



Independent Pricing and Regulatory Tribunal

Review of prices for water, wastewater and stormwater services for Gosford City Council and Wyong Shire Council

From 1 July 2009

Water — Issues Paper
July 2008



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Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due from Gosford City Council and Wyong Shire Council by 12 September 2008 and from all other stakeholders by 10 October 2008.

We would prefer to receive them by email <ipart@ipart.nsw.gov.au>.

You can also send comments by fax to (02) 9290 2061, or by mail to:

Gosford City and Wyong Shire Council Price Review
Independent Pricing and Regulatory Tribunal
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Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au>. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be subject to appeal under freedom of information legislation.

If you would like further information on making a submission, IPART's submission policy is available on our website.

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1 Introduction

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is responsible for setting charges for a range of monopoly services provided by Gosford City Council and Wyong Shire Council (Councils). IPART regulates charges for:

- ▼ water, sewerage and stormwater services, such as the provision of potable water to households and the transporting/disposal of sewage from these properties
- ▼ providing, or upgrading, water supply, sewerage and drainage facilities for new developments¹
- ▼ providing recycled water and allowing sewer mining²
- ▼ providing backlog sewerage services.³

IPART made a determination of the maximum charges to apply to the services described in the first dot point above for each of the Councils in 2006.⁴ That determination applies from 1 July 2006 to 30 June 2009. It is these services that are the subject of this review.

Gosford City Council and Wyong Shire Council

Gosford City Council (Gosford Council) provides water, wastewater and stormwater services to a permanent population of approximately 160,000 people. Its area of operations covers approximately 1,028 square kilometres of the Central Coast region of NSW.⁵ It provides water supply services to approximately 69,000 properties and sewerage services to approximately 68,000 properties.

¹ IPART has also been reviewing developer charges for metropolitan water agencies. The Final Report for the review is scheduled to be released in September 2008.

² IPART conducted a review of pricing arrangements for recycled water and sewer mining in 2006. The resulting determinations applied from 1 January 2007 for Gosford Council and 1 July 2007 for Wyong Council, see IPART, *Pricing arrangements for recycled water and sewer mining: Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006 (Determination Nos 8 and 9, 2006).

³ The current determination period for this service commenced on 1 July 2006, see IPART, *Pricing of backlog sewerage services for Gosford City Council*, February 2006 (Determination No 1, 2006).

⁴ IPART, *Gosford City Council, Wyong Shire Council: Prices of Water Supply, Wastewater and Stormwater Services From 1 July 2006 to 30 June 2009*, May 2006 (Determination Nos 2 and 3, 2006) (2006 Determination).

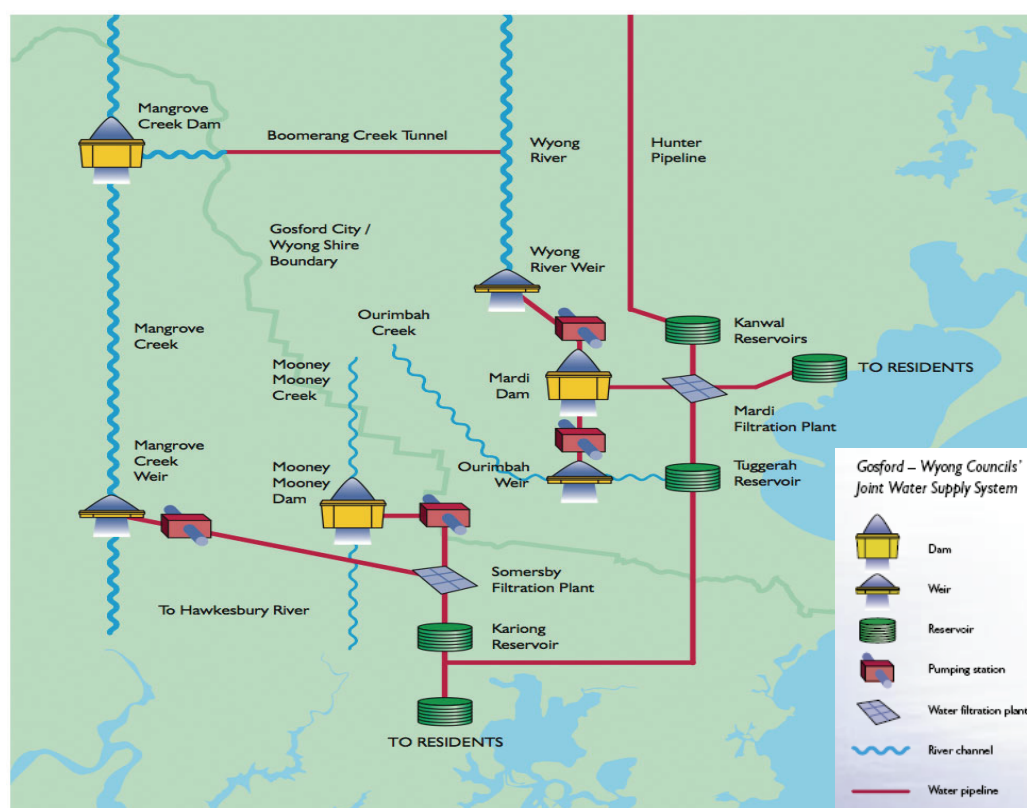
⁵ The Central Coast is the geographical area encompassing Wyong Shire Council and Gosford City Council areas.

Wyong Shire Council (Wyong Council) is responsible for an area covering approximately 827 square kilometres of operations with a current population of over 140,000 people. Wyong Council provides water supply services to approximately 58,000 properties and sewerage services to approximately 57,000 properties.

The Councils share a joint water headworks supply managed by the Gosford and Wyong Councils' Water Authority (Authority), with the major bulk water storages being Mooney Mooney and Mangrove Creek Dams in Gosford Council's area and Mardi Dam in Wyong Council's area. A schematic diagram of the Councils' water supply system is shown in Figure 1.1.

Gosford Council owns and manages over 900 km of water mains and approximately 1400 km of sewerage mains and channels. In the 2006/07 financial year Gosford Council supplied over 13.5 GL of water. Wyong Council owns and manages over 1,100 km of water mains and approximately 1,200 km of sewerage mains and channels. In the 2006/07 financial year Wyong Council supplied over 12.5 GL of water.

Figure 1.1 Gosford and Wyong Councils' Water Authority water supply system



Source: Gosford and Wyong Councils' Water Authority (http://gwcwater.nsw.gov.au/OurSystem/our_system_index.htm).

1.1 Since the 2006 Determination

The 2006 Determination for the Councils allowed for investment in new infrastructure to secure the water supply to the Central Coast and to overcome water shortages owing to the drought conditions prevailing at that time and the forecast increase in population growth in the area.⁶

Gosford Council's prices for the period 1 July 2006 to 30 June 2009 were set to generate expected total revenue of \$164 million (\$2005/06).⁷ This included provision to support a capital program of \$88.3 million (\$2005/06), which included Gosford Council's share of Joint Water Supply projects with Wyong Council to help secure future water supplies, including projects to upgrade Mardi Dam, augment the ability to transfer water from the adjacent Hunter Water supply system and expand the use of groundwater as a water source.

Wyong Council prices for the period 1 July 2006 to 30 June 2009 were set to generate expected total revenue of \$140 million (\$2005/06).⁸ This revenue included provision to support a capital program of \$94.5 million, inclusive of Wyong Council's share of joint water supply projects to be undertaken with Gosford Council.

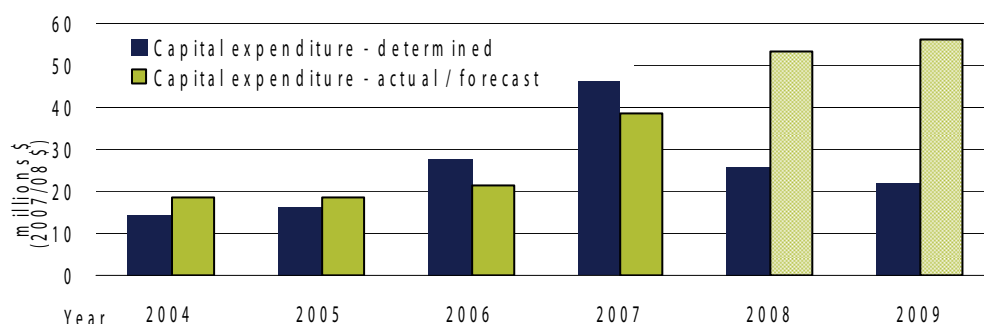
Prices for both Councils were also increased to allow for a better reflection of costs in the supply of water and the provision of stormwater drainage services, and to facilitate increased capital expenditure for sewerage services.

Figures 1.2 to 1.5 depict the allowed capital and operating expenditures for each of the Councils compared to the actual and forecast expenditures. For this review, IPART will require the Councils to reconcile the determined and actual costs and justify any divergence in these.

⁶ 2006 Determination

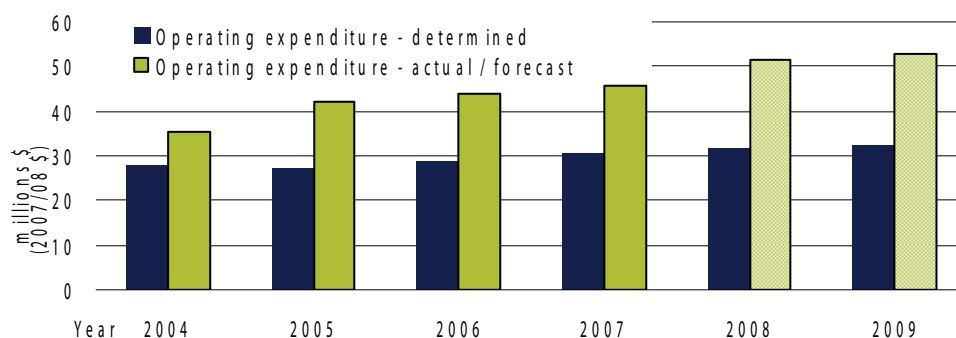
⁷ IPART, *Gosford City Council, Wyong Shire Council: Prices of Water Supply, Wastewater and Stormwater Services From 1 July 2006 to 30 June 2009*, May 2006 (Determination No 2, 2006) (2006 Determination (Gosford)).

⁸ IPART, *Gosford City Council, Wyong Shire Council: Prices of Water Supply, Wastewater and Stormwater Services From 1 July 2006 to 30 June 2009*, May 2006 (Determination No 3, 2006) (2006 Determination (Wyong)).

Figure 1.2 Gosford Council – capital expenditure

Data source: IPART determinations⁹ and Annual Information Returns from the Councils.

The comparisons show that Gosford Council has not achieved the increased capital expenditure forecast from 2005/06, underspending in both 2005/06 and 2006/07. However, Gosford Council has increased expenditure above previous levels and forecasts over-expenditure in 2007/08 and 2008/09. With respect to operating expenditure, Gosford Council has consistently overspent compared to forecasts between 2003/04 to date and predicts that this trend will continue. In light of the large variations between forecast and actual expenditures, IPART seeks confirmation from Gosford Council that service outcomes are being delivered.

Figure 1.3 Gosford Council – operating expenditure

Data source: IPART determinations¹⁰ and Annual Information Returns from the Councils.

