yarra Valley Water argued that the pass through mechanism should apply to any unforeseen major projects that arise within the period as well as those that were under consideration by the government or regulators at the time of the determination. Melbourne Water identified the approach under the National Electricity Rules and the process used by IPART as useful examples of how such a mechanism would work.

Under the National Electricity Rules specific project costs are assessed shortly before expenditure on the program is about to begin. Under this approach the project must be linked to a unique investment driver and satisfy a materiality threshold. Where the materiality threshold is not met, the regulator has discretion to decide whether the project will be considered. Triggers are used to define when the project will be brought forward and reflected in prices. At the end of the period the depreciated value of the actual investment is rolled into the regulatory asset base.

IPART has adopted a within period pass through approach for certain specified events to deal with foreseen but uncertain costs. Businesses are able to apply for cost pass throughs within 90 working days of the cost through event occurring.

IPART approves the total amount that can be passed through, as well the profile of recovery through increase prices over the regulatory period.

South East Water argued that they would prefer to move into the next regulatory period with a more certain understanding of the likely nature and total cost of projects that are expected to commence during the period. If projects are to be added at a later date, stakeholders would need to ensure that they retain the opportunity to argue that other projects (included at the time of the Water Plans should be delayed or removed from the works program in order to accommodate these additions.

City West Water argued that it would prefer fixed principles over a re-opening mechanism to address the lack of certainty around recycled water projects. It argued that while a large scale supply augmentation such as a seawater desalination plant may be suited to a re-opening clause, recycled water projects are often diverse and a number of projects may be required to deliver against CRSWS obligations over the next regulatory period.

A number of businesses suggested that the extreme drought conditions could be dealt with through a re-opening of the determination and an end of period adjustment. Barwon Water suggested that the Commission consider the use of a volumetric price adjustment based on individual water businesses' specific storage/demand trigger points.

Some businesses also suggested that there is scope to better manage the impact of demand uncertainty and extreme drought conditions through the form of price control that is adopted. City West Water argued that a tariff basket provides businesses with the flexibility to make within period adjustments to price to reduce any price shocks at the beginning of the next regulatory period. Melbourne Water and Yarra Valley Water argued that either a tariff basket or revenue cap could be used to manage demand related risk.

A number of businesses also commented on what might be considered appropriate materiality thresholds to be applied to mechanisms for dealing with uncertainty. Gippsland Water suggested that any materiality threshold should be linked to the annual operating expenditure associated with the unforeseen event, not total revenue. Western Water argued that a 'one size fits all' approach for both metropolitan and regional businesses ignores the increased difficulty and risks of servicing regional areas that do not have alternative sources of supply.

South East Water suggested that the materiality threshold should be set so as to ensure that no applications are made that are less than the administrative costs of conducting and reviewing the application. South East Water identified labour costs for the Commission and the business, the costs of consultants used to verify/review costs and the administrative costs of implementing tariff changes as being potentially relevant.

Further guidance

In considering mechanisms for dealing with uncertainty it is important to understand that the source of the uncertainty often relates to what has been included in the forecast used to determine the amount of revenue required by businesses to deliver services over the regulatory period.

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 being significantly less than forecast for the first regulatory period. One way to reduce 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.

Similarly, 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.

Therefore 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 costs (administrative and business incentives) associated with making adjustments and whether these costs vary with the type of adjustment mechanism adopted.

Most of the mechanisms suggested by the businesses are one sided in that they only operate in situations where actual demand (or costs) is lower (higher) than what was forecast. There will be situations where the reverse happens and demand (costs) end up being higher (lower) than what was forecast. In these situations, the same logic of being able to adjust prices for outcomes worse than anticipated would mean re-opening determinations to reduce prices where outcomes are better than anticipated. Doing so would weaken the incentives faced by businesses to deliver services more efficiently over time and to do so within a predetermined path. For example, if a business were to work hard to achieve efficiency gains such that costs were lower than anticipated, such an approach could lead to a re-opening by the Commission in order to reduce prices. Alternatively, businesses may not seek to take advantage of efficiency gains because they know that if costs are higher than anticipated they can simply seek a pass through.

Having considered the comments received and after further consideration of the issues the Commission accepts that there will need to be one or more of the following mechanisms to deal with uncertainty:

- re-opening of the determinations triggered by particular materiality thresholds or triggers
- predetermined pass throughs
- forms of price control and
- mid period reviews.

The Commission also recognises that particular mechanisms may be better suited to dealing with particular sources of uncertainty. For example, predetermined pass throughs may be better suited to dealing with known but uncertain major capital

projects and the form of price control may be better suited to dealing with demand uncertainty.

It is important that the businesses exposure draft Water Plans clearly identify the likely areas of uncertainty affecting them (for example, drought responses under different rainfall scenarios) to facilitate the design of appropriate mechanisms. The aim is to encourage robust public review and debate so that customers, businesses and the Commission understand the specific challenges that these adjustment mechanisms are designed to address.

The Commission will consult further on the design of these mechanisms during the draft Water Plan consultation period.

2.3 Adjusting for differences in licence fees

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

Estimates of these licence fees over the regulatory period are included in the businesses' operating expenditure forecasts. Actual licence fees are set by the relevant Minister on an annual basis and will vary from year to year.

For the first regulatory period the determinations provide for the Commission to adjust prices at the end of the period to reflect any difference between the estimated and actual licence fees levied by the EPA, DHS and the Commission.

In the Framework and Approach paper the Commission sought feedback on the merit of adopting an 'L factor' mechanism to adjust for licence fees annually. Under an 'L factor' prices are adjusted as part of the annual tariff approval process to reflect the annual change in licence fees (with a 1 year lag).

In response, businesses were generally supportive of the introduction of an 'L factor'. Therefore the Commission is proposing to adopt an 'L factor' for 2008 regulatory period. The detailed mechanism and process will be developed as part of the consideration of the form of price control.

A number of businesses have also outlined a preference for the Commission to continue to provide forecasts of annual licence fees for each year of the regulatory period and make end of period adjustments to reflect the difference between actual and forecast licence fees.

The Commission considers that it is in a position to provide businesses with robust forecasts of its own costs for each year of the regulatory period. However, in providing these forecasts it is important to note that the Commission's role in setting licence fees is restricted to providing details of the costs incurred in the regulation of the water sector. The Minister for Finance in consultation with the Minister for Water determines the amount contributed by each business. This process involves decisions being made on the level of costs to be recovered from regulated businesses and how costs will be allocated across the industries that the Commission regulates.

3.1 Introduction

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

The WIRO also provides that prices must, among other things, provide the regulated entity with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria's water resources. A guaranteed service level (GSL) scheme is one approach to providing businesses with incentives to deliver acceptable service standards. GSL schemes involve businesses making payments or rebates to customers who receive significantly below average service levels and as such act as an incentive for businesses to improve service levels for the worst served customers.

The following sections discuss the Commission's approach to regulating service standards and issues related to GSL schemes.

3.2 Service standards

Service standards 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 standards and targets are appropriate and whether customers are willing to pay for improved services are key considerations in assessing the appropriateness of the proposals.

The Commission's approach to regulating the standards and conditions of supply for water and sewerage services provided to urban and rural customers is to:

- establish separate customer service codes for urban and rural services
- require businesses to develop customer charters
- require businesses to set targets for a set of service standards and
- establish separate performance reporting frameworks for both urban and rural services.

The Commission sought feedback from businesses and other stakeholders on its approach to assessing proposed service standard targets, the core set of services

standards, the basis for proposing targets and the scope for greater uniformity of targets across the State.

3.2.1 Approach to assessing proposed service standards

The initial Water Plan guidance set out that businesses are required to outline targets for each year of the regulatory period for a core set of service standards.

In assessing proposed service standards, the Commission proposes to focus on whether the targets:

- are set in accordance with the definitions outlined in the Commission's performance reporting frameworks
- are consistent with available historic information on actual performance
- reflect the impact of proposed expenditure programs and
- reflect customer preferences (especially where businesses are proposing service improvements).

South East Water and Western Water both advised that climatic conditions may have an impact on the performance of businesses with respect to a number of indicators.

The Commission acknowledges the impact that climatic conditions can have on the ability of businesses to meet certain targets. Through the performance reporting framework, businesses are invited to explain the reasons for performance variation from the targets that have been approved and the actions they may be taking to address any performance shortfalls. This would include an explanation of how climatic conditions may have impacted on performance. Further, because the Commission is not intending to adopt an S-factor scheme for this regulatory period, businesses not meeting the approved service standard targets will face no financial consequences unless they link their performance to a guaranteed service level payment (see section 6.3.3).

3.2.2 Core set of service standards

The Commission has established separate sets of core service standards for urban services, rural services and Melbourne Water. The composition of these core sets was consulted on as part of the 2005 and 2006 price reviews.

Most businesses expressed general satisfaction with the current set of indicators. However, concerns about particular service standards were raised by some businesses.

Planned interruptions

South East Water advised that setting targets for planned interruptions can discourage businesses from implementing a program of works designed to improve long term system performance and that there may be incentives for businesses to undertake a less than efficient program (for example, having two shorter interruptions rather than one longer interruption). Gippsland Water indicated that it agreed with the concerns raised by South East Water.

As indicated previously, the Commission considers that interruptions, whether planned or not, are inconvenient to customers. Where a business was planning on undertaking an expanded program of works, it could avoid exceeding a planned interruptions target by setting a larger target for that particular indicator. In approving the targets the Commission would need to understand the basis for setting the target at that particular level.

Time to attend versus time to rectify

South East Water commented that for low priority incidents, it would rather rectify the problem in the shortest possible time than to use up resources attending quickly but taking longer to resolve the issue, for example, by sending a second crew.

The Commission maintains the view that both attendance time and rectification time are important indicators of a prompt response to an incident and expects businesses to provide targets for both.

Restrictions and legal action indicators

In the initial Water Plan guidance, the Commission introduced two additional core service standards for which urban businesses would be required to set targets for each year of the 2008 regulatory period. These related to restrictions and legal action for non payment and the number of customers assisted under hardship schemes.

A majority of businesses indicated that they were opposed to the introduction of these particular indicators. The concerns raised centred around the belief that the rate of restrictions or legal action was largely outside the business's control and that hardship grants were used where required and therefore not suited to the targeting of a predetermined number of grants to be issued in any given year.

The Commission remains concerned by the variation in the use of restrictions, legal action and hardship grants across the State. The Commission expects businesses to continue to work towards improving their management of customers facing hardship and will continue to require businesses to report on restrictions legal action and hardship grants through the performance reporting framework.

Having considered the comments received and after further consideration of the issues, the Commission is of the view that it would be inappropriate to add these indicators to the set of core service standards. Although businesses will still be required to explain in their Water Plans how they propose to deal with customers facing hardship, the Commission will not be requiring businesses to formally set targets for the use of restrictions, legal action or hardship grants.

3.2.3 Basis for proposing service standard targets

For businesses where there has been a history of performance monitoring, the identification of current service levels should be relatively straightforward. Where there is no history of reliable historic performance information, business will need to make use of the best available information to determine service standard targets going forward.

The Commission has previously suggested that targets should be consistent with the average performance over the previous three years for which actual data is available (2003-04 to 2005-06).

In the Framework and Approach paper, the Commission sought feedback on the basis for proposing service standard targets. A number of businesses provided comments about this issue.