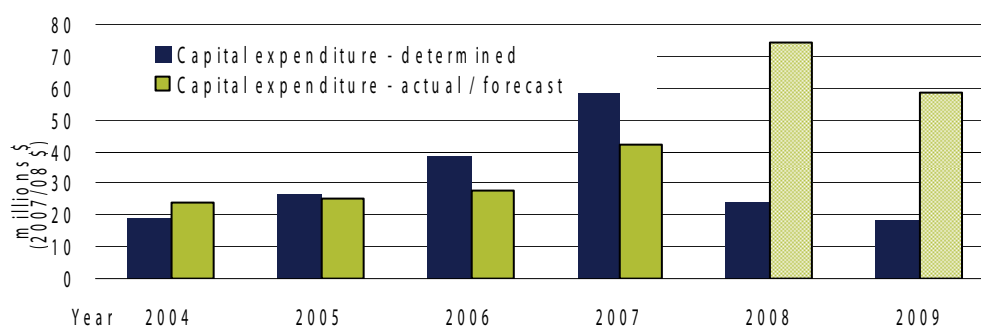
The expenditure trends for Wyong Council are very similar to those of Gosford Council. Capital expenditure was forecast to increase for the years 2005/06 and 2006/07. However, Wyong Council has not achieved its expenditure forecasts. Forecasts for 2007/08 and 2008/09 reflect the additional expenditure required in

⁹ IPART, *Gosford City Council, Prices of Water Supply, Wastewater and Stormwater Services from 1 July 2003 to 30 June 2005* (Determination No 1, 2003); IPART, *Prices of Water Supply, Wastewater and Stormwater Services - Gosford City Council Wyong Shire Council - 1 July 2005 to 30 June 2006* (Determination No 1, 2005) (2005 Determination(Gosford)); 2006 Determination (Gosford).

¹⁰ Ibid.

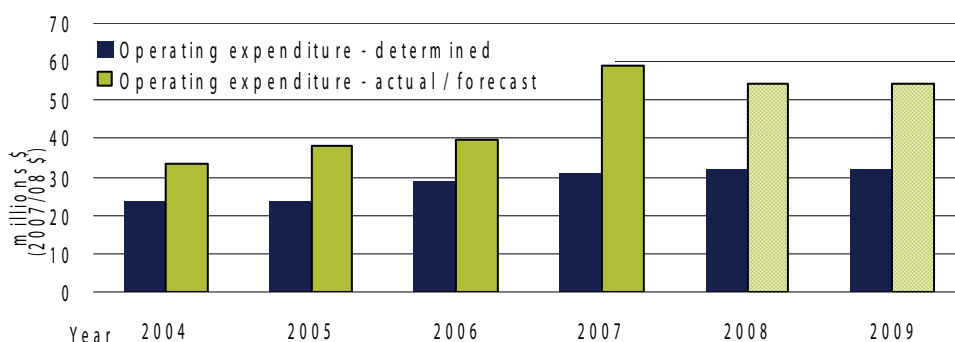
these years to maintain the capital program. In terms of operating expenditure, Wyong Council has consistently overspent the forecast values. Again, in light of the large variations between forecast and actual expenditures, IPART seeks confirmation from Wyong Council that service outcomes are being delivered.

Figure 1.4 Wyong Council – capital expenditure



Data source: IPART determinations¹¹ and Annual Information Returns from the Councils.

Figure 1.5 Wyong Council – operating expenditure



Data source: IPART determinations¹² and Annual Information Returns from the Councils

The Councils' water and sewerage prices for 2008/09, compared to those of Sydney Water and Hunter Water, are listed in Appendix E.

¹¹ IPART, *Wyong Shire Council Prices Of Water Supply, Wastewater And Stormwater Services from 1 July 2003 to 30 June 2005* (Determination No 2, 2003); IPART, *Prices of Water Supply, Wastewater and Stormwater Services - Gosford City Council Wyong Shire Council - 1 July 2005 to 30 June 2006* (Determination No 2, 2005) (2005 Determination(Wyong)); 2006 Determination (Wyong).

¹² Ibid.

1.2 Scope of the review

This review will be conducted under section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act). Price reviews conducted under section 11 require IPART to consider a broad range of issues, including a number of social and agency-specific concerns. They also include the issues specified under section 15 of the IPART Act, which requires IPART to consider matters related to:

- ▼ the **cost** of providing the services
- ▼ the **protection of consumers** from abuses of monopoly power in terms of prices, pricing policies and standard of services
- ▼ the **appropriate rate of return** on public sector assets, including appropriate payment of dividends
- ▼ the **effect on general price inflation** over the medium term
- ▼ the **need for greater efficiency** in the supply of the services so as to reduce costs for the benefit of consumers and taxpayers
- ▼ the **need to maintain ecologically sustainable development** by appropriate pricing policies that take account of all the feasible options available to protect the environment
- ▼ the **impact on pricing policies of borrowing, capital and dividend requirements** of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets
- ▼ the **impact on pricing policies** of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body
- ▼ the **need to promote competition** in the supply of the services
- ▼ **considerations of demand management** (including levels of demand) and least cost planning
- ▼ the **social impact** of IPART's determinations and recommendations
- ▼ the **quality, reliability and safety** of the services.

In considering these matters, IPART must balance the diverse needs and interests of stakeholders – such as customer affordability, environmental impact and maintenance of overall customer service quality – and ensure that the Councils are adequately recompensed for the services they provide.¹³

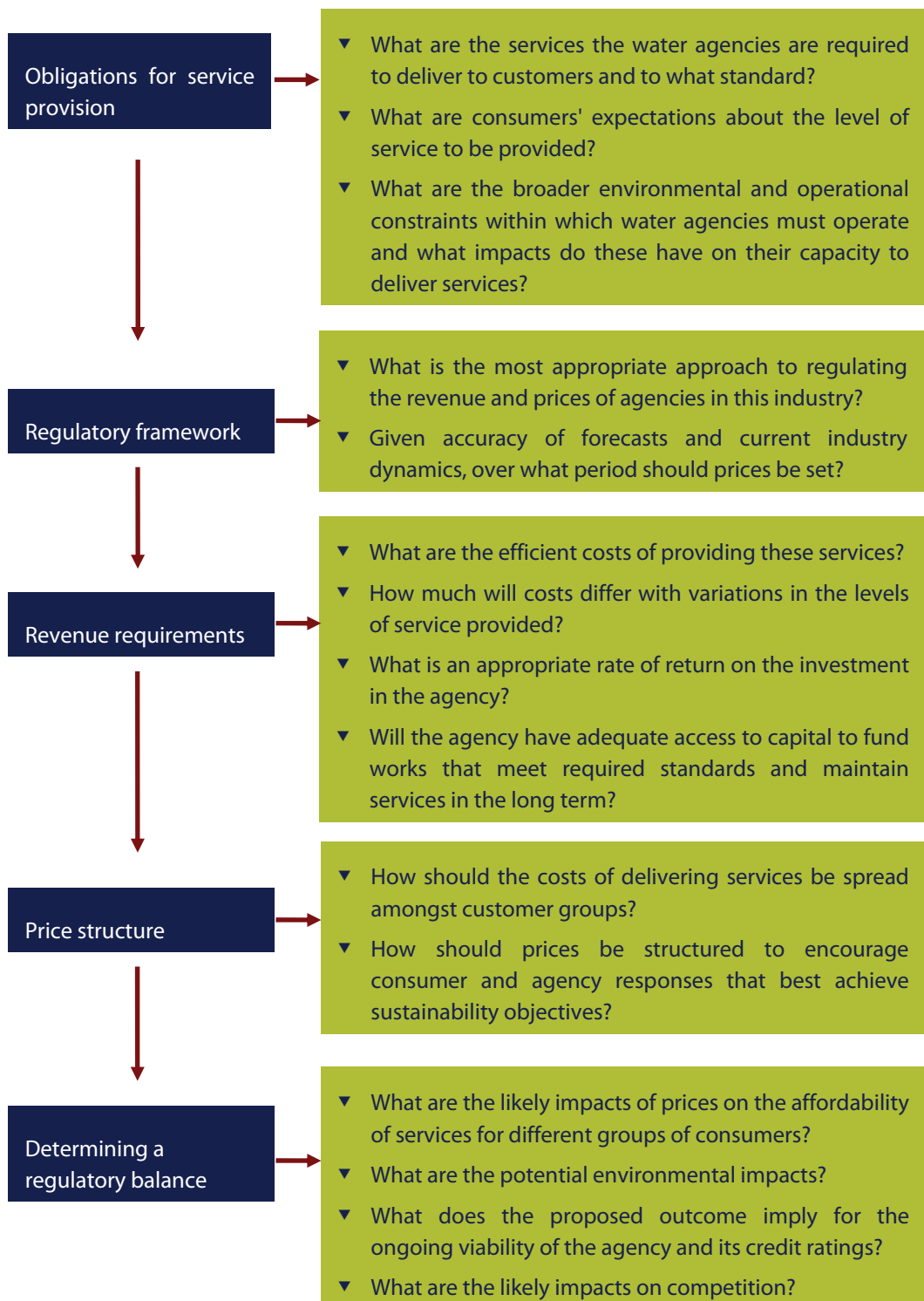
IPART will also take account of principles issued by the Council of Australian Governments (COAG) and contained in the National Water Initiative.¹⁴

¹³ The full list of matters to be considered under the IPART Act is included at Appendix A.

¹⁴ The National Water Initiative is built on the principles established in the 1994 COAG Water Reform Framework.

IPART's determination process is shown in Figure 1.6.

Figure 1.6 IPART's determination process



1.3 The review process

In conducting its review, IPART will rely on its own research and analysis as well as public consultation. As part of the consultation process IPART invites submissions to the review. This Issues Paper has been prepared to assist in identifying and understanding the key issues for the review and to encourage stakeholder comment. The Paper raises a range of issues and questions – both throughout the Paper and in a consolidated list in section 1.4.1 - on which IPART seeks particular comment. However, stakeholders are free to raise and discuss any other issues that they believe are relevant to the review. Details on how to make submissions are provided at the front of the Paper.

In addition, this Paper identifies information that IPART requires Gosford Council and Wyong Council to provide.

IPART will also hold a public hearing to provide a further opportunity for stakeholders to present their views.

Following this consultation, IPART will release a draft report, including a draft determination, and invite stakeholders to comment. It will then consider these comments before making its final determination and releasing its final report.

An indicative timetable for the review is set out below.

Table 1.1 Indicative review timetable

Task	Timeframe
Release Issues Paper	18 July 2008
Receive submission from the Councils	12 September 2008
Receive public submissions	10 October 2008
Public hearing	14 November 2008
Release draft report	February 2009
Receive submissions to the draft report	March 2009
Release final report	May 2009

Note: Please note that these dates are indicative and may be subject to change.

In the past, IPART has had difficulties completing its reviews on time because of delays in the provision of necessary information by regulated entities. The provision of supplementary information late in the review process can mean that work has to be suspended or revised in the light of the new information received. New information not only adds to the work of IPART, its staff and consultants, but also limits the ability of stakeholders to input into IPART's processes and decisions.

To enable IPART to better manage delays in the provision of information and supplementary information, it intends to put in place mechanisms that will 'stop the clock' when information is not received on time. Under 'stop the clock' arrangements, a delay in the receipt of information will mean that the timetable will

be automatically extended by a period equal to the length of the delay. If IPART ‘stops the clock’ it will make a statement to this effect and publish a revised timetable on its website. Once the information is received, IPART also reserves the right to ‘reset the clock’ to reflect the need to rework and reconsider matters in the light of this new information.

To assist the Councils in providing information, this Paper outlines IPART’s information requirements (both throughout the Paper and in Appendix B). IPART will also separately write to the Councils to seek confirmation that they can provide the necessary information in accordance with the review timetable. IPART will endeavour, as far as possible, to reach agreement with the Councils on the information that should be provided and the date by which it should be provided. This should ensure that the demands placed on the Councils are not unreasonable and also minimise the risk that the review ‘clock’ has to be stopped or reset.

In addition to the requirement that the Councils provide timely information, they will also need to provide sufficiently comprehensive information to justify their costs and forecast sales. In particular, any proposal to change the price structure or level of any regulated service must be accompanied by sufficient cost information, argument and justification to support the changes proposed and enable stakeholders to make informed responses to the proposal. The submission should also identify the potential customer impacts of the proposal, the distribution of these impacts and options explored by the Councils to mitigate or minimise these impacts.

IPART is also interested in receiving the Councils’ response to the broader range of issues raised throughout this Paper (and listed in section 1.4.1), as well as other information or its views on other issues that they believe are relevant to the review.

1.4 Purpose and structure of this Issues Paper

To assist stakeholders in making submissions, this Paper explains how the review will be undertaken, provides background information, and outlines the issues on which IPART particularly seeks comments. The Paper is organised as follows:

- ▼ Chapter 2 provides an overview of the regulatory framework for the Councils, and a discussion of IPART’s price-setting approach
- ▼ Chapters 3 provides an overview of IPART’s approach to determine the Councils’ revenue requirement
- ▼ Chapter 4 outlines the price-setting process, including the determination of an appropriate price structure for the Councils’ monopoly services to promote economic efficiency and ecologically sustainable development, and the analysis of likely customer and social impacts of any price changes.

1.4.1 List of issues and questions for stakeholder comment

To assist in identifying and understanding the key issues for this review, this Paper has sought comment on the following issues, which are explained and discussed more fully throughout the report (see page numbers in the list below). However, stakeholders are free to raise and discuss any other issues that they believe are relevant to the review.

IPART seeks comment on

- | | | |
|----|--|----|
| 1 | The prudence of the Councils' capital expenditure over the 2006-09 determination period (with reference to the Councils' submissions). | 18 |
| 2 | The Councils' projected capital expenditure program (with reference to the Councils' submissions). | 18 |
| 3 | An appropriate rate of return on capital to apply to the Councils' Regulatory Asset Bases. | 19 |
| 4 | Appropriate asset lives to apply for calculating the Councils' depreciation charge for the price determination (with reference, where necessary, to the Councils' submissions). | 20 |
| 5 | The efficiency of the projected operating costs outlined in the Councils' submissions. | 22 |
| 6 | Whether there is scope for the Councils to achieve further efficiency gains over the next price determination period. | 22 |
| 7 | The most cost-effective way of supplying the water needs of the Central Coast over the medium- to long-term. | 28 |
| 8 | Appropriate arrangements for apportioning and sharing costs of Tillegra Dam between Hunter Water and the Councils. | 28 |
| 9 | The means by which the Councils should recover any costs of Tillegra Dam, including: | 28 |
| | <ul style="list-style-type: none"> • whether the Councils' costs of Tillegra Dam should be incorporated in upfront developer charges or periodic prices or a combination of both, and if so, the appropriate arrangements for apportioning the costs • whether the Councils' costs of Tillegra Dam should be recovered through the fixed component of the two-part tariff or a mix of fixed and usage components • whether the Councils' costs of Tillegra Dam should be reflected in the Councils' prices prior to the Dam becoming operational. | 28 |
| 10 | The Councils' recycled water schemes, including cost information, avoided costs, proposed means of cost recovery, the timing/uptake of these schemes, and the drivers or 'mandates' behind these schemes. | 30 |

11 The effectiveness of output measures as indicators of the prudence of capital and operating expenditure.	31
12 The Councils' progress or performance against the output measures.	31
13 Appropriate output measures for each Council for the upcoming determination period.	31
14 The length of the determination period that should apply for this determination.	34
15 The use of an initial increase (that is greater than increases in following years) and/or incremental increases over the determination period.	34
16 Other approaches to translate revenue requirements into prices.	34
17 The appropriate structure for the Councils' water and wastewater prices, including the possible introduction of scarcity pricing.	37
18 Appropriate levels and structures of charges for the Councils' stormwater drainage, trade waste, sewer access and environmental improvement services, and ancillary and miscellaneous services.	39

2 | Regulatory framework

In the absence of competitive markets, the Councils are regulated to achieve the joint aims of economic efficiency and social and environmental objectives. This chapter outlines the regulatory obligations imposed on the Councils in connection with the supply of water, the incentive regulation methodology adopted by IPART in setting prices, and other factors, such as levels of service, service quality and customer impacts, that influence IPART's pricing decisions.

2.1 The role of the Councils

The Councils act together as members of the Gosford and Wyong Councils' Water Authority (Authority) to manage the supply of bulk water. The Authority manages a number of major water projects - termed Joint Water Supply (JWS) projects - with the costs shared between the Councils. However, the Councils are responsible for the supply of water and the provision of wastewater services within their own local government areas. This arrangement is the same as that which was in place at the time of the 2005 and 2006 Determinations.

The *Central Coast Water Corporation Act 2006* provides for the formation of the Central Coast Water Corporation and for the granting of an operating licence to the Corporation to ensure that its water supply and sewage management services meet the quality and performance standards specified in the operating licence (in relation to water quality, service interruptions, pricing and other matters). The provisions of this Act are not yet in force.

Unlike the other metropolitan water agencies, the Councils do not have operating licences that set targets, outline compliance requirements and establish customer contracts.¹⁵ Instead, the Councils are required, under *Local Government Act 1993* section 402, to develop annual management plans with respect to all their activities, including water and wastewater services.

¹⁵ These licences are issued by the Minister for Water Utilities.

2.2 Regulators

IPART is only one of the regulators that oversees the Councils' water industry functions. The principal regulators are:

- ▼ **IPART**, which is responsible for setting maximum prices that can be charged by the Councils for their monopoly services.
- ▼ **Department of Water and Energy (DWE)**, which has primary responsibility for the management of water resources throughout NSW. DWE licenses the extraction of water from surface and groundwater sources under the *Water Management Act 2000* and the *Water Act 1912*.¹⁶ These licences require the release of water for environmental purposes from a number of the Councils' storages,¹⁷ and the provision of certain information to DWE.
- ▼ **Department of Environment and Climate Change (DECC)**, which is responsible for monitoring and regulating wastewater discharges from the Councils' sewerage system to the receiving waters. DECC issues Environment Protection Licences issued under the *Protection of the Environment Operations Act 1997* for the Councils' wastewater transportation and treatment systems. These licences stipulate both quality and quantity conditions for discharge from each wastewater treatment works, and specify operational controls and reporting requirements for the pipe network and pumping station.
- ▼ **NSW Health**, which is responsible for regulating the quality and safety of the Councils' drinking water.

In addition to these regulators, the Councils are also subject to planning approvals and regulatory requirements relating to their proposed developments.

2.3 Incentive regulation

In meeting its obligations under section 15 of the IPART Act, IPART's preferred approach to regulation is CPI±X incentive regulation. IPART regulates the Councils by determining the maximum prices they can charge for specific monopoly services, and then sets out how these prices can rise or fall over the determination period to account for movements in general price inflation, efficiency gains, and significant changes in the operating environment (such as new environmental standards or customer service standards).

A critical element of IPART's price-setting process is the determination of the Councils' revenue requirement. IPART determines prices with the objective of generating a required level of revenue after taking into account all the factors specified in section 15 of the IPART Act. The calculation is based on an analysis of

¹⁶ Depending on whether a water sharing plan is in place for that water source.

¹⁷ Under normal circumstances.

the efficient operating and capital costs that the Councils should incur in providing appropriate levels of service during the determination period.

IPART calculates the Councils' revenue requirement using the 'building block revenue' methodology. The costs or 'building blocks' of service provision have been outlined by COAG and can be categorised as operations, maintenance and administration costs, provision for the cost of asset consumption, provision for the cost of capital, and externalities.

An important part of regulation is to encourage the Councils to achieve the efficiency targets implied in the building block approach. The CPI±X approach provides an incentive to the Councils to pursue efficiencies because, for the determination period, they retain the full benefits of any efficiency gains (through higher profits). If the Councils better the efficiency target allowed in the revenue build-up, actual profits will be higher than the rate of return allowed in the revenue build-up. The converse applies if the Councils do not achieve the expected efficiency improvements.

A detailed overview of IPART's regulatory and price-setting framework is included in Appendix C.

2.4 Service quality standards

IPART assumes, when it sets prices, that the existing standards of service required of the Councils will at least be maintained. Other regulatory instruments, such as the discharge licences issued by DECC, assist in maintaining, or encouraging improvements in, service standards by prescribing minimum standards that must be met.

Performance monitoring of non-metropolitan Local Water Utilities is undertaken annually by the Department of Water and Energy in the NSW Water Supply and Sewerage Benchmarking Report. That Department also provides Best Practice Guidelines for the management of water supply and sewerage, which requires utilities to provide annual performance data and allows utilities to be benchmarked against other similar utilities. In addition, the National Water Commission (NWC) has developed a set of performance indicators to be applied across water utilities throughout Australia.¹⁸

Generally, the amount that customers are willing to pay for a service is linked to the level of expected service quality. There is currently little product differentiation across the Councils' areas of operations, given the nature of the services provided and the delivery systems used. However, this may change with the introduction of competition and the greater availability of different grades of water which are fit for different purposes.

¹⁸ Water Services Association of Australia and National Water Commission, *National Performance Report 2006-2007 for urban water utilities*, 2008.

In determining the Councils' prices, considerations for IPART include relating actual and proposed expenditure to service quality outcomes, and ensuring an appropriate matching of service quality levels with customers' willingness to pay.

For this review, IPART will be seeking information from the Councils on the drivers of their proposed expenditure programs, and what the proposed expenditures will mean for service quality and performance generally.

IPART seeks information and explanations from the Councils on:

- 1 The uncertainties/risks in the Councils' operating environment over the upcoming determination period and beyond, including the nature of these uncertainties/risks and the likelihood that they will impact on specific costs (for example, electricity charges).
- 2 How the Councils have ascertained the appropriate service levels to be provided over the determination period, and how these service levels relate to forecast costs.

3 Revenue requirement

The Councils' projections of required operating and capital expenditure for the determination period will form part of the assessment of their revenue needs. IPART will seek detailed information on expenditure to date and projections of future requirements. IPART will also consider what the proposed expenditure might imply for overall service quality and performance.

This chapter outlines IPART's approach to determining the capital and operating expenditure requirements and the key issues that will need to be considered.

3.1 Revenue requirement

In defining a revenue requirement IPART assesses the future financial needs of the organisation. These must be sufficient to cover the operations, maintenance and administration expenses of the entity, plus any return of, and on, capital. The revenue requirement can be represented by the following formula (commonly described as the 'building block' approach):

$$R = C + D + O + M + A$$

Where R= revenue requirement

Capital costs: C= return on capital

D= return of capital (depreciation)

Non-capital costs: O= operations expenses

M= maintenance expenses

A= administration expenses

Capital expenditure requirement

As shown in the formula above, the revenue requirement does not include capital expenditure explicitly. Capital expenditure to maintain or augment the asset base is funded from the return of capital, injections of equity and borrowings (or other financing approaches). Ultimately, prudent and efficient capital expenditure is included in the asset base. Return of capital (depreciation), may be more appropriately described as 'maintenance of capital'.