Setting a range instead of a target

City West Water reiterated its intention to propose service standard targets with a confidence interval of one standard deviation around the expected performance level. It advised it is proposing this on the basis that some external factors such as climate will cause the actual performance levels to oscillate around the mean. It argued that activity levels above the mean but within the range will not result in additional unnecessary spend as the business recognises that by targeting the mean service performance, exogenous factors (such as climatic conditions) will cause oscillation. Similarly, where actual performance is below the mean, businesses will not reduce expenditure as the variation is driven by exogenous events. In the absence of ranges, increased expenditure may be able to restore performance to the expected value, but at an increased cost to the customer. It also advised that it would be very difficult for a business to “exploit headroom” that would be created by the weather due to the lack of predictability of future weather conditions. GWMWater agreed with the City West Water view that confidence intervals should apply to designated service standard targets.

The Commission remains of the view that specific targets are preferred to ranges. Businesses proposing to adopt ranges will need to explain their proposal and the basis for setting ranges in their Water Plans.

Setting targets based on three years of data

Most businesses agreed with the proposition that setting targets based on the previous three years of data made sense. However, a number of businesses (particularly Barwon Water and East Gippsland Water) recommended that a degree of flexibility is required by businesses if previous data is either not typical or not available. EWQV suggested that future performance targets should be set using both historical data and current customer preferences.

The Commission proposes that the most recent three years of actual data be used as the basis for setting targets going forward. This allows the impact of more recent technological changes to be fully reflected in targets. Additionally, more recent data will tend to be more accurate and more appropriate than older data which may, in some instances, pre-date infrastructure that is currently used.

The Commission remains of the view that although targets should be based on the three most recent years of data, if businesses want to set targets based on longer-term data or based on customer preferences, then the case will need to be made for such variations. Similarly, the Commission agrees with businesses in that if some data is unreliable or inappropriate, then businesses will need to use their judgment in setting targets and explain the reasons for any variation in their Water

Plans. Evidence of customer consultation concerning service standard targets will also need to be outlined in the Water Plan.

Setting targets for Melbourne Water

Melbourne Water argues that its performance indicators should be based on its contractual obligations in Bulk Water Agreements. It commented that as it has to legally obey these obligations, it should also be assessed against these as performance indicators.

The Commission accepts that there is scope to further align Melbourne Water's core set of service targets with the indicators in the bulk water agreements.

3.2.4 Consistency of service standards across businesses

In the Framework and Approach paper, the Commission sought feedback on whether there was scope to standardise target levels for particular indicators across urban businesses. In particular was there scope to harmonise targets that reflected management practices rather than soil conditions or other environmental factors, such as telephone-related indicators and interruption durations.

Most businesses commented that they were opposed to the introduction of harmonised service standard targets. Some businesses commented that customer preferences have played a part in determining service standards and associated prices in the past. Therefore it would be inappropriate for the Commission to impose consistent targets. Also, Barwon Water commented that the standards set by technical regulators are sufficient to ensure a level of consistency across the State. Goulburn Murray Water commented that it would be difficult to harmonise standards for rural businesses due to different standards that apply across the state.

However, EWOV commented that although the Commission may not be mandating service standard targets, it should be concerned where standards of comparable businesses differ across the State.

The Commission is not proposing to impose consistent targets across businesses. It will monitor and make comparisons across businesses through the performance reporting framework.

3.3 Guaranteed Service Levels

3.3.1 Introduction

The Commission must be satisfied that the prices it approves provide businesses with incentives to pursue efficiency improvements and promote the sustainable use of Victoria's water resources. In some cases however, what may appear to be efficiency improvements (providing services at lower than forecast cost) may be achieved at the expense of service standards and outputs. Therefore it is important to ensure that service standards and outputs reflected in forecast costs and prices are clearly specified and that businesses are provided with balanced incentives to achieve efficiencies while meeting the required service standards.

The service standard targets proposed by businesses and approved by the Commission generally reflect the average performance expected across all customers. However, it is also important that businesses have incentive to target customers who continuously receive service levels that are below average.

One approach to enhancing incentives for businesses to meet service standards for all customers is to adopt a guaranteed service level (GSL) scheme where businesses provide rebates to customers who receive a level of service that is significantly worse than the average level of performance expected by most customers. Because the cost of an assumed level of payments is reflected in the business's revenue requirement, there is an incentive to minimise the number of events that give rise to payments.

The underlying objective of GSLs is to provide an incentive for businesses to address the incidence of inferior service performance for the worst affected customers rather than to compensate those customers for poor performance.

Five businesses have GSL schemes in place for the first regulatory period.

3.3.2 Should all businesses be required to implement GSLs?

The Commission did not require all businesses to adopt GSLs for the first regulatory period. It concluded that it would be difficult to adopt a consistent GSL scheme across all urban businesses because of the lack of historically reliable data. For the rural businesses the Commission recognised that in the absence of a robust performance monitoring framework and extensive customer consultation it would be difficult to introduce a GSL scheme.

Instead, the Commission required all urban businesses to collect additional performance indicators related to some of the GSLs approved for the first regulatory period. The aim of collecting this data was to provide a systematic basis for assessing the benefits and costs of introducing GSLs for other businesses in the second regulatory period.

In general, the five businesses that introduced GSLs in the first period have a high level of average performance for service standards in which GSLs applied.

GSLs are a feature of regulatory frameworks for water in other Australian jurisdictions (NSW and the ACT) and overseas (United Kingdom and Wales). GSL schemes are also a key feature of the regulatory framework applying to the gas and electricity sectors in Victoria. Evidence from these jurisdictions and sectors suggests that GSLs act as an effective incentive mechanism.

In the Framework and Approach paper, the Commission sought feedback on whether all businesses should be required to implement GSLs.

The Consumer Advocacy Law Centre (CALC) and the Consumer Utilities Advocacy Centre (CUAC) and EWOV all expressed the view that all urban businesses should implement GSLs. EWOV also suggested that where businesses are proposing to not adopt GSLs they should explain their reasons for not doing so.

Wannon Water advised that it considers that the provision of small payments to customers for failure to achieve specific standards is a good internal mechanism to ensure focus by staff on priority customer specific issues.

However, a number of businesses stated that they were opposed to the Commission mandating the introduction of GSLs, largely because of the lack of customer acceptance and the cost of implementing such schemes.

The Commission maintains the view that there is merit in all urban businesses adopting a GSL scheme for the 2008 regulatory period. However, the it considers that it would still be premature to mandate the introduction of GSLs across the urban businesses.

Urban businesses which have access to appropriate data are strongly encouraged to implement a GSL scheme. The benefits, as seen both in the Victorian water industry and other utilities in the same and different jurisdictions, would appear to outweigh the costs.

Regardless of whether a business is proposing to implement a GSL scheme for the 2008 period, the Commission expects businesses to continue consult with customers on their support for GSLs.

The Commission will continue to monitor performance data over the coming regulatory period with a view towards more businesses taking up a GSL scheme in the next regulatory period.

3.3.3 To whom should GSLs apply?

The GSL schemes in place for the first regulatory period were restricted to residential customers. At the time of the 2005 Urban Water Price Review, the Commission noted that because the GSL schemes applying to the gas and electricity sectors were also restricted to residential customers, there was limited evidence on the merits of expanding GSL schemes to non-residential customers. It also noted that a number of issues would need to be resolved before GSL schemes could apply to non-residential customers, including:

- whether the scheme should apply to all non-residential customers or only small customers who are less likely to be able to negotiate or otherwise influence the level of service received
- whether the scheme should cover the same events as those for residential customers and
- whether it is appropriate to have similar payment levels as those for residential customers.

The Commission has now expanded the GSL scheme for electricity distribution businesses to include non-residential customers and is considering doing the same in the gas sector.

The Commission sought feedback on whether the water GSL schemes should be expanded to non-residential customers.

EWOV and CUAC both agreed that GSLs should be extended to urban non-residential customers given that there now exists a body of data that could be used to develop a minimum core set of standards.

South East Water advised it has already extended its GSL scheme to non-residential customers for the following reasons:

- There are a number of property types that are difficult to allocate to either non-residential or residential (for example milk bars with a residence or houses that have been converted to other uses such as medical suites).
- Non-residential properties suffer similar inconvenience if there is a service interruption.
- Most larger non-residential businesses are minimally impacted as the majority have dual supply.

City West Water commented that it is considering market-testing GSLs for small to medium businesses for the next Water Plan, although it advised that it will be managing relationships with larger non-residential customers through key account managers.

Barwon Water argued that non-residential customers should not be covered because it would be difficult to determine an appropriate and robust GSL scheme that provides strong incentives to meet non-residential service standards.

Having considered the comments received and after further consideration of the issues the Commission is of the view that there is merit to expanding current GSL schemes to include non-residential customers. However, it is not proposing to mandate that businesses do so. Businesses should consult with their non-residential customers on their support for GSL schemes and the appropriate payment levels, bearing in mind that the objective of GSL schemes is not to fully compensate customers.

In proposing GSL schemes in their Water Plans, businesses will need to identify to which customers the schemes apply.

3.3.4 GSL events

The underlying objective of GSLs is to provide an incentive for businesses to address the incidence of inferior service performance for the worst affected customers. In its 2005 price review the Commission took the view that customers and businesses are in the best position to form opinions on what areas of services are of most concern to customers. Therefore it did not specify the GSL events to be offered by businesses.

GWMWater and Western Water advised that if GSLs were to be mandated, they would be in favour of individual businesses negotiating with their customers to determine the types of GSLs to apply.

EWOV commented that there should be additional GSLs for missed appointments as there is in the Victorian electricity industry.

CALC recommended that GSL payments should also be applicable to customers where a water business had breached its hardship policy. For example, if a customer in compliance with a hardship scheme has restrictions incorrectly applied then a GSL payment would apply. This would encourage compliance with the provisions of hardship policies. CALC advised that the wrongful disconnection payment has been particularly successful in ensuring compliance with the Energy Retail Code and reducing the level of disconnections.

City West Water advised that it is considering expanding its GSL events from six to eight while Barwon Water advised that is not proposing to expand its suite of GSL events. Wannon Water commented that the number of GSL events should be small and focused on the areas of most concern to customers.

The Commission accepts that businesses, in consultation with customers, are in the best position to determine which events should be included in a GSL scheme. In their Water Plans businesses will need to propose what events are covered by the GSL scheme. In assessing the schemes, the Commission will consider:

- whether the business is already obligated to provide the service standard. Where an obligation already exists, it is not appropriate to allow businesses with the discretion to make a GSL payment when they do not meet the obligation
- whether the GSL event reflects those areas of service of most concern to customers and
- whether the GSL event is readily available to measure such that payments can be made automatically and without the customer needing to apply.

3.3.5 GSL payment levels

The Commission considers it important that payment levels are set so that they limit the cost of the scheme but also provide a clear incentive for businesses to avoid the costs associated with the GSL event. If payment levels are set too low, businesses may elect to make payments to the worst served customers, rather than investigating and fixing the cause of the event.

Payment levels approved as part of 2005 Urban Water Price Review ranged from \$25 per event up to \$500 payment for sewage spills on properties not contained within a specified time. For the gas and electricity sectors GSL payments range from \$10 to \$250.

City West Water suggested current payment levels are sufficient. Western Water commented that matters concerning payment levels should be determined by individual businesses.

CUAC noted that the existence of GSL schemes should not provide a perverse incentive by encouraging businesses to bear the penalties incurred in a GSL scheme rather than undertaking service improvements. CALC also suggested that payment levels need to be set at a level that discourages businesses from making the GSL payment instead of meeting the GSL threshold. If this were to happen the GSL payment level should be increased to ensure that the business has an incentive to improve its level of service.

The Commission agrees that GSL payment levels need to be set at a level which provides businesses with incentives to deliver an appropriate level of service. While it is not proposing to mandate GSL payment levels, it expects businesses to consult with customers and assess proposed payment levels as part of its review of proposed GSL schemes.

4.1 Introduction

The Water Industry Regulatory Order (WIRO) requires the Commission to ensure that the prices levied by the businesses provide them with a sustainable revenue stream that does not reflect monopoly rents or inefficient expenditure. It must also be satisfied that the proposed expenditure forecasts are efficient and take into account a long term planning horizon. 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 determining the level of revenue required, the Commission has to make assumptions about key drivers of a business's revenue requirement such as:

- the operating expenditure needed to deliver services to customers and
- the cost associated with financing past and future capital expenditure.

The Commission arrives at its assumptions based on assessing the information provided in the businesses' Water Plans, advice from independent consultants as to appropriateness of the proposed forecasts and its own analysis.

The following sections outline the key issues the Commission will need to consider in assessing the businesses' operating and capital expenditure over the regulatory period.

4.2 Operating expenditure

Operating expenditure is a key component of the revenue requirement and is included in the year in which it is incurred.

Consistent with the approach taken in previous price reviews the Commission is proposing to assess operating expenditure by establishing a baseline or 'business as usual' level of costs derived from the current expenditure incurred by businesses at the end of the regulatory period. The businesses will be required to demonstrate that they are proposing to achieve productivity improvements in the delivery of business as usual levels of service. Costs associated with additional obligations, functions or service levels will be considered separately.

In assessing the prudence and efficiency of the businesses' operating expenditure forecasts the Commission proposes to consider whether operating expenditure forecasts clearly reflect obligations that are imposed by the Minister, other regulators such as the EPA and DHS, or improvements demanded by customers.

The initial water plan guidance identified that Water Plans will need to clearly outline a business's forecasts of operating expenditure for each year of the

regulatory period, the key drivers of expenditure, justification of forecast expenditure levels and evidence of productivity improvements (including targets). The Water Plans will also need 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 should consider:

- historical expenditure levels
- benchmarking
- demand forecasts
- introduction of new obligations and
- consultation with government, regulators and customers.

As a general principle the Commission would expect a higher level of justification where a business is proposing 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.

In the Framework and Approach paper, the Commission invited comments on whether there are other factors the Commission should take into account when assessing the businesses' forecasts of operating expenditure.

CUAC commented that it supports the Commission's proposed scrutiny of proposals that reflects a reasonable trend in operational expenditure, and the use of independent studies and assessments of these proposals. The use of such rigour in examining expenditure proposals to ensure appropriate and affordable price levels is viewed as a very important basis of due diligence and ensuring equitable outcomes.

CUAC also raised concerns about the use of willingness to pay studies to justify service improvements, noting that while worthwhile in showing a price range within which consumers are prepared to pay for service improvements they may not necessarily or adequately differentiate between consumer classes and types. It was of the view that businesses should include evidence that they have closely consulted with and have the support of consumers in light of any possible implications for price, real household incomes and willingness to pay.

Generally, stakeholders did not comment on the overall approach to assessing operating expenditure but concentrated on two elements:

- the relevance of historical expenditure levels to future expenditure levels (and the classification of business and usual expenditure and new obligations expenditure) and
- the application of productivity improvements to businesses as usual expenditure.

Both of these issues are discussed in the following sections.

4.2.1 New obligations

The Commission identified in the initial water plan guidance that Water Plans need to distinguish between operating expenditure related to business as usual activities and new obligations. New obligations are defined as those that are reasonably

expected to take effect from 1 July 2008. The purpose of this is to provide transparency to the Commission, customers, Government and other regulators of the approximate cost and impact on prices of these obligations.

In response to the Framework and Approach paper a number of businesses continued to raise concerns about the definition of business as usual expenditure. Barwon Water and Goulburn Murray Water commented that historical expenditure levels are not a reasonable indicator of future expenditure levels due to changing resource and operating conditions.

East Gippsland Water commented that new obligations are not openly expressed and in many instances may be difficult to separate for expenditure justification. For example, changes to occupational health and safety requirements and insurance obligations. Also, the nature of the Water Authorities coming under the shared Ministries of Department of Treasury and Finance and Department of Sustainability and Environment means that many Victorian Government requirements are passed on without due regard to the cost of implementation.

Melbourne Water raised concerns regarding the timing of new obligations. It considers it useful to provide disaggregated information on obligations which came into effect from 1 July 2005 and which were not included in the 2005 Water Plan. In addition, Melbourne Water believes that the treatment of such expenditures as “new obligations” is consistent with the proposed technical review of capital and operating expenditures. Yarra Valley Water also raised concerns regarding the timing of new obligations. In particular the importance of taking appropriate account of increasing expenditure requirements driven by compliance obligations that exist today when assessing business as usual expenditure requirements.

Under the regulatory framework, prices are realigned at the end of a period to reflect actual expenditure so where obligations have been imposed on the businesses during the first regulatory period these costs will be reflected in the actual operating costs incurred by the business (as opposed to the forecast costs assumed in the last price review). At the time the draft Water Plans are prepared businesses will have two years of actual data (2004-05 and 2005-06) and two years of forecasts (2006-07 and 2007-08) and when the final Water Plans are submitted on 1 September all businesses will have three years of actual data and one year of forecasts.

The Commission’s trend analysis will therefore include the operating costs incurred in 2006-07 as part of the baseline for assessment. This means, for example, that most of the extra cost associated with preparing supply-demand plans and managing for drought are included in these baseline figures.

The expenditure assessment process should be forward looking, focusing on the outcomes to be delivered over the second regulatory period and the expenditure needed to deliver those outcomes, rather than revisiting the forecasts and deviation from the last review. All analysis of operating cost trends will be against the baseline of actual expenditure in 2006-07 with businesses given the opportunity to explain variation going forward and the reasons why. Businesses can, as Melbourne Water suggests, explain the underlying reasons for increased costs in 2005-06 as part of the Water Plan, but the major focus of the Water Plan

needs to be the forward looking expenditure required over the next regulatory period.

4.2.2 Productivity improvements over the period

The Commission proposes that it will seek to identify the extent to which the businesses' pricing proposals reflect a reasonable trend in operating expenditure that is consistent with an efficient business. In doing so, it will have regard to the extent to which the businesses have explicitly reflected anticipated efficiency improvements in their proposals and the trend in operating expenditure that is implied by the businesses' proposals over the regulatory period.

In reviewing the Water Plans the Commission will also seek to verify that efficiency savings have been built into the forecasts of 'business as usual' operating expenditure. Where this is not evident or where proposed efficiencies are less than thought achievable, the Commission proposes to make adjustments to the forecasts to reflect productivity gains.

In the 2005 Urban Water Price Review, the Commission considered it appropriate for the businesses to achieve a minimum 1 per cent per year productivity improvement on their growth adjusted business as usual expenditure over the regulatory period. Where this improvement would have required an adjustment of greater than 1 per cent of expenditure (excluding bulk water costs), then the Commission assumed a maximum adjustment of 1 per cent. The Commission made similar adjustments in the 2006 rural price review.

In the Framework and Approach paper, the Commission suggested that it is reasonable to expect that businesses will be able to deliver efficiency improvements with respect to business as usual expenditure over the regulatory period. It invited comments on what factors it should consider when assessing the potential for productivity improvements. In response to the Framework and Approach paper a number of issues were raised.

Melbourne Water and City West Water raised concerns over the application of efficiency factors to operating expenditure. In particular, that efficiency factors should not be applied to expenditure related to new obligations. City West Water sought further discussion on the methodology applied in the 2005 Electricity Distribution Price Review, namely a 'rate of change' approach to estimating productivity improvements and adjustment to final estimates on the basis of real increases in input costs (for example, labour). South East Water recognised that it would be difficult to separately identify the extent to which productivity improvements have been incorporated given the increase in business as usual operating expenditure during the current and next regulatory period.

Barwon Water, Goulburn Valley Water and Wannon Water raised the issue of the ability to deliver efficiency improvements given external constraints (such as current drought conditions and unanticipated regulations).

Wannon Water and Gippsland Water noted that productivity gains do not necessarily lead to a reduction in operating expenses, but can also reflect an increase in performance delivery to provide compliant standards of operation. Gippsland Water does not support the imposition of a 1 per cent per annum

productivity improvement on the water businesses, proposing that consideration should be given to allowing businesses to propose productivity gains and demonstrate why such gains are realistic in nature.

Wannon Water sought recognition of the maturity of the water businesses in the Commission's assessment — particularly for businesses which are in a development phase, compared to businesses which are mature and have a solid operational base to work from.

These comments suggest that while businesses are supportive of the proposition that it is reasonable to expect that businesses deliver efficiency improvements, they are concerned with the ability to measure and identify productivity gains or the use of a threshold by the Commission to assess whether productivity improvements have been achieved.

The Commission agrees with Gippsland Water that businesses should be given the opportunity to propose productivity gains, and demonstrate why such gains are realistic in nature. The initial water plan guidance outlined a similar expectation that businesses through their Water Plan should identify how they have accounted for productivity improvements. Where businesses have not or cannot demonstrate how they have accounted for productivity improvements the Commission will make a productivity adjustment to the expenditure levels.

In demonstrating how productivity improvements have been incorporated into the Water Plans, the Commission agrees with Melbourne Water that only business as usual costs are relevant and that costs associated with new obligations or costs which are uncontrollable by the business should be excluded. In its previous reviews the Commission excluded bulk water, licensing and environmental levy costs from its assessment of productivity improvements.

A number of businesses do not agree with the "hurdle rate" approach used in the first review of an assumed minimum 1 per cent per year improvement on growth adjusted business as usual expenditure. The most likely alternative approaches that the Commission could adopt, such as a detailed examination by the expenditure consultants of all work programs with a recommendation of potential savings or the use of either DEA or TFP analysis are likely to prove far more intrusive and time consuming for the businesses.

It should also be noted that the Commission would only consider imposing a productivity adjustment where a business has not or cannot demonstrate how they have accounted for productivity improvements in their Water Plans. The WIRO requires forecasts to be efficient and an inability to identify productivity gains or how productivity improvements have been incorporated into the Water Plan suggests that businesses are unable to satisfy this requirement. The Commission did not make adjustments to most businesses in the 2005 price review as Water Plans demonstrated a clear trend of growth adjusted business as usual expenditure reducing over the regulatory period.

4.2.3 Benchmarking

In the Framework and Approach paper the Commission sought information on whether there are any water benchmarking studies that the Commission should consider when assessing the businesses' forecasts of operating expenditure.

No respondents to the Framework and Approach paper identified suitable studies that the Commission could make use of. South East Water commented that the Commission should be cautious about relying on benchmark studies, as they often fail to take into account the specific business circumstances that can significantly affect the unit cost of providing a particular service

The Commission's expectation is that where businesses have participated in benchmarking studies they will make this information available to support their Water Plans. The Commission does not have a preferred benchmarking framework but would give greater weighting to studies that are independent of the business and have a larger pool of participants. Benchmarking studies could cover either broad areas of business operations or focus on specific activities (for example, maintenance, asset management or information technology). One limitation of the businesses supplying benchmarking data is that there is an incentive to only provide favourable studies.

4.3 Capital expenditure

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

The Commission's initial water plan guidance identified that the Water Plans will need to clearly outline a business's forecasts of capital expenditure for each year of the regulatory period, the key drivers of expenditure (including major projects) and information to show that the expected levels of expenditure are prudent and efficient.

The Commission will assess whether each business's proposed capital expenditure forecast is adequate to efficiently deliver the service levels required by customers and to meet all regulatory obligations imposed on the business.

The Commission's preferred approach is to assess proposed capital expenditure forecasts by using trends in historical expenditure to consider the business as usual level of service, and to consider separately the costs associated with any additional obligations, functions or service levels. The purpose of distinguishing between expenditure on new obligations and business as usual expenditure is to identify clearly the extent to which price increases are the result of additional requirements imposed through regulatory obligations and/or customer driven service improvements.