The return on capital represents IPART's assessment of the opportunity cost of capital invested by the Councils. It ensures that efficient investment in capital continues into the future for the maintenance and growth of their infrastructure.

Specific issues that IPART will need to consider for this review in relation to the Councils' capital requirements are discussed further below.

3.1.2 Review of historical and proposed future capital expenditure

The review which led to the 2005 Determination¹⁹ adopted a two stage regulatory test process – a forward-looking efficiency test of proposed capital expenditure for the coming determination period and a backward-looking prudence test of actual capital expenditure decisions in the current determination period.²⁰ For the 2006 Determination IPART took an alternative approach. It asked consultants Halcrow Pacific Pty Limited (Halcrow) and McLennan Megasanik Associates (MMA) to review projects for which forecast costs had changed significantly between the Councils' submissions for the 2005 and 2006 Determinations. IPART's approach to the treatment of capital expenditure for this review will be similar to that adopted in the 2005 Determination.

The prudence test is used to determine how much of the actual capital expenditure by the Councils in the current determination period will go into the opening value of the Regulatory Asset Base (RAB). The efficiency test is used to determine how much of the Councils' proposed capital expenditure for the next period will go into the allowance for efficient capital expenditure.

As part of the submission process, IPART seeks capital expenditure information from the Councils. This information should outline actual capital expenditure during the current determination period and proposed capital expenditure during the forthcoming determination period, together with actual and expected outcomes to be

¹⁹ IPART, *Prices of Water Supply, Wastewater and Stormwater Services - Gosford City Council Wyong Shire Council - 1 July 2005 to 30 June 2006* (Determination Nos 1 and 2, 2005) (2005 Determination)

²⁰ The efficiency test examines whether the Councils' proposed capital expenditure represents (over the life of the asset) the best way of meeting the community's need for the relevant services. By contrast, the prudence test assesses whether, in the circumstances that existed at the time, the decision to invest in the asset is one that the agency, acting prudently, would have expected to make. The prudence test is somewhat easier to satisfy than the efficiency test.

achieved by the capital expenditure in the current and upcoming determination periods.

IPART considers sound asset management practices to be critical in maintaining long-term system performance standards in the most efficient manner. For this reason, it will continue to take a close interest in the practices and performance of regulated businesses in this area. IPART will be looking for evidence that the Councils have well-developed and sound asset management practices and plans in place, and that capital expenditure programs are based on a robust asset management framework. Additionally, IPART will be seeking assurance that the critical infrastructure of the businesses is not being run down.

In past determinations IPART has employed industry experts to review the Councils' asset management, the efficiency of proposed capital expenditure and the prudence of past capital expenditure. This has usually involved an examination by the consultant of the drivers of capital expenditure, the timing of proposed expenditure, customer demand growth and general asset management practices. This analysis, combined with cost benchmarking and general consultant experience, allows the consultant to make recommendations on the efficiency and prudence of the capital expenditure program. IPART intends to repeat this process for this review by engaging a consultant to review asset management and capital expenditure. The consultant will prepare a report which will be made available for public review. Interested stakeholders can comment on the consultant's report as part of their submission to IPART's draft report.

IPART seeks information and explanations from the Councils on:

- 3 The Councils' capital expenditure over the 2006-09 determination period.
- 4 Drivers of the Councils' capital expenditure over the 2006-09 determination period, and service outcomes achieved by this expenditure.
- 5 The Councils' capital expenditure over the 2006-09 determination period compared to expenditure allowed by IPART when it set prices in 2006, with an explanation of variances.
- 6 The Councils' projected capital expenditure program over the upcoming determination period.
- 7 Drivers of the Councils' projected capital expenditure program over the upcoming determination period, and expected service outcomes to be achieved.
- 8 The Councils' asset management practices and plans, and the relationship between the asset management framework and capital expenditure program.

IPART seeks comment on:

- 1 The prudence of the Councils' capital expenditure over the 2006-09 determination period (with reference to the Councils' submissions).
- 2 The Councils' projected capital expenditure program (with reference to the Councils' submissions).

3.1.3 Return on capital

There are several approaches for calculating the appropriate return on the RAB. In past determinations IPART has used the real pre-tax Weighted Average Cost of Capital (WACC) to determine an appropriate range for the rate of return. The WACC is the weighted average of the cost of debt and equity. IPART uses the Capital Asset Pricing Model (CAPM) to derive the cost of equity, and calculates the cost of debt as a margin over the risk free rate.

For this review IPART proposes to maintain the existing approach to calculating the rate of return for the RAB and will seek to update the parameters used in calculating the WACC.

IPART seeks comment on:

- 3 An appropriate rate of return on capital to apply to the Councils' Regulatory Asset Bases.

3.1.4 Return of capital

For this review IPART will be considering the asset lives used to calculate the depreciation charge for the price determination. In its current modelling IPART calculates the capital maintenance requirement based on the RAB, using a straight line approach over the average life of the assets. This means that the total value of the RAB is recovered over that period, which, in the 2006 Determination was assumed to be 73 - 75 years for existing assets²¹ and 100 years for new assets. However, at the 2006 Determination Gosford expressed concern that these assumptions do not accurately reflect the lives of new assets.

In IPART's recent review of its prices, Sydney Water outlined a case for applying different asset lives to different asset classes for new and existing assets. IPART agreed that this approach is a step forward from the approach previously applied to regulatory depreciation because it allows a more accurate assessment of the efficient recovery of the cost of an investment over the life of the asset. IPART consequently engaged a consultant to review and assist it to determine appropriate asset lives for Sydney Water's regulated assets, and calculated depreciation using its assessment of appropriate asset lives for different classes of existing and new assets.²²

IPART proposes to engage consultants to conduct a review to assist in assessing any proposed changes and to determine appropriate asset lives for the Councils'

²¹ For each new regulatory period (determination), the assumed life of existing assets is calculated using the final year depreciation value and the final value of the RAB from the previous determination, thus factoring in the assumed lives (that is, 100 years in the 2006 determination) of new assets constructed over the previous determination period.

²² IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008, Water – Final Report and Determination*, June 2008, Chapter 10.

regulated assets.²³ The consultant's reports will be made available for public review. Interested stakeholders can comment on the consultant's report as part of their submission to IPART's draft report.

IPART seeks information and explanation from the Councils on:

- 9 Any changes proposed by the Councils for the calculation of depreciation including asset classes and asset lives for each asset class applied by the Councils and the methodology adopted in this calculation.

IPART seeks comment on:

- 4 Appropriate asset lives to apply for calculating the Councils' depreciation charge for the price determination (with reference, where necessary, to the Councils' submissions).

3.1.5 The Councils' ability to replace system assets in the future

IPART's approach has been to establish a RAB which represents the amount of financial capital invested by the Councils which should be maintained. This RAB is then rolled forward to take account of new capital expenditure, inflation, depreciation and disposals.²⁴ The financial capital maintenance concept incorporated in this approach provides consistency in dealing with sunk costs, developer charges and legacy issues. The prices derived from this RAB enable the Councils to earn a return on investments consistent with WACC.

As the Councils' assets reach the end of their useful lives, IPART allows the value of any replacement asset, including the replacement cost of assets previously funded by developers or through grants, to enter the RAB. The Councils are then able to recoup the value of the funds outlaid on the replacement (including the opportunity cost of the funds invested) through prices over the lives of the replacement assets. The recovery of the cost of assets over the life of the assets in question is consistent with normal commercial practice.

The mechanism described above ensures that, over time, the Councils receive the income to which they are entitled to support their investments in their own business undertakings.

²³ This may be for new assets, existing assets or both.

²⁴ IPART, *Rolling forward the regulatory asset bases of the electricity and gas industries, Discussion Paper*, January 1999.

3.1.6 Adjustments to the RAB for developer charges

Under IPART's price-setting approach for the Councils, all forecast capital expenditure (for the existing system and for growth) is added to the RAB. As developer charges are recovered, the RAB is adjusted downwards to exclude the investments made by developers. In this way, the asset base used for calculating periodic charges only includes investments funded by the Councils.

Depending on the rate of development, differences may arise between actual developer charge receipts and those forecast in the Development Service Plans (DSPs).²⁵ IPART will closely review the revenue from developer charges to ensure that these are accurately deducted from the RAB.

IPART notes that the method for calculating the contributions to be made by developers is currently under review, with publication of the final report and determination scheduled for September 2008. The Councils should consider any changes to the expected revenue from developer charges when preparing forecasts for their submissions.²⁶

IPART seeks information and explanation from the Councils on"

- 10 The value and timing of contributions (including contributed assets) to the Councils from developers, government and/or other sources.
- 11 Any changes to the expected revenue from developer charges due to the draft developer charges determination.

3.1.7 Operating expenditure

Another key component of the building block methodology is the provision of sufficient revenue to meet the operation, maintenance and administration costs of the declared monopoly services provided by the Councils. IPART will need to determine the efficient costs that the Councils will incur in operating the business effectively, having regard to service quality standards.

For this review, the Councils will need to provide information on the past and future projected operating expenditures and the potential for future efficiency gains. It will also need to provide information about the drivers behind any projected real increases in operating expenditures during the upcoming determination period.

Specific issues relating to the Councils' operating expenditure requirements that IPART will need to consider for this review are discussed further below.

²⁵ The Councils publish DSPs in support of calculations of developer charges. The DSPs include the various assumptions made in calculating the charges, including the rate of development.

²⁶ The draft report and determination for this review will be available in early July and should be used for this purpose.

IPART seeks information and explanation from the Councils on:

- 12 The Councils' operating expenditure over the 2006-09 determination period compared to expenditure allowed by IPART when it set prices in 2006, and an explanation of variances.
- 13 Forecast operating expenditure, including the potential for future efficiency gains.
- 14 Drivers behind any projected real increases in operating expenditures during the upcoming determination period.

3.1.8 Review of historical and proposed future operating expenditure

As in previous determinations, IPART will engage an independent consultant to review the operating expenditure, asset management and capital expenditure of the Councils. The consultant will need to assess the efficiency of operations and the prudence and effectiveness of expenditure programs. They will also conduct a benchmarking analysis, including an analysis of trends in costs and service quality indicators for the Councils (compared to other utilities).

IPART seeks comment on:

- 5 The efficiency of the projected operating costs outlined in the Councils' submissions.
- 6 Whether there is scope for the Councils to achieve further efficiency gains over the next price determination period.

3.2 Demand management and other projects

In the 2006 Determination IPART provided a mechanism for adjusting prices to allow the Councils to contribute to the Water Savings Fund.²⁷

The Councils will need to provide information in their submissions with respect to the status and quantum of their contribution to and reimbursements from the Water Savings Fund (to 2007/08) and the Climate Change Fund (from 2008/09) and the assumed implications of these programs on forecast water sales.

IPART seeks information and explanation from the Councils on:

- 15 The status and quantum of contribution to, and reimbursements from, the Water Savings Fund (to 2007/08) and the Climate Change Fund (from 2008/09), and implications for forecast water sales.

²⁷ Now replaced by the Climate Change Fund.

3.3 Supply security

Since the 2006 Determination the Councils have formally adopted WaterPlan 2050.²⁸ This strategy document outlines a number of strategies that are being pursued, or are intended to be pursued, to better manage the supply and demand balance within the Councils' areas. The plan includes system upgrades, reducing demand and accessing more water. Since the 2006 Determination the Councils' strategies changed from supply augmentation through desalination to the expansion of the connection with Hunter Water and the investigation of groundwater sources, the latter resulting in the development of seven groundwater bore fields yielding a total of 9 ML of drinking water per day.

System upgrades that have been completed since the 2006 Determination (or are approaching completion) include:

- ▼ increased capacity of Wyong River pump station
- ▼ a connection from lower Mangrove Creek weir to Mooney Mooney Dam to enable the transfer of surplus water for storage
- ▼ raising of Mardi Dam wall to increase its storage capacity by 18 per cent (programmed completion May 2008)
- ▼ a new high lift pumping station at Mardi Dam (programmed completion June 2008)
- ▼ a new transfer system from Mardi Dam to Mardi Treatment Plant (programmed completion November 2008).

Future system upgrades, such as the Mardi – Mangrove Link, are discussed in section 3.4.2.

The Councils will need to provide information about the programs forecast in the 2006 Determination and the outcomes delivered since then. In addition, the Councils should present their forecast program of works for the 2009 determination period so that both can be assessed for the prudence of the expenditure (as discussed in section 3.2.1).

3.4 Transfers from Hunter Water

The Councils currently have a water trading arrangement with Hunter Water. Water is transferred between the two regions via a pipeline which has recently been augmented to provide transfer capacity of 35 ML per day.

²⁸ This document was being prepared at the time of the 2006 Determination.

The amount of water transferred between the Central Coast and Hunter Water, and the direction of this transfer, is generally climate-dependent. In recent times, the link has primarily been used to augment the Councils' water supplies in times of drought. Supply to the Central Coast was 2.2 GL per annum in 2005/06 and 3.6 GL per annum in 2006/07.²⁹ However, water has also been transferred in the other direction.³⁰ For part of 2007, the Councils supplied potable water to Hunter Water customers in the south-western suburbs of Lake Macquarie, and the equivalent quantity of water was 'banked' in one of its dams for later use. According to Hunter Water:

This arrangement made sense for both parties as two of the Central Coast's smaller dams were filled and it was unable to store water collected from Wyong Creek. By accepting water from the Central Coast, Hunter Water was able to keep that quantity of water within Grahamstown Dam which had surplus capacity at the time³¹.

A 2004 review³² of the Councils' operating and capital expenditure undertaken by consultants (WS Atkins International Ltd/Cardno) on behalf of IPART, concluded that purchasing water from Hunter Water was a cost-effective drought management measure. Indeed, this expenditure review recommended that the Councils consider increasing water transfers from Hunter Water in preference to the construction of a desalination plant.

For this review (as well as the concurrent review of Hunter Water's prices), IPART will need to consider:

- ▼ the extent to which it should regulate the prices of water transferred between Hunter Water and Gosford and Wyong Councils (or in the opposite direction)
- ▼ depending on the answer to the previous issue, the appropriate level and structure of these prices.

IPART's decision-making processes must consider the impact of pricing decisions on Central Coast residents and those within the Hunter Water area of operations. This includes protecting consumers from inefficient and imprudent business practices and arrangements between the utilities. IPART can protect consumers in a number of ways, such as by regulating the price of water transfers between Hunter Water and the Central Coast (or in the opposite direction). However, if IPART does not regulate these prices, the costs that Hunter Water and the Councils incur in transferring water between systems will need to be ring fenced and excluded from their regulatory systems to prevent the recovery of unregulated costs.

As discussed below, key considerations are likely to be how the cost of Tillegra Dam should be apportioned between the Hunter and Central Coast regions and the benefits received by Hunter as a result of capital projects undertaken by the Councils.

²⁹ Hunter Water's *Integrated Water Resource Plan Report to IPART*, August 2007, p 12.

³⁰ Ibid.

³¹ Hunter Water, *Draft H₂50 Plan – Securing Our Water Future, A Long Term Strategy to Meet Water Supply Needs for the Lower Hunter*, April 2008, p 94 (H₂50 Plan).

³² Atkins/Cardno, *IPART Capex, Asset Management and Opex Review Overview Report Final*, February 2005.

3.4.1 Apportioning the costs of Tillegra Dam

In November 2006, the NSW Government announced a new dam and a 'Water Grid' for the Hunter/Central Coast region. This includes a 450,000 ML dam at Tillegra (north of Dungog, within Hunter Water's area of operations) and expansion of the capacity of the Hunter to Central Coast pipeline (which has recently been completed, increasing capacity to approximately 35 ML per day).³³

According to the Premier's announcement:³⁴

- ▼ The Dam will not only secure water supply for the Hunter, but will also "ensure that the crisis which exists on the Central Coast will not happen again".
- ▼ Construction of the Dam is expected to begin in mid-2008, subject to environmental assessment and approvals, including providing for adequate environmental flows for the Williams River. Water from the Dam is expected to be available in 2013.
- ▼ The package will be funded by the proceeds from the sale of water from Hunter Water to the Authority, future development contributions in the Hunter and Central Coast and the 2009-2013 IPART determination.

Cost-sharing arrangements between the Councils and Hunter Water

A significant issue for this review, and for Hunter Water, is the extent to which the Councils should contribute to the costs of Tillegra Dam and the form of this contribution – that is, the extent to which any costs are recovered via water purchases from Hunter Water compared to upfront capital contributions from the Councils.

This is likely to depend largely on the purpose for which Tillegra Dam is being constructed, the way in which it will be used and the significance of water flows from Hunter Water to the Central Coast. If, for example, the Dam is being developed to ensure that supply keeps pace with demand and to provide drought security (or supply 'insurance') for both the Hunter and the Councils' supply areas, it could be argued that the Councils should contribute by an upfront contribution to the cost of constructing Tillegra Dam.

On the other hand, if the Dam is being constructed primarily for the purpose of supplying water to the Hunter, with water from the Hunter only expected to be supplied to the Central Coast in exceptional circumstances – if the Hunter has surplus capacity and the Central Coast experiences severe drought – it is arguable that the Central Coast should only contribute to the cost of the Dam via the price of water purchases, on an 'as needs' basis. However, a counterpoint to this argument is that Hunter Water's supply would still be acting as a 'backstop' (ie, an 'insurance'

³³ The link is a 600-750mm pipeline connecting Hunter Water at Morrisset with the Central Coast between Wyong and Charmhaven. The project was completed in December 2006 at a cost of \$37m.

³⁴ Premier of New South Wales, News Release, "\$342 Million for New Dam and Hunter/Central Coast Water Grid", 13 November 2006.

measure to ensure security of supply) for the Central Coast and that the Councils should therefore contribute to its costs via an appropriate capital contribution.

The Councils have stated that their modelling, incorporating the current transfer agreement and other planned supply augmentation projects, indicates that they do not need to use water from Tillegra Dam until at least 2026.³⁵ In contrast, the draft Hunter Water's draft H250 Plan suggests that Hunter Water needs a new source of water to be built as a matter of some urgency.

Recovering costs of Tillegra Dam through periodic charges and/or developer charges

If it is decided that the Councils should contribute to the costs of Tillegra Dam, it will be necessary to decide what proportion of those costs should be recovered through developer charges levied by the Councils and what proportion recovered through periodic charges.

This may largely depend on the extent to which Tillegra Dam is being constructed to meet future demands placed on water supplies due to new development in the region, as opposed to ensuring security of water supply for existing customers. If, for example, the Dam is being constructed to meet future demand from new growth areas, it may be consistent with existing pricing policies to recover at least part of these costs through upfront developer charges.

Further, if some of the Councils' costs of Tillegra Dam are to be recovered through the periodic charge, IPART will need to consider whether the costs should be reflected in the fixed component or the usage component of their water charges over the upcoming determination period. This is likely to depend on the extent to which the Councils' costs of Tillegra Dam are 'avoidable' throughout the upcoming determination period, and hence the extent to which they should be reflected in estimates of the Councils' marginal cost of supply³⁶. This, in turn, will depend on the form of any cost-sharing arrangements with Hunter Water.

Related to this is the point in the determination period at which the Councils' costs of Tillegra Dam should begin to be reflected in their water prices to customers. One option is to allow any capital costs of the Dam that the Councils may be liable for to be recovered from users prior to the Dam commencing supply. This may mean, for example, that capital or fixed costs of the Dam are included in the fixed charge to water consumers, with the Councils' share of the Dam's variable costs reflected in their usage charges to customers once the Dam commences supply. IPART will consider these timing issues as part of its review.

³⁵ Being the date the current supply agreement expires, correspondence from Wyong Council dated 17 June 2008.

³⁶ As marginal cost is the change in total costs from supplying an additional unit of output, it can also be viewed as the avoidable cost of not producing an additional unit of output.

3.4.2 Implications of Tillegra Dam for other water supply augmentation projects

The Central Coast's *WaterPlan 2050*³⁷ includes plans to construct a link between Mardi and Mangrove Creek Dams and increase water extractions from Wyong River via construction of a 21 km pipeline and associated pump stations. One pump station will enable water to be transferred between the two dams, while the other will increase water extractions from Wyong River. Additional water will be harvested from Wyong River and Ourimbah Creek during medium and high flows and temporarily stored in Mardi Dam before being pumped through to Mangrove Creek Dam. When required, spillway gates will be constructed on Mangrove Creek Dam to increase its storage capacity from 190,000 ML to 230,000 ML.³⁸

WaterPlan 2050 estimates that this Mardi-Mangrove Link could be completed by the end of 2010, subject to NSW Government regulations and approvals. It also notes that the Federal Government has committed \$80 million towards the project through the National Water Commission, which will cover the initial estimated cost of the Mardi-Mangrove Link.³⁹ According to the Councils, the key benefits of this project include:

- ▼ harvesting more water for town use from Wyong River and Ourimbah Creek during medium and high flows
- ▼ the ability to increase storage levels of Mangrove Creek using excess water from Wyong River and Ourimbah Creek
- ▼ enhanced environmental flows in Wyong River during low and medium streamflows
- ▼ better integration with current and future elements of the Central Coast's water supply system.⁴⁰

Given that Tillegra Dam is now going ahead, and that there has been a recent augmentation of the Hunter to Central Coast water pipeline, a potential consideration for this review is whether expenditure on the Mardi-Mangrove Link is necessary (and hence efficient) at this time, or whether it would be more efficient to delay construction of this link until the next major supply augmentation measure for the Hunter and Central Coast region is required.

If the Mardi-Mangrove Link does proceed, the Federal Government's \$80 million contribution would be excluded from the Councils' RABs, and hence prices. However, under IPART's approach, any efficient costs of the link that are funded by the Councils' (including any construction costs in excess of the \$80 million Federal Government contribution, as well as the link's operating costs) would be factored into prices.

³⁷ Gosford City Council and Wyong Shire Council, *Water Plan 2050 – A long-term water supply strategy for the Central Coast*, August 2007 (WaterPlan 2050).

³⁸ WaterPlan 2050, p 6.

³⁹ Ibid.

⁴⁰ Ibid.