There are three broad steps involved in the Commission's approach to assessing capital expenditure forecasts. The first step involves ensuring that any significant changes to expenditure levels are driven by realistic forecasts and verified obligations. To do this the Commission requires that any new capital expenditure

reflects clear obligations imposed by regulatory agencies or the need to upgrade or invest in new infrastructure to meet the needs or service expectations of customers. Businesses are required to set out the target service levels they propose to deliver over the regulatory period and to show evidence of consultation with customers regarding their willingness to pay for any service improvements.

The focus of the assessment process is to ensure that any significant changes in expenditure levels are linked to clear obligations imposed by regulatory agencies, or that they reflect the need to upgrade or invest in new infrastructure to meet the needs or service expectations of customers.

In doing so, the Commission proposes that it will consider whether:

- the capital expenditure forecasts associated with new obligations clearly reflect additional obligations that are required by the Minister, other regulators such as the EPA, DHS or by customers
- there is evidence of, and consistency with, well developed asset management planning and processes that demonstrate that forecasts have been determined over a planning horizon that extends beyond the five year regulatory period
- the proposed program of expenditure is deliverable over the regulatory period
- the proposed trends in capital expenditure are related to trends in historical expenditure, such that the reasons underpinning any difference in the expected level from those trends can be identified together with any other relevant factors (such as changes in the asset age profiles or in service levels) and
- the business is to receive any government grants to undertake certain projects, to ensure that customers only pay for the projects financed by the water businesses and that these costs are not recovered twice.

Further, the Commission would expect any proposals which significantly increase capital expenditure to be substantiated by supporting information on the following cost drivers:

- for new obligations — evidence of more stringent standards established by regulatory agencies or that there is evidence of significant customer demand for enhanced service levels
- for existing infrastructure — evidence that the water or sewerage networks need to be renewed so that businesses can continue to deliver services that meet customers expectations
- for growth-related capital expenditure — significant growth in the number of new connections or in the demand for water, sewerage or other prescribed services and
- for corporate and retail expenditure — demonstrating that the existing assets are not sufficient for businesses to meet the needs of customers.

In order to ensure that businesses' expenditure forecasts reflect efficient expenditure and that the proposed projects are deliverable over the regulatory period, the Commission is proposing to engage independent consultants to review each business's expenditure forecasts.

In reviewing the businesses' expenditure forecasts and the delivery of major projects the Commission will consult with the other regulatory agencies (DHS, EPA and DSE) to understand the regulatory drivers behind any large increases in forecast capital expenditure programs and the urgency with which the regulatory outcomes from these programs are expected to be delivered. The Commission will seek confirmation from these regulators that the major projects contained in the Water Plans are required to meet regulatory obligations.

In the Framework and Approach paper the Commission confirmed that it would continue with this general approach. In response, Barwon Water, Goulburn Murray Water, Yarra Valley Water and Wannon Water stated that the use of historic actual expenditure is not appropriate when assessing expenditure required for the forthcoming regulatory period. These businesses suggested that the review of expenditure should be based on the identification of key expenditure drivers over the period and the businesses' capacity to deliver the proposed program.

CUAC commented that capital expenditure projects can have large impacts on a business's revenue requirement and prices. As such, water businesses should be required to clearly articulate capital projects in their Water Plans, explaining priorities as well as identifying actual capital expenditure undertaken in the past.

The Commission notes that examination of past expenditure levels is only the first step in the expenditure review process. In the first regulatory period, many businesses significantly increased capital expenditure levels. Consideration of past expenditure levels does not assume that future levels will match these. Rather the expectation is, as Barwon Water suggests, that businesses are able to explain and justify the reasons for changes in the scale and scope of their capital program.

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

In the Framework and Approach paper the Commission also identified that any review of the prudence and efficiency of capital expenditure incurred in the first period would be by exception and not a matter of course and would only occur where costs were significantly higher than forecast and outcomes were not delivered without sufficient reason. This remains the Commission's position.

4.3.1 Project delivery

For the first regulatory period there was a significant increase in forecast capital expenditure. This reflected a small number of key projects underpinning the capital expenditure programs of most businesses (for example, a large proportion of proposed capital expenditure for each of the businesses was typically linked to five key projects).

A key issue for the second review of expenditure is whether the forecasts submitted by the businesses are realistic in terms of the timing allowed for the delivery of major programs within the regulatory period, noting that major projects often require detailed planning and approvals to be in place before they can proceed. In previous water price reviews the Commission and its consultants found

many businesses were overly optimistic about the timeframes required to deliver major projects.

To assess the capacity of the businesses to deliver the proposed capital expenditure programs the Commission proposes to consider:

- actual performance against previous capital expenditure programs (noting that several water businesses have a history of significantly underspending their capital works budgets, monitoring of actual delivery in the first year of the current regulatory period has revealed delays to many major projects) and the businesses' demonstrated capacity to deliver against capital budgets in the order of those proposed
- the current approval status of the proposed projects
- the internal and external resources available to the business to deliver the identified projects and
- the businesses' project management capability.

To assist in the review expenditure forecasts and to provide information to customers about the key projects underpinning proposed prices the initial water plan guidance identified that the Water Plans should contain information on the:

- the top ten projects/programs to be delivered over the regulatory period
- the drivers of each project/program
- the outcomes that will be delivered by each project/program
- the expected delivery date for the project/program and
- the cost of the project/program for each year of the period.

Gippsland Water commented that while it supports the requirement to contain information on key projects within the Water Plan, the Commission should allow businesses to determine the number of projects within its plan. A similar concern was raised by Yarra Valley Water in commenting on the initial water plan guidance.

The Commission maintains the view that the Water Plans covering the first regulatory period contained too little information on major projects or initiatives. Detailing a minimum of ten projects will provide sufficient information to customers and the Commission to understand the key elements of each business's capital expenditure program.

4.3.2 Asset management

The Commission expects businesses to ensure that they effectively plan for and manage the renewals 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 Water Plans are consistent with a long term planning horizon beyond the regulatory period.

The Commission will assess the asset management practices of water businesses in assessing the robustness of the capital forecasting methods and the ability to deliver the proposed projects.

4.3.3 Annuities

For the first regulatory period Victorian rural water businesses had a choice as to whether to adopt a regulatory asset base (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 annuitised 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.

In this regulatory period the Commission's role extends to reviewing the proposed renewals annuity amounts, including the key inputs and assumptions adopted by each business, and the implications for the total revenue requirement.

The Commission considers that a renewals annuity amount should:

- provide sufficient revenue to undertake reasonable forecasts of renewals expenditure
- reflect efficient forecasts of expenditure
- have regard for a long term planning horizon (beyond the regulatory period)
- enable customers or potential customers to readily understand the manner in which it is calculated and
- be reviewed on a regular basis.

In order to accurately calculate a renewals annuity, businesses must have an accurate future renewals profile based on a good understanding of existing assets and their condition and degradation characteristics. Businesses also need to have a good understanding of how current assets and future expenditure relate to demand in the long term.

The key choices regarding method, assumptions and inputs underpinning the calculation of a renewals annuity include the:

- nature of assets included in the annuities calculation. The renewals approach is best applied to assets which form an integrated system, where the life of the whole system can be indefinitely extended by the refurbishment and 'renewal' of the component parts. In other jurisdictions, regulators such as The Water Services Regulation Authority have taken the position that non-infrastructure assets — assets with a defined useful life and which do not form part of a contiguous system — should be depreciated using conventional approaches. A common delineation between infrastructure and non-infrastructure assets is critical to the comparability of renewals estimates between businesses.
- annuity term — the term over which the annuity is calculated. In theory the term should capture a full asset cost cycle for the business. Care should be taken to

ensure that there are no 'spikes' in capital maintenance expenditure requirements just outside the chosen annuity period. However, the term also needs to take into account the confidence that businesses have in forecasts, the accuracy of which will necessarily decrease the longer the term.

- discount rate — the discount rate is applied to determine the present value of the payment stream that equates to the expected stream of future renewals expenditure. The discount rate impacts on the renewals calculation as it is used both to discount a stream of future capital maintenance expenditures to a present value and then to convert this present value to an annuity.

The Commission noted in its rural price determinations that the three businesses that continued to use annuity approaches were inconsistent in their application for each of the three points above.

While some businesses have retained the annuity method, all constructed assets from 1 July 2006 are now subject to the RAB based approach. The RAB valuation methodology is characterised as reflecting the economic value of the business at current prices while ensuring that all criteria related to the long-term financial viability of the business can be met. The opening valuation was subject to ministerial approval. Any future investment is then rolled into the asset base.

The 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 many existing assets may never occur.

In the Framework and Approach paper the Commission sought views on whether:

- annuities remain an appropriate method for recovering future capital expenditure in the rural sector and the factors that should be considered in assessing an annuity and
- a RAB model is a better method for recovering capital expenditure in the rural sector.

Lower Murray Water commented that as part of its Water Plan it is reviewing the method of recovering future capital expenditure on its rural network. The review will assess which annuity term is more appropriate and an appropriate discount rate and whether a RAB approach is feasible. Lower Murray Water further commented that its proposed approach for the 2008 regulatory period is not confirmed and that it may continue with an annuity. It suggested that a move to RAB approach would result in a greatly reduced recovery of expenditure if a "pure" RAB approach is adopted without any renewals expenditure or other transitional arrangement.

GWMWater commented that while it supports the RAB approach over the renewals annuity there needs to be a mechanism to reflect expected investment requirements beyond the regulatory period under consideration. This will provide substantial incentives for water authorities to implement an effective asset management framework to support the pricing proposal.

Western Water commented that it supports the use of a RAB approach for the rural sector as it provides a more transparent result. However, if the annuity method was

permitted then the principles of calculation of the annuity such as class of assets, time period and capital cost assumptions should be set by the Commission.

Neither Southern Rural Water nor FMIT which use an annuity approach provided a response to the Framework and Approach paper.

Rural water businesses will need to set out in their Water Plans whether they intend to continue to use an annuity approach or to adopt a RAB approach.

The Commission is of the view that the RAB approach is the preferable method to use for future pricing of rural water systems. It recognises that the transition to a RAB approach can present some short term difficulties. The Commission will work directly with any businesses moving from an annuity to a RAB on how to manage these transitional issues.

If a business proposes to continue with an annuity approach its Water Plan will need to set out the assumptions regarding the:

- nature of assets included in the annuities calculation
- annuity term and
- discount rate applied.

5 | FINANCING CAPITAL INVESTMENTS

Under the provisions of the WIRO businesses may recover the cost of financing existing and new investments through:

- earning a return on the value of the regulatory asset base (RAB) (that is, the weighted average cost of capital multiplied by the RAB) plus
- a return of the value of the RAB (ie regulatory depreciation)

5.1 Opening value of the regulatory asset base (1 January 2008)

Each water business's RAB represents the value, as assessed by the Commission, of past capital investments. This is the value on which businesses 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). To calculate the opening RAB for each business at 1 July 2008 the following formula is used:

$$\begin{aligned} & \text{Opening RAB}_{2008} \\ & \text{Equals Opening RAB}_{2004} \\ & \text{Plus gross capital expenditure}_{2004-2007} \\ & \text{Less contributions}_{2004-2007} \\ & \text{Less proceeds from disposal of assets}_{2004-2007} \\ & \text{Less regulatory depreciation}_{2004-2008} \end{aligned}$$

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 in this calculation.

The Commission preferred approach to determining the regulatory asset base at 1 July 2008, is to adopt the standard regulatory approach of using the actual capital expenditure, contributions (from government and customers), 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 Urban Water Price Review to determine the revenue requirement for 2007. The regulatory depreciation used in determining the opening RAB is that forecast in the 2005 and 2006 reviews.

An adjustment will be made in 2013 for any difference between assumed and actual net capital expenditure for 2007 when the opening regulatory asset base is calculated for the next regulatory period (which begins in 2013). Regulatory depreciation will remain the same as that estimated for the 2008 price review.

A number of businesses raised concerns over the use of the approved 2007 forecast on the basis that the current stress being placed on water supply by the continuing drought will result in significant unanticipated capital expenditure during 2007. Under the standard regulatory approach businesses would not be able to earn a return on and of this additional expenditure until 2013. They argued that the RAB should be rolled forward using an updated forecast for 2007 instead.

The Commission recognises that the current drought represents an abnormal circumstance and is willing to consider the use of updated forecasts for 2007 where water businesses are able to present a compelling case for doing so. Water plans would need to clearly articulate what the unanticipated costs and their associated drivers were.

As with all other forecasts that feed into the revenue requirement the Commission would need to be satisfied that the adjusted forecasts for 2007 represent prudent and efficient expenditure. One potential way to address this would be to include the updated forecasts in any consultant review of expenditure.

5.2 Weighted average cost of capital

As part of its Water Plan, each business will need to propose an estimate of the rate of return using a real post-tax WACC. The current estimate of the WACC is 5.1 per cent (see table 3.1). This estimate is for the 20 day period 7 February to 6 March. It should be noted that the current estimate may vary significantly from that adopted for the draft and final decisions. A brief discussion of the method underlying the estimate follows.

Table 3.1 **Real post tax WACC**

<i>Real risk free rate</i>	<i>Equity beta</i>	<i>Market risk premium</i>	<i>Debt margin</i>	<i>Financing structure</i>	<i>Franking credit value</i>	<i>WACC</i>
<i>(per cent)</i>	<i>(β)</i>	<i>(per cent)</i>	<i>(per cent)</i>	<i>(per cent)</i>	<i>(Υ)</i>	<i>(per cent)</i>
2.6	0.75	6.00	1.11	60	0.5	5.1

- *The risk free rate* — in principle, the risk free benchmark in the Capital Asset Pricing Model (CAPM) should reflect the yield on a risk free investment. The yield on government securities is typically used as a proxy. The Commission has applied the same approach to calculate the real risk free rate as it did in the 2005 Urban Water Price Review. This method results in an estimate of 2.61 per cent. It is worth reiterating that the standard practice amongst regulators is to update the risk free rate and the debt margin for the most recent 20 days.
- *The 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. As with the 2005 Urban Water Price Review, the

- Commission has adopted a proxy of the equity beta of 0.75, based upon benchmark gearing of 60 per cent debt to regulatory assets. The equity beta is consistent with:
- recent regulatory decisions in the water sector (0.81)
 - empirical evidence from the Australian energy sector (0.70) and
 - the range proposed in the last review.
- *The market risk premium* — in applying the CAPM, it is necessary to estimate the market risk premium in order to determine the opportunity cost of capital for providers of equity funds. During the last price review the Commission adopted an estimate of the expected market risk premium of 6 per cent. This estimate is:
 - 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.
 - within the 95 per cent confidence interval associated with the long term historical returns (4.3 per cent to 10.4 per cent) and is above forward looking estimates (4 per cent).
 - *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. The debt margin, assuming BBB+ rated debt with a 10 year term to maturity, is estimated at 1.11 per cent based on the 20 day average to 6 March, inclusion of a non-margin establishment fees of 10 basis points, and an adjustment for yield predictions. During the Electricity Distribution Price Review 2006-10, the Commission made allowance for a reasonable adjustment to CBASpectrum predicted yields. Accordingly, an adjustment of 18.5 basis points has been included in the updated WACC. The Commission will provide further guidance on the adjustment during the course of the current review.
 - *Financing structure* — consistent with the last price review the WACC includes a benchmark financing structure of 60 per cent debt to regulatory assets. This is consistent with:
 - actual observed gearing level 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.
 - *Franking credits* — consistent with the 2005 Urban Water Price Review the WACC is based on an assumption of 0.5 for gamma. This reflects:
 - an assumption that franking credits are valued at 60 per cent of their face value, and that 82 per cent are distributed consistent with the findings of Professors' Officer and Hathaway and
 - that a gamma of 0.5 is consistent with the majority of businesses' proposals during the last price review and recent regulatory decisions.

6 | INCENTIVE MECHANISMS

6.1 Introduction

The Commission is required to be satisfied that prices provide businesses with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria's water resources.

Economic regulators generally seek to ensure that regulated businesses have sufficient incentives to:

- achieve efficiencies in relation to minimising the actual cost of providing a particular level of service and
- deliver the desired level of service over the regulatory period, notwithstanding incentives to achieve efficiencies.

Recognising the tradeoffs that can often occur between these two competing incentives, incentive-based regulatory approaches are often designed to address both price and service dimensions. It is important to recognise that these incentives do not operate independently. For example, in the absence of any countervailing service incentive, the incentive to minimise costs may be achieved by lowering service quality. In developing well-focused incentive mechanisms, it is necessary to consider the interactions between various incentive mechanisms.

6.2 Approach to providing incentives in the water sector

The Commission has identified that there are a number of approaches that can be used to provide incentives for water businesses to meet their performance obligations and efficiently deliver services over the regulatory period. These include:

- specifying service obligations to apply to the businesses through regulatory codes and/or approving or specifying service standards to apply during a regulatory period as part of the Water Plan (discussed in section 3.2)
- reporting performance against service obligations and standards as part of the performance monitoring and reporting regime. The Commission has established a public performance monitoring framework for the urban water sector and is doing so for the rural water sector
- designing financial incentive mechanisms to reward and/or penalise businesses for performance that varies from pre-determined benchmarks or standards or
- combinations of the above.

As noted in the Framework and Approach paper the Commission generally adopts an incentive based approach that has typically involved:

- setting a price path for a five year period on the basis of forward looking forecasts of the key components of revenue (including expenditure and returns) and then allowing businesses to retain any benefits that arise from out-performing the forecasts and equally requiring them to bear any losses resulting from their performance during the regulatory period. For this approach to work there needs to be limited or no opportunity for the determination to be 're-opened' such that prices are adjusted to reflect actual demand and expenditure levels. A re-opening of the determination weakens the incentive properties of the framework. One of the strengths of this approach is that it enables the regulator to adopt a more high level approach, leaving operational and commercial decisions to the regulated businesses. The length of the regulatory period is discussed in more detail in chapter 2)
- enhancing incentives to achieve efficiencies within the period by allowing the businesses to retain any efficiency savings for a full five years after the year in which they have achieved any efficiency savings and then requiring them to share a proportion of those savings with customers (efficiency carryover mechanism)
- in the electricity sector but not the gas sector, the Commission has sought to balance the financial incentive to achieve efficiency savings with a financial incentive to pursue service improvements by adjusting the price caps to reflect actual performance against service and reliability targets (S factor). This reflects the fact that incentives to achieve cost reductions could be pursued at the expense of service levels
- identifying services that should be subject to guaranteed service level payments (GSLs), which thereby provide an incentive for businesses to address performance to individual customers whose service is poor when compared to the average. This approach has also been adopted for the metropolitan water retailers (discussed in more detail in section 3.3) and
- reporting and auditing the performance of businesses against a set of performance indicators, thereby providing a solid basis for delivering on the incentives described above. This approach was introduced into the urban water sector in 2004 and is proposed to be introduced into the rural water sector in 2007.

It has been the Commission's experience that this incentive-based approach to regulation has proved to be effective in both encouraging businesses to focus on efficient asset management and investment practices and deliver improvements in the quality and reliability of service to customers. These incentive mechanisms encompass both non-financial incentives (such as performance reporting) and financial incentives (such as efficiency carryovers, GSLs and S factors). A key issue in the regulation of the water sector is the extent to which financial incentives will be effective in influencing the behaviour of businesses.

The ownership and governance arrangements for water businesses as well as the potential conflict between social and commercial objectives may limit the effectiveness of financial incentives. For this reason non-financial incentives may be more effective in the case of the water sector.

It is the Commission's view that performance monitoring has a significant role to play in reinforcing the incentives faced by water businesses. For this reason it is proposing to expand its annual performance reporting to include monitoring of the delivery of the outcomes and commitments made by businesses in their Water Plans. Each year, Businesses will be provided with the opportunity to explain to customers how and why actual outcomes differ from those committed to in the Water Plans.

The Commission is also of the view that there is still scope for financial incentives to play a role in the water sector as they have in other sectors. The following sections discuss:

- whether the efficiency carryover and the S factor mechanisms used by the Commission in other infrastructure industries are likely to be appropriate and effective for the water sector and
- what practical difficulties and limitations arise in implementing these financial incentive mechanisms in the water sector for the first and second regulatory periods.

6.3 Efficiency carryover mechanism

A basic feature of the CPI-X approach is that it provides incentives for regulated businesses to continually improve their efficiency by reducing expenditure. Because there is no 'clawback' of revenue at the end of a regulatory period, if businesses can provide the required service at costs that are lower than those set in the expenditure forecasts, they are also able to retain the revenue within the business or achieve higher returns.

Because prices are realigned with costs at the end of each regulatory period businesses may have an incentive not to defer efficiency savings until the first year of the next regulatory period. For example, a business that achieves a \$50 000 ongoing operating cost reduction in year 1 of a 5 year regulatory period retains a benefit of \$250 000. The same reduction made in year 5 would only return \$50 000 to the business.

The efficiency carryover mechanism aims to address this by providing businesses with the same reward for an efficiency gain, irrespective of when (within a pricing period) the particular gain is made. The efficiency carryover mechanism should be designed to:

- be objective, transparent, easy to administer and replicable
- focus on the efficiency gains that can be influenced through managerial decision making
- require minimal or no re-opening of prior period forecasts to maintain the incentive
- provide as far as practicable, equal incentives to make efficiency gains in any given year, and equal incentives in respect of operating expenditure and capital expenditure and
- ensure that the allowance for efficiency gains is not at the expense of service standards.

In the Framework and Approach paper the Commission identified there were two broad factors that need to be considered by the Commission in the application of an efficiency carryover mechanism to the water sector:

- the treatment of any efficiency gains made over the first regulatory period and how these should be reflected in prices applying from 1 July 2008 and
- the approach to any efficiency carryover adopted for the second regulatory period.

6.3.1 Efficiency carryover mechanisms in the first regulatory period

In terms of applying an efficiency carryover to the first regulatory period, the Commission identified in its 2005 Urban Water Price Review that an efficiency carryover would apply and affect prices in the second regulatory period. However, the Commission noted that while there was support for the concept, the detailed basis on which efficiency gains and losses are treated would need to be considered in light of:

- water businesses' actual performance over the first regulatory period, in particular how effectively they respond to the incentives put in place and
- the Commission's broader thinking in terms of how effectively existing efficiency carryover mechanisms are operating in other industries that it regulates.

Since the 2005 Urban Water Price Review a number of factors have impacted on whether an efficiency carryover mechanism remains appropriate for the water sector for the first period. In particular:

- uncertainty surrounding the forecasts for the first regulatory period
- the short duration of the regulatory period and limited data availability at the time of the draft Water Plans (only 2005-06 actual data will be available)
- the worsening drought conditions across the State leading to changing priorities for a number of businesses and increased operating costs
- possible changes in obligations that have occurred over the period, with several businesses citing changing obligations impacting on operating costs
- the Commission's monitoring of major capital projects which suggests that many businesses are falling behind in delivering capital projects (the deferral of major projects to the next regulatory period is not considered to be an efficiency gain) and
- several businesses have asked that they be allowed to reforecast capital expenditure for the final year of the regulatory period which if allowed would blunt the effectiveness and relevance of the carryover mechanism.