IPART seeks comment on:

- 7 The most cost-effective way of supplying the water needs of the Central Coast over the medium- to long-term.
- 8 Appropriate arrangements for apportioning and sharing costs of Tillegra Dam between Hunter Water and the Councils.
- 9 The means by which the Councils should recover any costs of Tillegra Dam, including:
 - whether the Councils' costs of Tillegra Dam should be incorporated in upfront developer charges or periodic prices or a combination of both, and if so, the appropriate arrangements for apportioning the costs
 - whether the Councils' costs of Tillegra Dam should be recovered through the fixed component of the two-part tariff or a mix of fixed and usage components
 - whether the Councils' costs of Tillegra Dam should be reflected in the Councils' prices prior to the Dam becoming operational.

3.5 Sewerage and stormwater schemes

The 2006 Determination included provision for significant expenditure for sewerage and stormwater capital programs for Gosford Council. The report accompanying the Determination noted the Gosford CBD sewer project, which included upgrades to infrastructure to service expected increases in population density, and the North Avoca sewerage scheme. In addition, the report noted issues with Gosford Council's stormwater system which resulted in flooding caused by insufficient system capacity in some areas and no system in others.

At the time of the 2006 Determination Gosford Council highlighted that the forecast expenditures for stormwater capital works could underestimate the actual costs significantly due to incomplete studies of the works required.

The 2006 Determination for Wyong Council recognised strong population growth in the area. This growth, and improvements to ensure compliance with regulatory standards, contributed to the majority of the sewerage capital program proposed by Wyong Council. As with Gosford Council, Wyong Council reported a backlog of stormwater works in the area resulting in a forward program of over 20 years.

The Councils will need to provide information in their submissions relating to the forecasts submitted at the time of the 2006 Determination. In addition, the Councils should present their forecast program of works for the next determination period so that both can be assessed for the prudence of the expenditure (as discussed in section 3.2.1 above).

3.6 Recycled water schemes

In 2006 IPART completed a review of pricing arrangements for recycled water and sewer mining in the Sydney, Hunter and Central Coast areas.⁴¹ IPART's resulting pricing framework divided recycled water projects into two groups:

- ▼ mandated schemes
- ▼ voluntary schemes.

This distinction reflects the degree of choice that customers have when connecting to recycled water schemes, which in turn influences the relative market power of recycled water suppliers and customers. A mandatory scheme requires customers to connect due to government policy. A voluntary scheme does not require customers to connect. Customers of voluntary schemes have a substitute water product available to them (usually at a regulated price) such as potable water or river water.

In the review preceding the 2006 Determination, IPART decided to only make a determination for mandated schemes where there is sufficient information for it to set efficient prices. On this basis, it only set recycled water prices in the Rouse Hill Development Area.⁴² (In its recent determination of Sydney Water's prices, IPART maintained the current structure of prices for recycled water services in the Rouse Hill area, with the recycled water usage charge set at 80 per cent of the potable usage charge and the fixed charge retained.) For other mandated recycled water schemes, IPART established a set of pricing guidelines for water agencies to use in calculating recycled water prices.

In that review, IPART also:

- ▼ made a determination for Recycled Water Developer Charges
- ▼ developed pricing principles for voluntary recycled water schemes and a pricing framework for sewer mining, to help guide negotiations
- ▼ required water agencies to ring fence from the regulated parts of their businesses the costs and revenues of recycled water schemes, where IPART has not made an explicit pricing determination
- ▼ provided that a water utility could recover 'avoided costs' attributable to its water recycling schemes from its broader customer base.

This last dot point recognises that recycled water schemes may enable a water and sewerage provider to avoid and/or defer costs. For example, this occurs where water or sewerage infrastructure upgrades to service growth or regulatory

⁴¹ IPART, *Pricing arrangements for recycled water and sewer mining: Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006 (Determination Nos 8 and 9, 2006).

⁴² The Rouse Hill Development Area in Sydney's north-west includes a recycled water system owned and operated by Sydney Water Corporation. In this area, wastewater is recycled and delivered to customers through a separate pipe system for toilet flushing and external uses.

requirements are avoided or deferred as a result of a recycled water scheme. Allowing avoided costs to be recovered from a utility's broader water and/or sewerage customer base is fairer and more economically efficient.

For this review, IPART will be seeking information from the Councils about the costs and revenues of their recycled water schemes. This should include:

- ▼ the costs of these recycled water schemes
- ▼ identification of avoided costs attributable to the Councils' recycled water projects, taking into account future demands to be placed on these schemes⁴³
- ▼ the Councils' proposed means of cost recovery for each of their recycled water schemes
- ▼ the proposed timing of these schemes, and the drivers or 'mandates' behind these projects.

IPART seeks information and explanations from the Councils on:

16 The costs and revenues of the Councils' recycled water schemes, including avoided costs, proposed means of cost recovery, the timing/uptake of these schemes and the drivers or 'mandates' behind them.

IPART seeks comment on:

10 The Councils' recycled water schemes, including cost information, avoided costs, proposed means of cost recovery, the timing/uptake of these schemes, and the drivers or 'mandates' behind these schemes.

3.7 Output measures

In the 2006 Determination IPART specified a set of output measures based on each Council's proposed expenditure program. These output measures are listed in Appendix D. For this review, IPART will be seeking information from the Councils on performance against those output measures.

IPART uses output measures as a starting point for the assessment of prudent expenditure and the basis for reporting on any deviation from established targets. For other agencies, IPART has requested a list of capital projects that they propose to undertake over the upcoming determination period, and has revised each agency's output measures to reflect the nature of this capital program. IPART has required the agencies to monitor expenditure on these projects and provide annual progress reports throughout the determination period.

⁴³ The consultant engaged by IPART to review the Councils' asset management, capital expenditure and operating expenditure will also review/assess the Councils' avoided costs attributable to their recycled water schemes.

IPART seeks information and explanations from the Councils on:

17 Performance against the output measures agreed in the 2006 Determination (as identified in Appendix D).

18 Appropriate output measures for each Council for the upcoming determination period.

IPART seeks comment on:

11 The effectiveness of output measures as indicators of the prudence of capital and operating expenditure.

12 The Councils' progress or performance against the output measures.

13 Appropriate output measures for each Council for the upcoming determination period.

4 | Price-setting

Once IPART has determined the efficient costs to be recovered through the Councils' charges, the next step is to set prices to recover these costs. Prices are set based on an assumed level of water sales and customer numbers.

For this review, IPART will need to:

- ▼ forecast water sales and customer numbers to use for price-setting purposes
- ▼ decide on a regulatory approach to pricing to assess the overall impact of each approach on customers and the Councils
- ▼ establish the level and rate of change of prices, having regard to cost recovery and customer impacts
- ▼ set a price structure, considering the incentive effects.

4.1 Determining appropriate water sales

Determining appropriate water sales and customer numbers are key factors in setting prices. In past determinations, IPART has relied on detailed customer numbers provided by the Councils but conducted some checks to ensure the robustness of the information.

Forecasting water sales is more difficult, given their inherent volatility. Water sales can be affected by issues such as population growth, water restrictions and weather variables. If forecasts are not reasonable, there is a risk that the prices IPART sets will lead to the Councils significantly over- or under-recovering their required revenue. In the 2005 Determination IPART engaged McLennan Magasanik Associates (MMA) to conduct a review of the forecast water sales submitted by the Councils. MMA reviewed the key drivers behind forecast water sales (eg, population growth, pricing structures) and submitted a forecast based on its assessments. For the 2006 Determination IPART reviewed MMA's report and examined the Councils' updated forecasts.

For this review the Councils will need to provide detailed forecasts of water sales. IPART will assess the forecast water sales submitted by the Councils and may engage an independent consultant to conduct detailed analysis to test the robustness of these forecasts.

Given the inherent variability of water sales from year to year, IPART will also consider mechanisms to deal with any substantial changes in the demand forecasts. These are discussed further below.

IPART seeks information and explanation from the Councils on:

- 19 Forecast water sales, by customer grouping, for the upcoming determination period.
- 20 Forecast sales for other regulated services, by customer grouping, for the upcoming determination period.
- 21 The methodology and assumptions used in developing these forecasts.

4.2 Length of determination period and aggregate pricing approach

For this review IPART will need to consider the appropriate length of the determination period. IPART's decision will, in part, depend on the reliability of the forecasts submitted by the Councils. If, for example, the expenditure profile can only be reliably predicted for two years, a short determination period may be more appropriate.

Once the length of the determination period is known, IPART will need to decide on the aggregate pricing approach that it wishes to pursue. IPART has a number of options for defining prices over the determination period:⁴⁴

- ▼ target the annual revenue requirement for the Councils in each year of the determination period
- ▼ smooth the revenue requirement, so that the Councils' targeted revenue equals its notional revenue requirement in Net Present Value (NPV) terms throughout the determination period
- ▼ adopt an approach where the increase granted in the first year is higher than subsequent years
- ▼ apply a single factor to ensure that prices change smoothly over the determination period in real terms (glide path), and that each Council's targeted revenue in the final year of the determination period equals its notional revenue requirement for that year
- ▼ use a combination of an initial increase (that is greater than increases in following years) and subsequent incremental increases.

In the 2006 Determination, IPART adopted an approach that targeted the revenue requirement for each of the Councils in each year.

⁴⁴ These options are discussed more fully in Appendix B.

IPART seeks comment on:

- 14 The length of the determination period that should apply for this determination.
- 15 The use of an initial increase (that is greater than increases in following years) and/or incremental increases over the determination period.
- 16 Other approaches to translate revenue requirements into prices.

4.3 Determining appropriate prices and structure of the prices

Under section 15 of the IPART Act, IPART is required to have regard to a range of matters when making its determinations, including how price levels and structures impact on economic efficiency, ecologically sustainable development, the regulated businesses and their customers. On occasion, this diversity of factors may require IPART to trade-off or balance different impacts or outcomes, for example customer affordability and economic efficiency.

Fixed and volumetric charges

IPART has also generally favoured a two-part approach to water and wastewater tariffs. That is, residential and non-residential customers pay for their water and wastewater services through two charges: a fixed service charge and a variable usage charge that depends on the volume of water they use.⁴⁵

The benefit of a two-part tariff approach is that it can provide the water business with some revenue stability through the fixed charge, but also a signal to consumers to use water efficiently through the volume-based usage charge.⁴⁶ The reasoning behind the two-part tariff approach to monopoly pricing, where the usage charge covers the marginal cost of supply and the fixed charge acts as a balancing item to cover the remainder of the utility's efficient costs, is outlined further in Box 4.1 below.

⁴⁵ Although Hunter Water is the only agency that currently charges residential customers a usage price for sewerage.

⁴⁶ For a discussion on efficient pricing of monopoly services and the benefits of two-part tariffs, see IPART, *Water scarcity: Does it exist and can price help solve the problem?*, January 2008, pp 3-5.

Box 4.1 Efficient pricing of monopoly services⁴⁷

Economic theory suggests that an efficient price structure is one that encourages an efficient allocation of resources in the economy by the signals that it sends to consumers and producers. This is achieved by setting prices at the marginal cost of supply, where ‘marginal cost’ is the increase in total costs resulting from the production of one more unit of output.⁴⁸

The marginal cost of water supply is largely dependent on the capacity of large, indivisible capital investments such as dams, desalination plants, treatment plants and transmission pipelines. Once a utility has incurred the cost of building the infrastructure, the marginal cost of supplying water is much lower than the average cost of supply.⁴⁹ This means that, if prices are set at marginal cost, the utility may not recover its costs. This will impact on the utility’s incentive to invest in the business in the future.