Consequently, the Framework and Approach paper suggested that applying an efficiency carryover to the first regulatory period may have limited (or no) impact for most businesses. It was also suggested that the effort required to adjust for the above issues could be unduly complex and outweigh any benefits, especially for capital expenditure.

Stakeholders generally supported the Commission's view that there was little merit in applying an efficiency carryover mechanism for the first period.

Goulburn Valley Water noted its in principle support of the efficiency carryover mechanism, but argued that the Commission's approach to the identification and quantification of efficiency improvements to business as usual expenditure is simplistic. The Commission notes the efficiency carryover mechanism applies to all expenditure, not just business as usual expenditure.

The Consumer Utilities Advocacy Centre commented that it supports the adoption of an efficiency carryover mechanism as long as it provides equal incentives to make efficiency gains throughout the course of the regulatory period, rather than only at certain times of that period. But it acknowledged that the realisation of efficiencies will be difficult in the context of low average rainfall levels.

The only respondent in favour of an efficiency carryover mechanism in the first regulatory period was South East Water. South East Water commented that while there have been several unexpected occurrences that may impact on the implementation of an efficiency carryover mechanism for the first regulatory period, the Commission should implement a mechanism as foreshadowed at the last review.

The Commission maintains the view that there is little merit in applying an efficiency carryover mechanism across the water sector in the first regulatory period and it appears this position is broadly supported by stakeholders. As such the Commission does not propose to apply an efficiency carryover mechanism and does not expect businesses to address the issue in their Water Plans.

In the case of South East Water, the Commission will consider an application for an efficiency carryover. South East Water's Water Plan will need to set out its proposal for an efficiency carryover and the impact on proposed prices. The Commission will then consider the proposal in accordance with the guiding principles set out in the 2005 final decision. This will ensure that South East Water is not materially disadvantaged by the decision not to broadly apply an efficiency carryover mechanism.

6.3.2 Efficiency carryover mechanisms in the second regulatory period

The Framework and Approach paper invited comments on:

- whether an efficiency carryover mechanism should be applied for the 2008 regulatory period and
- how the efficiency carryover mechanism should be designed

As to whether an efficiency carryover mechanism should be applied for the 2008 regulatory period responses were mixed. Those businesses that did not support an efficiency carryover mechanism included Barwon Water, Melbourne Water and Western Water. Melbourne Water stated that it is inappropriate to apply an efficiency carryover mechanism in the 2008 regulatory period given the uncertainty surrounding forecasts. Western Water suggested that many of the

reasons the Commission gave for not applying such a mechanism to the first regulatory period are still likely to be relevant for the second regulatory period.

Those that supported the introduction of an efficiency carryover mechanism included City West Water, Lower Murray Water, South East Water and Yarra Valley Water. These businesses also stated that the manner in which any such mechanism is adopted needs to be clearly stated.

The Consumer Law Action Centre commented that it supports the introduction of an incentive mechanism or efficiency carryover as a measure which provides incentives to businesses to pursue efficiency improvements. Such a mechanism, if implemented appropriately, would be in accordance with the requirements of the WIRO.

The Commission considers that it is desirable that the regulatory framework enhance incentives for the water businesses to achieve efficiency gains. In particular, businesses should have a continuous incentive to achieve efficiency gains irrespective of when they arise during the regulatory period. Also, incentives should reflect efficiencies achieved within the control of management.

The Commission considers that applying an efficiency carryover mechanism in the second regulatory period is consistent with the requirement in the WIRO to provide incentives to pursue efficiency improvements.

The Commission recognises that some businesses continue to have misgivings about the relevance of an efficiency carryover mechanism to the water sector or are concerned that continuing uncertainty within the sector may make implementing a carryover mechanism difficult. However, it is likely that the forecasts for the second regulatory period will be more robust than for the first period and the longer length of the regulatory period provides greater incentives to pursue efficiencies.

Several businesses commented on the design of the efficiency carryover mechanism and/or requested that the rules governing the mechanism be established by 1 July 2008.

City West Water commented that if a efficiency carryover mechanism is to be used in the second period then further clarification is required from the Commission outlining how it proposes to deal with a number of design issues associated with the incentive mechanism.

The Commission accepts that in practice, the design and operation of the efficiency carryover mechanism can be complex and a number of issues need to be addressed in finalising the mechanism. These include:

- the length of the retention period — the longer the period the greater the incentive to make efficiency gains
- whether carryover mechanisms might apply to both operating expenditure and capital expenditure, or just operating expenditure. The Commission's preference is to apply the carryover mechanism to operating expenditure only

- how actual expenditure above forecast will be treated — whether penalties should be imposed if costs are exceeded and if so whether any caps on the penalties should be in place
- how to ensure that efficiency gains are not being made at the expense of imprudently deferred maintenance activity
- how the efficiency carryover interrelates with the rest of the regulatory framework — for example, the carryover mechanism in the gas industry is based on the premise that expenditure in the first year of the next regulatory period will be the same as expenditure in the second last year of the previous period, plus adjustments for ‘scope’ change. In this way businesses are prevented from artificially moving costs between years or under-reporting expenditure
- the assumptions that need to be made about expenditure in the final year of a regulatory period — given that actual expenditure in the final year is not known prior to a price decision for the next regulatory period being finalised and
- how efficiency gains should be shared between businesses and customers

City West Water argued that any expenditure responsible for exceeding benchmark levels that is driven by unforeseen circumstances (e.g. expenditure associated to drought conditions) should not be penalised.

South East Water commented that it believes that the efficiency carryover mechanism should:

- apply to operating expenditure and capital expenditure
- recognise that the deferral of expenditure may be efficient
- retain efficiencies for at least five years
- recognise that the impact of service level reporting and GSLs ensures that businesses will strive to achieve true efficiency improvements and
- recognise that events outside the business’s control (e.g. climate change) occasionally occur and should not prevent businesses from receiving a full five year value from any innovations or efficiency improvements that may have been implemented.

Central Highlands Water commented that a carryover mechanism should only be applied to operating expenditure, as capital expenditure plans by their nature include estimates on projects that have not been through detailed design and consequently have a degree of variability embedded. Central Highlands Water further commented that the imposition of penalties where costs are exceeded would not be an efficient outcome for customers. It noted that regional businesses in particular do not regard profit as a significant driver of activity and rarely remit dividends to their stakeholders. Raising additional penalties therefore will not impact any stakeholder but will only worsen Central Highlands Water’s financial position and make it harder to deliver outcomes to customers.

The Commission considers that the key principles that should underpin the efficiency carryover mechanism in the second regulatory period are:

- the mechanism should provide a gain (loss) to a business in a regulatory period when actual expenditure is less (more) than the expenditure benchmarks used to set prices
- for operating expenditure, the efficiency reward in the next regulatory period should be equal to the reduction in the recurrent level of expenditure in excess of the reduction reflected in the expenditure benchmarks (subject to any possible adjustment for changes in scope)
- the businesses should be able to retain the carryover associated with efficiency gains for five years after the year in which the gain is achieved and
- the carryover amounts should only be applied where the net increment to the revenue requirement over the whole of the regulatory period would be positive, after adjusting for the time value of money.

The Commission also considers that the efficiency carryover mechanism should not apply to capital expenditure in the water sector given the lumpy investment profiles and high proportion of capital linked to a small number of projects.

The Commission will consult further on the application and design of an efficiency carryover mechanism for the second regulatory period over the course of the price review. The question of whether an efficiency carryover mechanism is to apply and the design of the mechanism will not impede the development of Water Plans.

6.3.3 S factor mechanism

Another approach to providing financial incentives for businesses to deliver service levels is to allow prices to be adjusted annually to reflect actual performance against certain specified service standards or targets. This approach provides incentives to achieve or exceed the service targets and standards established during a price determination and improve service performance where economically efficient.

The Commission has adopted an S Factor mechanisms in the electricity sector where prices are increased or decreased each year to reflect performance against clearly defined average reliability targets.

The application of an S factor adjustment mechanism to the water sector requires consideration of:

- the quality and reliability of performance data so that robust targets can be set. An S factor mechanism cannot work without reliable information on performance levels
- the performance targets to be included in the basket of measures that are to be included in the mechanism and the respective weightings of each measure within the basket
- the percentage of revenue that could be gained or lost from meeting the S factor requirements and that the size of the financial incentive is consistent with the level of expenditure required to achieve the service targets and
- how to ensure that perverse incentives are not created by the businesses focusing heavily on achieving the targets included within the S factor basket of measures at the exclusion of other service levels.

The Commission decided against the use of an S factor mechanism in the first regulatory period because of the poor quality of the available performance data (with the exception of the three metropolitan water retailers) and the corresponding uncertainty about the reliability of projected service targets.

While the Commission has developed a performance reporting and auditing regime that applies to the water businesses, concerns remain as to whether all businesses have developed their performance reporting systems to a level which would allow an S factor mechanism to be implemented across the entire sector. In the rural water sector where performance reporting and service levels have yet to be established an S factor mechanism cannot be considered.

A further consideration is whether an S factor mechanism is warranted if businesses are only proposing modest service level increases — the Commission is only expecting businesses to maintain service levels consistent with the three year average (see section 3.2). In the electricity sector the S factor adjustment mechanism was implemented in conjunction with the expectation of large increases in service reliability and corresponding expenditure levels to deliver these outputs.

In response to the Framework and Approach paper CUAC commented that an S factor provides a powerful incentive to drive increased service performance, but its mandatory implementation is probably not appropriate for the 2008 regulatory period. CUAC commented that it would strongly support the Commission's requirement that businesses collect data that will facilitate the introduction of an S factor in future years. Similarly, most businesses responded that an S factor should not be implemented during the second regulatory period.

City West Water commented that it supports an S factor not being applied as incentives will be diluted for the next regulatory period. City West Water commented that it will not be proposing, nor do its customers support, any major changes to service standards during the next regulatory period.

The Commission confirms it does not propose to introduce an S factor adjustment mechanism across the water sector in the second regulatory period and it does not expect businesses to address the issue in their Water Plans.

7.1 Introduction

Each business's Water Plan should identify the prices and tariff structures that it is proposing to implement over the regulatory period. Businesses should identify material changes to prices being proposed and provide clear links between the proposed price changes and their drivers, such as new government obligations or demand side management initiatives related to the current drought.

The WIRO requires the Commission to approve prices for the regulatory period beginning 1 July 2008. In doing so, the Commission may approve all of a business's proposed prices, or the manner in which it proposes to calculate or otherwise determine proposed prices, if it is satisfied that all of the procedural requirements and regulatory principles of the WIRO are met. Alternatively, it may specify the prices or the manner in which the business should calculate or otherwise determine the prices.

As noted, the WIRO contains a number of regulatory principles that relate specifically to the design of prices. Overall, prices must be such that they provide for a sustainable revenue stream without reflecting monopoly rents or inefficient expenditure. In doing so, prices must allow businesses to recover operating and maintenance costs, renewal and replacement costs and a rate of return on existing and future assets.

The regulatory principles of the WIRO also require prices to:

- provide appropriate signals to customers about the costs of providing particular services and choices regarding alternative supplies for different purposes
- take into account the interests of customers, including low income and vulnerable customers
- provide the water businesses with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria's water resources and
- enable customers to readily understand the prices charged.

In approving prices the Commission needs to be satisfied that businesses will earn sufficient revenue to deliver all of their obligations and that prices send appropriate signals and take into account the interests of customers.

In its Framework and Approach paper, the Commission proposed to address the following considerations in assessing proposed prices for the 2008-2013 regulatory period against the WIRO:

- 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 and
- proposed prices need to have consideration for their impact on customers.

In their responses to the consultation paper, most stakeholders indicated that they supported the Commission's proposed approach for assessing prices. Alinta Ltd noted its support for the determination of the long run marginal cost of supply as an important reference point in the tariff setting process.

The Consumer Utilities Advocacy Centre (CUAC) recommended in its submission that the Commission ensure businesses assess the needs of different classes of customers to address any disadvantage that might arise from a change in tariff structures. The Department of Human Services (DHS), CUAC and the Consumer Action Law Centre noted that price signals are weakened when bills are weighted towards fixed charges and proposed that fixed service charges should be kept at a minimum to give consumers greater control over their bills through water saving measures. DHS also suggested that water businesses could cross subsidise concession households to assist customers on low incomes.

It is the Commission's expectation that businesses assess the needs of different classes of customers to address any disadvantage that might arise from a change in tariff structures.

The Commission notes that price signals may be distorted when bills are inappropriately weighted towards fixed charges. The relative weighting of fixed and variable charges should show consideration for the underlying costs of service provision. Where businesses 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 estimates and the drivers behind these costs.

The Commission is concerned that the suggestion that concession card holders should be funded by other customers has the potential impact on price signals to customers. Ideally the subsidisation of low income customers' consumption should be addressed through concession card arrangements. If prices are to provide some form of welfare support then this would best be done through the fixed annual service charge so as to preserve the ability of usage charges to provide signals to customers.

Considering the recent consultation and responses from businesses and other stakeholders, the Commission proposes to continue applying the same overarching considerations for assessing prices against the WIRO as detailed above. It is worth reiterating the importance of Water Plans in showing how businesses have considered the tradeoffs between a tariff's ability to effectively signal cost to customers and the impacts of proposals on customers. More specific guidance on particular tariff issues is provided below.

7.2 Urban tariffs

7.2.1 Inclining blocks

Inclining block tariffs are typically used in conjunction with two part tariffs and are applied to the usage or variable component of the tariff. Customers are charged a higher price for water use above some level which is generally regarded as non-discretionary, providing them with an incentive to moderate their discretionary water use.³ In proposing an inclining block tariff the business will need to consider a number of important issues. These include:

- the number of blocks to be established and how they are applied over different customer classes
- the level of usage at which the first block should be set, such that non-discretionary water use is affordable for vulnerable households
- the level of usage at which subsequent blocks are set
- the price relativities between the blocks
- the impacts of inclining blocks on large households and
- the complexity of an inclining block tariff.

Concerning inclining blocks in general and their effectiveness over the first regulatory period:

- South East Water noted that while they had seen a significant reduction in the volume of water consumed, the results do not conclusively point to inclining block tariffs as being the cause as other demand management policies implemented have also contributed
- Wannon Water noted that lower average household consumption occurred in its areas where inclining block tariffs had been introduced
- the Consumer Action Law Centre submitted that while in principle it supported inclining block tariffs, it noted that there is little evidence of these structures having contributed to reductions in water consumption and
- DHS claimed that household income, rather than price, is the main influence on customers' consumption levels, therefore reducing the impact of inclining block tariff structures, particularly on low income customers.

From the responses received, it is not conclusive whether inclining block tariffs are effective in providing signals to customers about sustainable water use. However, the Commission does not propose to preclude businesses from using inclining block tariff structures in the urban setting nor require businesses to adopt them.

There were also a number of submissions concerning the impact of inclining block tariff structures on large families:

- Alinta Ltd suggested that large households could be provided with rebates on application

³ Non-discretionary use in the residential context is defined as the level of consumption required to meet basic hydration, cooking and hygiene needs.

- Wannon Water noted that businesses can assist large families with in-home efficiency improvements, hardship provisions and information about Government assistance and
- DHS suggested a modified inclining block tariff be applied to customers with concession cards, or customers could be provided with choice between a range of pricing plans.

The Commission sees merit in Alinta Ltd's suggestion that large households facing inclining block tariff structures should have the ability to apply for a rebate from their water business. The Commission also sees merit in Wannon Water's proposal and notes that in-home efficiency improvements, hardship provisions and information about Government assistance as suggested by Wannon Water should already be part of businesses' hardship provisions contained in their customer charter. The extension of such provisions to large households who face inclining block tariffs is supported by the Commission. To be effective, these measures should be clearly communicated to customers.

DHS suggested that customers could be provided with a choice between alternative pricing plans to create incentives for all customers to reduce consumption. The Commission recognises that there are benefits in providing customers with increased choices. These benefits would need to be weighed against any possible administrative cost.

7.2.2 Variable charges for non-residential customers

While the Commission recognises that inclining block tariffs may assist in providing signals to customers regarding sustainability, it has a number of concerns regarding their application to non-residential customers. Primarily, the issue of defining non-discretionary water use by non-residential customers has yet to be resolved, as the current definition of non-discretionary use in the residential context is not appropriate. Also, while residential water use can be seen to be relatively homogeneous this is not the case for non-residential use, which has the potential to vary considerably depending on the industry and application making it difficult to set blocks.

Concerning the issue of water consumption among non-residential customer and the possible application of inclining blocks:

- South East Water noted in its submission that "the heterogeneous nature of the non-residential sector makes it very difficult to universally implement inclining block tariffs without creating barriers to entry, impacting on competitiveness and discouraging mergers and expansions"⁴
- However, consultants engaged by South East Water found that there was a demonstrable elasticity of demand among non-residential customers.⁵ South East Water suggested that inclining block tariffs might be able to be applied to specific industry sectors where consumption patterns are relatively consistent,

⁴ South East Water Response to the 2008 Water Price Review Consultation Paper, p.12

⁵ South East Water engaged ACIL Tasman through the Smart Water Fund to investigate pricing options and elasticity function for the non-residential sector.

while recognising that this would require research to identify these sectors and the customers affected

- Alinta Ltd suggested setting block sizes individually based on the customer's consumption history and re-set annually in accordance with a pre-determined strategy
- Barwon Water submitted that the use of targets and incentive pricing would add too much complexity to the tariff structure and also that the administrative costs of such initiatives could outweigh the benefits
- Western Water noted the difficulty in determining the level of discretionary use in non-residential customers and
- Coliban Water advised that it currently employs a liaison officer to work with large non-residential customers to assist them in achieving reductions in their water use, a strategy which has seen significant results and is preferred by the business to inclining blocks.

Developing tariff structures specific to particular sectors of the industry could overcome the diversity of the non-residential customer base. However, as noted by South East Water, this would require significant research to implement. The costs of gathering the necessary information, implementing and administering such a tariff structure may outweigh the benefits.

Alinta Ltd's suggestion of setting blocks individually for non-residential customers based on historical levels of consumption may be effective in providing incentives for non-residential customers to reduce water use. However, this may require more information than South East Water's sectoral approach and similarly the administrative costs of implementing and maintaining such a pricing structure may outweigh the benefits.

Most responses regarding the application of inclining block tariffs to non-residential customers mirrored the Commission's concern that this may not be the most effective means of providing price based incentives to non-residential customers about the sustainable use of water.

Where businesses propose to implement inclining block tariffs for non-residential customers, Water Plans should clearly articulate the basis for the proposal and the manner in which it will be implemented. Businesses would also need to consult with their customer base regarding the introduction of inclining block tariffs for non-residential customers. Further, any businesses proposing alternative tariff structures will need to consider how the proposed tariff structures relate to supply demand balance strategies.

7.3 Recycled water

7.3.1 Form of price control

In the 2005 Urban Water Price Review the Commission outlined a set of broad pricing principles for recycled water for each business. These were that 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 (excluding polluter's costs associated with EPA discharge compliance) and
- include a variable component.⁶

In its Framework and Approach paper, the Commission outlined its proposed treatment of recycled water prices for the 2008 Price Review.

Where residential customers are receiving recycled water through third pipe systems, the Commission proposed that annual approval of prices is the most appropriate form of regulation. This is a relatively homogenous service and therefore the inclusion recycled water services in the tariff schedule is appropriate, as with other water and sewerage services.

Where businesses supply recycled water to non-residential customers on a one-off basis (such as golf courses and other industrial users) the Commission proposed that pricing principles are the most appropriate form of regulation. This approach recognises that where customers receive a specific or unique service businesses should have the flexibility to set prices on a case-by-case basis against the approved principles.

The Commission also sought comment on the appropriateness of the pricing principles outlined in the 2005 Urban Water Price Review in light of recent policy developments regarding recycled water.⁷ In particular, the Commission sought feedback on the appropriateness of the principle to maximise revenue earned from recycled water services.

7.3.2 Stakeholder response

In response to the Framework and Approach paper, most businesses noted that they supported the application of price caps to recycled water services for residential subdivisions. This position was supported by the Consumer Action Law Centre, which stated that in the case of residents of third pipe estates, pricing principles provide inadequate protection from the difficulties customers face in determining whether they are being charged an efficient price and the limited oversight of the Commission.

There was also support from the businesses for continuing to use pricing principles in the case of non-residential or unique (one-off) customers. South East Water noted in its submission that negotiating directly with unique non-residential customers gives it the ability to come to an agreement that reflects the circumstances of the particular customer. It is worth noting that under the current

⁶ The principles for Melbourne Water are slightly different from those for other regulated entities. These differences reflect the recovery of funding shortfalls associated with recycled water from bulk water charges applied to the metropolitan retailers.

⁷ Most significantly, these policy developments included changes to the Victorian Planning Provisions that provide businesses with the power to mandate third pipe systems for particular areas (clause 56, Victorian Planning Provisions).

principle based framework the Commission can review negotiated prices in terms of their compliance with the approved pricing principles. In addition the Commission will also respond to and investigate customer inquiries regarding the compliance of negotiated prices.

A small number of businesses noted that they would prefer to maintain the current system of using pricing principles for the pricing of recycled water services, whether it be for residential third pipe systems or non-residential or unique customers. There were several reasons stated by businesses for this preference:

- Coliban Water advised that it was not expecting to supply recycled water to customers other than in one-off situations
- Barwon Water advised that its preference was to maintain the flexibility afforded by being able to set its own prices on an estate-by-estate basis to avoid cross subsidisation and
- Westernport Water stated that flexibility in pricing would be required as different customers have preferences for different qualities of recycled water.

The Commission notes that the application of price cap regulation to recycled water where it is a relatively homogenous service (such as third pipe schemes) should not cause concern for these businesses. Businesses are able to propose varying tariffs, on either an estate-by-estate or water quality basis, to be included in the tariff schedule. One-off situations will still be regulated through pricing principles.

With regard to the principles to be applied, most businesses agreed that given the ability of businesses to mandate the uptake of recycled water services in certain circumstances the principle of revenue maximisation was no longer appropriate. It is worth noting that the principle was originally intended to allow businesses to recover as much cost as possible given that most recycled water projects were envisaged to not achieve full cost recovery.

Alinta Ltd suggested that the price of recycled water should be set at or within a small range of the potable water price, as high prices will encourage the substitution of potable water, while pricing too low will lead to excessive use.

The Commission notes that the price of recycled water is in practice subject to market disciplines afforded by the degree to which it is substitutable with alternative water supplies. Where substitution is possible recycled water prices are bounded by the price of alternatives. The fact that these disciplines naturally exist means that they do not need to be directly imposed by regulation. The current principles state that prices need to have regard to substitutes. They do not draw direct reference to the price of substitutes — such as stating that prices need to be 30 per cent lower than the first tier of the potable water inclining block tariff.