For this reason, it is generally accepted that pricing of monopoly services is efficient if it meets the following objectives:

- ▼ it signals to consumers the costs imposed (or avoided) if they increase (or reduce) their consumption by a small amount
- ▼ it allows utilities to recover the efficient cost of service provision and recover these costs with the least harm to economic efficiency.

A two-part tariff is generally considered the most efficient price structure for monopoly services as it comprises a single usage charge (set at the marginal cost of supply) and a fixed charge (to recover the remaining revenue requirement). A fixed charge is considered an efficient means of recovering the difference between average costs and marginal costs, because it is levied independently of usage and does not distort the pricing signal set by the usage charge.

Block tariff structures

An Inclining Block Tariff (IBT) is a rate structure in which the usage charge of each succeeding block of usage is charged at a higher unit rate than the previous block(s). The number of rate blocks and size and pricing of each block can vary. The usage component is often accompanied by a fixed charge.⁵⁰

Over the last determination period IPART has phased out the use of a Declining Block Tariff for Hunter Water, and for the recent determination of Sydney Water’s prices, IPART replaced Sydney Water’s IBT with a two-part tariff, comprising a fixed service charge and a single usage charge for all units of consumption. The final

⁴⁷ IPART, *Review of prices for Sydney Water Corporation’s water, sewerage, stormwater and other services from 1 July 2008*, June 2008, (Determination No 1 of 2008) Chapter 10.

⁴⁸ Marginal cost should include any costs or benefits accruing to third parties (ie, those external to the transaction). These costs/benefits are known as externalities.

⁴⁹ Marginal cost can be low for long periods of time. However, as capacity is taken up, marginal cost increases as the next augmentation approaches (and may exceed average cost).

⁵⁰ Conversely, a Declining Block Tariff is a rate structure in which the usage charge of each succeeding block of usage is charged at a lower unit rate than the previous block(s).

report accompanying that determination noted IPART's belief that this is appropriate where there is expected to be little or no water scarcity over the next few years. The usage charge reflects IPART's estimate of the Long Run Marginal Cost (LRMC) of supplying water by the end of the determination period.⁵¹

Scarcity pricing

In terms of alternative pricing structures, scarcity pricing has been advocated by a number of commentators as a better means of bringing the demand for water into line with the available supply. Under such an approach the price of water would increase during droughts when rainfall decreases and water storage levels decrease.⁵² Conversely, lower prices would apply where water is in relative abundance such as when water storages are at a near full storage level.

In reviewing Sydney Water's prices, IPART recently examined the pros and cons of scarcity pricing.⁵³ It found that while scarcity pricing may be considered more economically efficient, because water is allocated to its highest value uses, water restrictions appear to have broad community acceptance and may be more effective at managing short term supply/demand imbalances. Importantly, IPART also found that, given recent water supply augmentation measures (ie, the construction of the desalination plant and the development of several water recycling schemes), investment in demand management measures and recent rises in dam levels, there is likely to be a lack of water scarcity in Sydney in the short- to medium-term. Due to this lack of water scarcity, IPART considered that scarcity pricing should not be implemented in Sydney at this time.⁵⁴

For this review, IPART will consider the specific circumstances pertaining to the supply and demand balance within the Central Coast, and will consider the relative advantages and disadvantages of the introduction of a scarcity pricing structure at this time.

IPART seeks information and explanation from the Councils on:

22 The Councils' water supply/demand balance over the short- to medium- term, including the relative scarcity of water.

⁵¹ IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008*, June 2008 (Determination No 1, 2008), Chapter 10.

⁵² While the price would vary with storage levels, scarcity pricing can be structured so that it does not have an adverse impact on vulnerable customers – for example, a 'base' or non-discretionary amount of water for each customer could be made available at low price, with the price for consumption above this level increasing as storage levels decrease.

⁵³ See: IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008*, June 2008 (Determination No 1, 2008), Chapter 10; and IPART, *Water scarcity: Does it exist and can price help solve the problem?*, Water – Working Paper, January 2008.

⁵⁴ IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008*, *Water – Final Report and Determination*, June 2008 (Determination No 1, 2008), Chapter 10.

Long Run Marginal Cost (LRMC)

Economic theory suggests that the usage component of water prices should be set at the LRMC of supply to achieve efficiency. The LRMC represents the incremental cost of measures needed to bring the demand and supply of water into balance.

Calculating the LRMC involves estimating the costs and water savings associated with available demand management and supply augmentation options.

The Councils will need to provide information in their submissions with respect to estimates of the LRMC of water supply and wastewater services based on the capital and operating costs of the various augmentation schemes being implemented by them, and the demand management options being considered.

IPART seeks information and explanations from the Councils on:

23 The basis on which the Long Run Marginal Costs (LRMC) of supply might be calculated, and estimates of LRMC.

IPART seeks comment on:

17 The appropriate structure for the Councils' water and wastewater prices, including the possible introduction of scarcity pricing.

4.4 Charges for other services

As part of its determination, IPART will also need to set charges for a number of other services, including stormwater drainage services, trade waste services and other sewerage charges, and ancillary and miscellaneous customer services. Descriptions of these charges are outlined below. IPART will be seeking the Councils' proposals regarding these charges, including supporting cost information.

IPART has previously engaged independent consultants to review trade waste charges (in 2003) and miscellaneous charges (in 2005) and to provide advice on individual charges that should be set.

In this review, IPART may engage consultants to review the Councils' charges for some of these other services. This is likely to depend on the Councils' proposed charges for these services, and in particular the significance of any suggested changes.

As is the case with prices for its other services, any proposed change by the Councils should be supported by sufficient cost information and justification.

Stormwater water drainage charges

Currently, costs for the provision of stormwater services are recovered by Gosford Council through an annual stormwater drainage charge for all properties⁵⁵. In the 2006 Determination (Wyang) IPART deferred the introduction of a stormwater charge for Wyong Council and allowed the continued recovery of capital costs through water and sewerage charges. This decision was made at the request of Wyong Council, and was due to the absence of an order to designate areas as 'drainage areas' (and thus allow Wyong Council to levy a drainage charge). IPART anticipates that these administrative difficulties may now have been resolved.

IPART seeks information and an explanation from Wyong Council on:

24 The introduction of a stormwater charge in the Wyong Council area.

IPART will be reviewing the current arrangements and notes that the Councils should submit proposals supported by sufficient cost information and justification.

Trade waste charges

The Councils charge trade waste fees for the receipt and treatment of waste to standards acceptable for discharge. Trade waste costs can be a function of several factors, including treatment plant operating and capital costs, administration costs and the load-based licensing fees that DECC charges the Councils for wastewater discharges. For the 2006 Determination, IPART accepted Gosford Council's proposed trade waste charges and Wyong Council's introduction of a new trade waste policy (compliant with best practice guidelines at the time), with minor amendments to minimise the impact on customers.

Ancillary and miscellaneous charges

IPART sets miscellaneous charges for a range of ancillary services that the Councils provide, including special meter readings, statements of available pressure and flows and applications for water service connection. These charges do not account for a large proportion of the total revenue earned by the Councils, but they can be significant for those customers who are required to pay for them.

For the 2005 Determination, IPART engaged an independent consultant (RSM Bird Cameron) to review each agency's miscellaneous charges. With the exception of a few minor changes to Gosford Council's proposals to more accurately reflect costs, IPART accepted the Councils' proposed miscellaneous charges in the 2006 Determination.

⁵⁵ Prior to the 2006 Determination these costs were recovered through the stormwater levy.

IPART seeks information and explanations from the Councils on:

- 25 The Councils' proposed prices (including level and structure) for water and sewerage services over the upcoming determination period, and the reasoning or justification behind these proposals, including supporting cost information.
- 26 Proposals for any changes to charges other services, including stormwater drainage services, trade waste services and other sewerage charges, and ancillary and miscellaneous customer services.
- 27 If the Councils are proposing changes to price structures, any perceived transitional issues that may arise.

IPART seeks comment on:

- 18 Appropriate levels and structures of charges for the Councils' stormwater drainage, trade waste, sewer access and environmental improvement services, and ancillary and miscellaneous services.

4.5 Impacts of pricing decisions

As part of this review, IPART will consider the potential impact of its pricing decisions on the Councils' residential, commercial and industrial customers. In particular, it will consider affordability of water services for high and low water users and vulnerable customers.

To assist with this task, IPART is currently conducting a household survey that, among other things, seeks to collect data on household characteristics and their utility bills in the Central Coast area. A final report, which presents and analyses this survey data, is expected to be publicly available by the end of the year.

IPART will also consider the impacts of any pricing decisions on the financial viability of the Councils, including their credit ratings and cash flows and their ability to maintain and replace the assets required to deliver services.

IPART seeks information and explanations from the Councils on:

- 28 The impact of the Councils' proposed prices for water, sewerage and other services on customer groups, and on the Councils' financial performance and standing.
- 29 Any mitigation measures that the Councils have in place, or propose, to help customers adjust to price increases.



Appendices

A Matters to be considered by IPART under section 15 of the IPART Act

In making determinations IPART is required by the *IPART Act* to have regard to the following matters (in addition to any other matters IPART considers relevant):

- a) the cost of providing the services concerned
- b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services
- c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales
- d) the effect on general price inflation over the medium term
- e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers
- f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991*) by appropriate pricing policies that take account of all the feasible options available to protect the environment
- g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets
- h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body
- i) the need to promote competition in the supply of the services concerned
- j) considerations of demand management (including levels of demand) and least cost planning
- k) the social impact of the determinations and recommendations
- l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

B Information required from the Councils

IPART has sought the following information and explanation from the Councils throughout the report:

- 1 The uncertainties/risks in the Councils' operating environment over the upcoming determination period and beyond, including the nature of these uncertainties/risks and the likelihood that they will impact on specific costs (for example, electricity charges). 15
- 2 How the Councils have ascertained the appropriate service levels to be provided over the determination period, and how these service levels relate to forecast costs. 15
- 3 The Councils' capital expenditure over the 2006-09 determination period. 18
- 4 Drivers of the Councils' capital expenditure over the 2006-09 determination period, and service outcomes achieved by this expenditure. 18
- 5 The Councils' capital expenditure over the 2006-09 determination period compared to expenditure allowed by IPART when it set prices in 2006, with an explanation of variances. 18
- 6 The Councils' projected capital expenditure program over the upcoming determination period. 18
- 7 Drivers of the Councils' projected capital expenditure program over the upcoming determination period, and expected service outcomes to be achieved. 18
- 8 The Councils' asset management practices and plans, and the relationship between the asset management framework and capital expenditure program. 18
- 9 Any changes proposed by the Councils for the calculation of depreciation including asset classes and asset lives for each asset class applied by the Councils and the methodology adopted in this calculation. 20
- 10 The value and timing of contributions (including contributed assets) to the Councils from developers, government and/or other sources. 21
- 11 Any changes to the expected revenue from developer charges due to the draft developer charges determination. 21