Alinta Ltd also proposed distinguishing between customers on the basis of whether their uptake of recycled water was voluntary or mandated. The Commission notes Alinta's suggestion, but considers that the approach proposed by the Commission is more in line with the regulatory principles in the WIRO that require prices to provide signals to users about the costs of providing the service. It should be clarified that the proposed distinction is based upon the appropriate form of price control (being price caps or pricing principles) for the type of service being

delivered. That is, principles are appropriate where services are unique and one-off and prices should be included in a tariff schedule where services are relatively homogenous and provided to a large group of customers.

Western Water submitted that return flows to rivers or groundwater systems should be treated as recycled water, as it considers the environment to be the third party where recycled water is required for environmental flows. The Commission may acknowledge these flows for performance monitoring and reporting purposes (where the return flows are approved by the EPA as environmentally beneficial reuse), however, for the purposes of pricing the Commission is unaware of any proposal to levy a charge for the provision of environmental flows.

7.3.3 Approach going forward

The Commission proposes to adopt the approach outlined in the Framework and Approach paper for the regulation of recycled water services. Where recycled water services are provided through third pipe systems to residential customers, the Commission proposes to regulate prices through annual approval, as is the practice for water and sewerage services.

In setting out prices for recycled water, businesses will need to take account of the cost drivers of providing the service, include a variable component to provide signals about costs and sustainability and ensure prices conform to the regulatory principles set out in the WIRO.

Where recycled water services are provided to large non-residential or unique (one-off) customers, the Commission proposes to adopt a pricing principles approach to regulation. The proposed principles should be consistent with the following:

- Recycled water prices should be set so as to:
 - have regard to the price of any alternative 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 second principle has been amended to reflect the potential imposition by Government of obligations related to recycled water to non-metropolitan businesses, such as those contained in the Central Region Sustainable Water Strategy. This principle also recognises the ongoing pressure being placed on businesses' ability to maintain a balance between supply and demand by the current drought.

Where businesses invest in recycled water initiatives in order to meet Government obligations for recycling or to maintain the balance between supply and demand, they may not be able to recover the full cost of providing the service through prices. Given the substitutability with alternative water sources the benefits of recycled water initiatives (such as security of supply) accrue to all customers of the water

business and funding shortfalls for recycled water investments may be recovered from the general customer base.

Businesses' proposals that differ from the Commission's outlined position need to be accompanied by a thorough explanation of the proposed alternative.

7.4 Miscellaneous services

7.4.1 Consultation paper

In addition to providing 'core' water and sewerage services, businesses provide a wide range of other services to customers. These include undertaking new connections, providing special meter readings, conducting meter tests, providing property information statements and reviewing applications to build over easements. Businesses also impose a range of application and 'penalty' fees (such as where customers' cheques are dishonoured).

In its Framework and Approach paper the Commission raised concerns about the:

- the range of miscellaneous services being offered
- definitions of miscellaneous and
- pricing for miscellaneous services.

In particular the Commission stated that prices and how they are to be applied should be clearly defined, including a definition of the service being provided. Prices proposed for miscellaneous services should address the following principles:

- prices should be consistent with the broader objectives of the business
- prices should be effective in providing adequate signals to customers and
- proposed prices need to have consideration for their impact on customers.

The Commission stated a belief that there may be opportunities to rationalise the number of miscellaneous services being offered, either by offering some miscellaneous services as part of the main water or sewerage service, or combining certain miscellaneous services at the same price. One of the benefits of rationalisation is that it would provide for relatively simpler administration.

The Commission invited comments in response to the paper on the above, as well as other related issues, including:

- Do stakeholders have any view on how best to deal with the uncertainty about the nature of miscellaneous services being offered?
- Should businesses be required to more comprehensively define their miscellaneous services? Should common definitions be adopted?
- What is the best way of ensuring that miscellaneous services are priced appropriately and consistently across businesses?
- Do stakeholders have any concerns with the manner in which 'actual cost' pricing is being applied?

- Would there be benefits in adopting a more common approach to determining 'actual cost'?
- Should businesses be required to provide an estimate of costs prior to a service being provided?
- Is it necessary to maintain the ability for new miscellaneous services to be introduced during a regulatory period?
- Should the introduction of new miscellaneous services be restricted to the commencement of each regulatory period?

7.4.2 Stakeholder responses

In response to the Framework and Approach paper most businesses agreed that there is scope to identify a standard set of miscellaneous services. However, this was qualified by a stated need for businesses to have the flexibility to propose prices that reflect their particular cost circumstances.

A number of businesses expressed a preference for prices to be regulated via pricing principles as opposed to their current inclusion in the tariff schedule accompanied by an annual price approval process. South East Water suggested a hybrid approach where a core set of miscellaneous services are identified and subject to annual approval with the remainder being regulated through pricing principles. The core services identified by South East Water are:

- 20 mm meter fees
- removal and testing of meters
- restoration of supply
- information statements
- application fees for single house connections
- build over easement application fees
- sewer location plan fees (house connection plans) and
- tradewaste application fees.

The Commission sees merit in South East Water's suggestion, while noting that what constitutes a core set of miscellaneous services may differ from business to business. For example, Melbourne Water noted that there are instances where miscellaneous services are unique to a business (such as drainage services) and that ensuring commonality between businesses will not be possible. The Commission has taken the position that identification of a core set of services is desirable but that businesses are best placed to identify these services.

South East Water suggested the following principles be applied to non-scheduled services:

- the direct costs of service provision by contractors plus
- south east waters direct costs plus and
- a 25 per cent contribution to overheads.

While the Commission sees merit in a principle based approach it would need to be satisfied that principles allowing the introduction of new services during the period make explicit reference to associated prices excluding costs that have been included in the 2005 Urban Water Price Review and subsequently reflected in the pre-existing approved prices. For example, principles related to overheads and costs should only include incremental costs.

Most businesses responded positively to the suggestion that businesses attach definitions to scheduled miscellaneous services. However, a number of businesses did raise the concern that the relative immateriality of miscellaneous charges in terms of revenue stream implied that any benefits of providing such definitions would be outweighed by their associated costs.

7.4.3 Further guidance

After consideration of the submissions and responses to the consultation paper, the Commission proposes that businesses identify within their Water Plans a core set of miscellaneous services that will be subject to the annual price approval process and subsequently included in the tariff schedule. The Commission expects that there will be some degree of commonality in identified services across businesses. However, the Commission recognises that the degree of similarity across businesses will be limited by the circumstances specific to individual businesses.

Non-scheduled miscellaneous prices should be set such that they:

- 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
- are transparent.

Under a pricing principles approach to regulation the Commission may audit compliance with principles as and when the need arises.

The core set of miscellaneous services proposed by businesses should be well-defined, either in terms of the nature of the service provided, or the standard of service offered. In some cases, this information is readily obtainable from other documentation. For example, a miscellaneous service may be included in the tariff schedule in the following manner:

Standard property information certificate — provision of a property information statement in accordance with section 75 of the *Water Industry Act 1994*, in hard copy form, within 7 days of receiving a request.

8 | NEW CUSTOMER CONTRIBUTIONS

8.1 Consultation paper

Water businesses have the ability to require new and existing customers to make an upfront contribution to the costs of connecting to the existing water and sewerage networks. 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.

In the Framework and Approach paper the Commission proposed to change the existing interim arrangements by increasing the cap on customer contributions to \$1000 per lot for water and \$1000 per lot for sewerage. The Commission also proposed to accompany the new cap with a principle that contributions below \$1000 reflect the per lot cost to the businesses of shared infrastructure associated with the development or area.

The Commission also raised a number of issues regarding the classification of assets, the determination of bring forwards in time and the contribution arrangements surrounding compulsory third pipe schemes.

The Commission recognised that 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 and what possible form that criteria could take. The Commission is also cognisant that when considering any possible amendments, there is a trade-off between the benefits of such amendments and loss of the administrative simplicity inherent in the current arrangements.

The Commission saw merit in the development of a set of high level principles that provide guidance in the estimation of the period of bring forward associated with non-scheduled customer contributions. The Commission sought feedback from stakeholders on the form and content of such principles. The Commission also sees merit in the development of service plans that outline the expected timing for the provision of works in identified growth areas.

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. The Commission sought feedback from stakeholders on the appropriate form and manner in which to regulate recycled services.

8.2 Stakeholder responses and further guidance

In response to the Framework and Approach paper most water businesses stated a preference to increase contributions. A number of businesses noted that the

arrangements proposed by the Commission constitute a significant change in the underlying principles adopted in the last review.

City West Water stated customers should contribute to location specific assets thorough contributions. However, such contributions should reflect a consistent set of principles and should not be arbitrarily capped. The capping of contributions at \$1000 would in effect result in two distinctly different sets of principles. At or below \$1000 the principle would be to base contributions on the value of shared assets, implying that customers are responsible for funding such assets. Above \$1000 the principle is to base the contribution on the bring forward financing costs associated with out of sequence works, based on the assumption that these are the costs imposed by customers and that businesses are responsible for the funding of such assets. South East Water also raised this concern and suggested that with the removal of the arbitrary cap, contributions should approximate \$3400 per lot.

Yarra Valley Water also responded by stating it was seeking to propose more cost reflective tariffs based on whether the development was greenfield development (\$5000 per lot for water and \$11 000 per lot for sewerage) or an infill development (\$100 per lot for water and \$5000 per lot for sewerage).

A number of businesses also suggested that it would be problematic to determine contributions on a lot by lot basis. Both Central Highlands Water and City West Water suggested contributions should be levied on a catchment basis, as this would provide more certainty to customers and would provide for administrative simplicity.

The Urban Development Institute of Australia (UDIA) raised concerns about the impact of increased contributions on residential housing affordability. UDIA noted that the up front funding of infrastructure while having no financial impact on water businesses had a direct impact on the new home owners. The UDIA noted that the low number of applications for non-scheduled contributions under the current arrangements indicates that businesses are able to manage financially. However, increased per lot charges for water and sewerage (along with the imposition of the State Government Infrastructure Levy, with likely per lot charges between \$3000 and \$8000 per lot) would increase house prices and raise affordability issues.

UDIA is also concerned about the equitable treatment of existing and new customers. It noted that under a uniform tariff, a new customer serviced with new infrastructure (and therefore very low maintenance cost) will require low recurrent spending for the next 30-40 years, thereby cross subsidising existing areas which have substantially higher maintenance costs and in many cases require replacement of local infrastructure (fully funded through tariffs with no accompanying contribution). If new home buyers on the fringe are paying for their infrastructure but have lower costs over the next 30-40 years, then they should face lower water use charges.

UDIA also noted that the development cycle for broadhectare land, that is the elapsed time between site identification and purchase and the release of developed lots to the market, can take up to a decade or sometimes longer. Evident when dealing with timeframes of this nature is the need for economic certainty and subsequently there is a need to avoid significant changes to funding models.

In response to the Framework and Approach paper the Victorian Water Industry Association suggested an alternative framework for levying new customer contributions based on the water use efficiency of particular developments. The Association is proposing to adopt a standard schedule of charges, scaled according to the water-sensitivity of particular developments and the demand for future infrastructure. Essentially there would be three different levels of contribution.

1. a minimum \$500 per lot per service for water and sewerage (total \$1000 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.
2. \$1000 per lot per service for water and sewerage (total \$2000 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.
3. \$2000 per lot per service for water and sewerage (total \$4000 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.

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 proposes 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.

The Consumer Action Law Centre also raised the potential of contributions to promote water sensitive urban development. The Centre suggested an alternative approach of allowing rebates or incentives to developers that promote sustainable outcomes.

Given the current pressures on the demand supply obligations of water businesses, the Commission sees merit in the approach suggested by the Victorian Water Industry Association. Where businesses are intending to propose the Victorian Water Industry Association model they should clearly articulate in their Water Plans how the model will be implemented and how the differing categories of water sensitive development will be defined. In addition, businesses need to state how the model will allow for out of sequence developments.

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.