12 The Councils' operating expenditure over the 2006-09 determination period compared to expenditure allowed by IPART when it set prices in 2006, and an explanation of variances.	22
13 Forecast operating expenditure, including the potential for future efficiency gains.	22
14 Drivers behind any projected real increases in operating expenditures during the upcoming determination period.	22
15 The status and quantum of contribution to, and reimbursements from, the Water Savings Fund (to 2007/08) and the Climate Change Fund (from 2008/09), and implications for forecast water sales.	22
16 The costs and revenues of the Councils' recycled water schemes, including avoided costs, proposed means of cost recovery, the timing/uptake of these schemes and the drivers or 'mandates' behind them.	30
17 Performance against the output measures agreed in the 2006 Determination (as identified in Appendix D).	31
18 Appropriate output measures for each Council for the upcoming determination period.	31
19 Forecast water sales, by customer grouping, for the upcoming determination period.	33
20 Forecast sales for other regulated services, by customer grouping, for the upcoming determination period.	33
21 The methodology and assumptions used in developing these forecasts.	33
22 The Councils' water supply/demand balance over the short- to medium- term, including the relative scarcity of water.	36
23 The basis on which the Long Run Marginal Costs (LRMC) of supply might be calculated, and estimates of LRMC.	37
24 The introduction of a stormwater charge in the Wyong Council area.	38
25 The Councils' proposed prices (including level and structure) for water and sewerage services over the upcoming determination period, and the reasoning or justification behind these proposals, including supporting cost information.	39
26 Proposals for any changes to charges other services, including stormwater drainage services, trade waste services and other sewerage charges, and ancillary and miscellaneous customer services.	39
27 If the Councils are proposing changes to price structures, any perceived transitional issues that may arise.	39
28 The impact of the Councils' proposed prices for water, sewerage and other services on customer groups, and on the Councils' financial performance and standing.	39

29 Any mitigation measures that the Councils have in place, or propose, to help customers adjust to price increases. 39

IPART is also interested in receiving the Councils' responses to the broader range of issues raised in this Paper and listed in section 1.4.1, as well as other information or its views on other issues that they believe are relevant to this review.

C Overview of IPART's regulatory framework

IPART regulates the Councils' monopoly water, sewerage, stormwater and recycled water services by determining maximum charges.⁵⁶ In making determinations under the IPART Act, IPART is required to have regard to a number of matters, as listed in section 15 of the Act (see Appendix C).

To give effect to this requirement of the IPART Act, IPART's approach to setting maximum prices involves the following steps:

1. Determining the Councils' notional revenue requirement based on an analysis of the efficient operating and capital costs they should incur in providing appropriate levels of service during the determination period.
2. Identifying appropriate forecast metered water sales and customer numbers.
3. Identifying the broad pricing approaches that could feasibly be applied for the Councils to translate the revenue requirement into prices, and assessing the impact of each approach on customers and the Councils. The approaches considered will include:
 - i) unsmoothed revenue requirement – where prices (and X factors) are set to match the profile of the notional revenue requirement
 - ii) smoothed revenue requirement – where a single X-factor is set to ensure that each Council's targeted revenue equals its notional revenue requirement in NPV terms throughout the determination period
 - iii) glide path – where a single X-factor is set to ensure that prices change smoothly over the determination period in real terms, and that each Council's targeted revenue in the final year of the determination period equals its notional revenue requirement for that year
 - iv) P-nought adjustment and glide path – where two X-factors are set. The first X-factor is set to deliver a P-nought adjustment to prices in the first year of the determination period. The second X-factor is set so that average prices increase smoothly over the rest of the determination period and the expected revenue in the final year of the period is equal to the notional revenue requirement in that year.

⁵⁶ IPART has issued guidelines for establishing recycled water charges and developer charges, see IPART, *Pricing arrangements for recycled water and sewer mining: Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006 (Report Nos 8 and 9, 2006).

4. Identifying feasible pricing structures and calculating actual prices for all or a selection of the pricing options identified in Step 3, then assessing the implications of these prices in the context of the factors prescribed in section 15 of the IPART Act. Specifically, this includes considering the impact of prices on customers and the agency's financial viability as follows:
 - i) in considering customer impact, typical analysis would consider the magnitude of real price increases in 2008/09 compared to 2007/08, and over the whole determination period, the effect of these increases on average bills, and relative bill size compared with other NSW agencies and other jurisdictions
 - ii) in considering financial viability and sustainability, examining the Council's forecast credit rating, taking into account its existing cash/debt levels and its ability to pay dividends, and the 'benchmark financial structure' consistent with the WACC parameter assumptions made by IPART for the purposes of the review
 - iii) in considering economic efficiency, IPART examining the signals sent to customers and cost reflectivity.
5. Deciding on the pricing structure and level for the determination to take account of the interests of the Councils, customers and other stakeholders, recognising that the balancing of these different interests could mean that the target revenue derived by prices is less than IPART's determined notional revenue requirement.

For the purposes of this review, IPART proposes to maintain the general approach to setting prices adopted in past metropolitan determinations. This involves setting a maximum price for individual services, including miscellaneous and trade waste charges.

D 2006 Determination output measures

The output measures which the Councils were required to report against during the 2006 determination period are set out below.

Output measures for the Joint Water Supply Authority⁵⁷

1. completion of the Lower Wyong Transfer System Upgrade
2. completion of the Mooney Mooney Transfer System Upgrade
3. completion of the Mardi Dam Raising
4. completion of the Mardi High Lift Pumping Station and Associated Works
5. completion of the Mardi Dam Transfer System
6. substantial progress on the Mardi to Mangrove Transfer System
7. completion of the Groundwater Contingency Scheme
8. completion of the Hunter Transfer Contingency Scheme.

Output measures for Gosford Council

Table D.1 Output measures for water services

Output (or activity) measure - water	Report value
Renewal of water mains	Kms
New mains laid by council	Kms
Average leakage for	
2006/07	ML/d
2007/08	ML/d
2008/09	ML/d
Pumping stations renewed	No
Service reservoirs	
built	No
refurbished	No

Source: 2006 Determination (Gosford).

⁵⁷ 2006 Determination.

Table D.2 Output measures for sewerage services

Output (or activity) measure - water	Report value
Repair of sewers	Kms
Renewal of sewers	Kms
Comply with DEC effluents standards	all STPs
KSTP- Renew Belt Press Facility	
Make substantial progress on Gosford CBD upgrade	
Complete Gosford CBD Sewer DSP works	
Complete North Avoca Sewerage Scheme	
Pumping stations renewed.	No

Source: 2006 Determination (Gosford).

Output measures for Wyong Council

Table D.3 Output measures for water services

Output (or activity) measure - water	Report value
Renewal of water mains	Kms.
New mains laid by council	Kms
Average leakage for	
2006/07	ML/d
2007/08	ML/d
2008/09	ML/d
Pumping stations renewed	No
Service reservoirs	
built	No
refurbished	No

Source: 2006 Determination (Wyong).

Table D.4 Output measures for sewerage services

Output (or activity) measure - water	Report value
Repair of sewers	Kms
Renewal of sewers	Kms
Comply with DEC effluents standards	All STPs
Complete B3/B4 Pumping Stations and Rising Mains	
Complete B11/B13 Pumping Stations	
Complete WS9 Pumping Station and Rising Main	
Complete replacement of aerators and roadworks at Wyong South STW	
Pumping stations renewed.	No

Source: 2006 Determination (Wyong).

E Price comparisons across agencies

Table E.1 Residential water charges for 2008/09^a

	Hunter Water	Sydney Water	Gosford Council	Wyong Council
Fixed charge (\$)	41.46	75.70	88.48 ^b	112.16 ^b
Usage charge (\$/kL)	1.27	Tier 1: 1.61 Tier 2: 1.83	1.67	1.668

^a For individually metered properties.

^b For a 20mm meter.

Source: Hunter Water: www.hunterwater.com.au/files/Customer_Charge_Hunter_-_Brochure_2008.pdf

Sydney Water: IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008*, June 2008 (Determination No 1 of 2008).

Gosford Council: New South Wales Government Gazette No 76 (27 June 2008) pp 6488-6489 and www.gosford.nsw.gov.au

Wyong Council: New South Wales Government Gazette No 79 (30 June 2008).

Table E.2 Residential sewerage charges for 2008/09

	Hunter Water	Sydney Water	Gosford Council	Wyong Council
Fixed charge (\$)	321.17 ^c	480.31	399.40	412.67
Usage charge (\$/kL)	0.47 ^d	-	-	-

^c Standalone dwelling with a 20mm meter.

^d For half of the metered water usage.

Source: Hunter Water: www.hunterwater.com.au/files/Customer_Charge_Hunter_-_Brochure_2008.pdf

Sydney Water: IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008*, June 2008 (Determination No 1 of 2008).

Gosford Council: New South Wales Government Gazette No 76 (27 June 2008) pp 6488-6489 and www.gosford.nsw.gov.au.

Wyong Council: New South Wales Government Gazette No 79 (30 June 2008).

Table E.3 Example residential bills for 2008/09^e

	Hunter Water	Sydney Water	Gosford Council	Wyong Council
Total residential bill ^f	779.99	923.04	882.70	858.43

^e Assumes 200 kL consumption per annum.

^f Includes stormwater where applicable.

F Glossary

2005 Determination	IPART, <i>Prices of Water Supply, Wastewater and Stormwater Services - Gosford City Council Wyong Shire Council - 1 July 2005 to 30 June 2006</i> May 2005 (Determination Nos 1 and 2, 2005)
2005 Determination (Gosford)	The 2005 Determination as it applies to Gosford City Council (Determination No 1 2005)
2005 Determination (Wyong)	The 2005 Determination as it applies to Wyong Shire Council (Determination No 2 2005)
2006 determination period	The period from 1 July 2006 to 30 June 2009
2006 Determination	IPART, <i>Gosford City Council, Wyong Shire Council: Prices of Water Supply, Wastewater and Stormwater Services From 1 July 2006 to 30 June 2009</i> , May 2006 (Determination Nos 2 and 3, 2006)
2006 Determination (Gosford)	The 2006 Determination as it applies to Gosford City Council (Determination No 2 2006)
2006 Determination (Wyong)	The 2006 Determination as it applies to Wyong Shire Council (Determination No 3 2006)
Authority	Gosford and Wyong Councils' Water Authority
CAPM	Capital Asset Pricing Model
Central Coast	The geographical area encompassing Wyong Shire Council and Gosford City Council areas
Councils	The water, sewerage and stormwater sections of Wyong Shire Council and Gosford City Council (the regulated business)
CPI	Consumer Price Index
Dam	Tillegra Dam

DECC	Department of Environment and Climate Change
determination	The price limits set by IPART for a given determination period
financial year	The year commencing on 1 July and ending 30 June
GL	Gigalitre (1000 ML = 1,000,000,000 litres)
Gosford Council	The water, sewerage and stormwater sections of Gosford City Council
Hunter Water	Hunter Water Corporation
IBT	Inclining Block Tariff
IPART	Independent Pricing and Regulatory Tribunal of New South Wales
IPART Act	<i>Independent Pricing and Regulatory Tribunal Act 1992</i>
JWS	Joint water supply projects undertaken by the Gosford and Wyong Councils' Water Authority Agreement 2000
kL	Kilolitre (1000 litres)
LCD	Litres per capita per day
LRMC	Long Run Marginal Cost
ML	Megalitre (1000 kL = 1,000,000 litres)
MMA	McLennan Magasanik Associates
NPV	Net Present Value
RAB	Regulatory Asset Base
STP	Sewage Treatment Plant
WACC	Weighted Average Cost of Capital
Wyong Council	The water, sewerage and stormwater sections of Wyong Shire Council

