HUNTER WATER CORPORATION

PRICES OF WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES

Medium term price path from 1 July 1996

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

HUNTER WATER CORPORATION

PRICES OF WATER, SEWERAGE AND DRAINAGE SERVICES

Medium term price path from 1 July 1996

Determination No 5, 1996 **17 June 1996**

Medium term price path - Hunter Water Corporation

The Tribunal has been investigating pricing proposals and setting maximum prices for Hunter Water Corporation since 1992/93. There have been a number of changes in the way in which Hunter Water does business and charges for its services. In particular :

- Hunter Water led the way in NSW with the move to greater reliance on actual usage of water in determining water bills; as a result, Hunter Water has achieved significant reductions in average water consumption.

- Hunter Water's operating costs per property have been substantially reduced over recent years; with a 30% reduction in real operating costs per property since 1989/90.

- Hunter Water has been at the forefront of changes to the process of setting developer charges, with better signalling of the "true" costs of water and wastewater infrastructure in different areas.

With Hunter Water having successfully achieved all of the major aspects of price reform, the Tribunal believes that it is now appropriate to set a medium-term price path for Hunter Water.

This determination sets out a four year price path to 1999/2000, with a mid-term review to take place in early 1998. The Tribunal believes that this determination will provide an appropriate level of revenues for Hunter Water to undertake its currently anticipated activities through to the end of the decade.

The four year price path will provide a degree of certainty to the owners and management of Hunter Water with respect to prices and revenues.

The Tribunal believes that this determination provides a reasonable balance between the various and often conflicting interests of the stakeholders. In particular, the four year price path :

- provides sufficient revenues to fund Hunter Water's core business activities and meet its currently known and anticipated water and wastewater quality objectives;

- while providing significant real reductions in customers' bills, largely from a $38 per year reduction in the environmental improvement charge and reductions in residential sewerage usage charges;

- at the same time providing sufficient revenues to generate "appropriate" commercial returns and dividend payments to the owner.

Providing that there are no unanticipated "shocks" during the period of the determination, the Tribunal expects that the price and related financial outcomes reported here will hold for the next four years. In the event of major unanticipated changes during the four year price-cap period which may require additional revenues, such as major changes in environmental quality requirements, Hunter Water will need to come to the Tribunal to establish a case for re-opening the determination. The mid-term review in 1998 will provide an opportunity to assess any such need.

This medium term determination has a number of important implications for key stakeholders.

The Household Sector

As a result of this determination, bills for residential customers will fall in real terms in each of the next four years. The major reduction in bills will occur in 1996/97 as a result of the reduced environmental improvement charge. The Tribunal notes the reduced costs of the Hunter Fringe Sewerage Backlog scheme. This has enabled the passing on of the benefits of the lower costs of the scheme to all customers by way of a reduced environmental improvement charge (reduced from $78 to $40).

The lower costs of the fringe scheme has also allowed for a reduction in the Hunter Sewer Service Access Charge from its projected 1996/97 level of $3,221 to $2,780. Hunter Water has proposed and the Tribunal has accepted that a refund of $441 plus accrued interest be paid to those who have already paid the (higher) access charge to reflect this adjustment.

The net effect of the four-year price path will see water usage charges increase by 5.3 cents to 85.7 cents in 1996/97 and thereafter by small increments to 88.8 cents (in 1996/97 prices) by 2000. Residential sewerage usage charges will decrease by 8.8 cents to 74.6 cents per kilolitre in 1996/97 and progressively thereafter to 45.8 cents (in 1996/97 prices) by 1999/2000.

With the other elements of the price determination, the "typical" household (215 kl per annum) will pay $30 less in 1996/97. "Typical" households' bills will increase by 2.9% less than the increase in the CPI each year over the period 1996/97 to 1999/2000.

The Tribunal has been pleased to note that there appears to have been relatively modest need for social policy support measures for customers of Hunter Water. We understand that Government Social Program Policy safety nets (such as pensioner rebates) as well as Hunter Water's own programs to assist the disadvantaged (such as the payment assistance scheme) will continue.

The Business Sector

Hunter Water has successfully eliminated a substantial component of cross-subsidy by removing property-value based charges. This particularly benefited business customers. The elimination of the price differential between residential and non-residential sewerage usage charges will remove the small cross-subsidy from households to business.

With the increase in water usage charges, business will experience minor real increases in bills of around 0.6 to 0.7% over the price control period. It is expected that many businesses will be in a position to further reduce consumption by adopting water efficiency and re-use initiatives.

The Owner and Commercial Returns

Successive governments have increasingly required agencies such as Sydney Water to act in a business-like manner. Indeed, Hunter Water has been corporatised and is expected to operate as a fully commercial entity within commercial, environmental and other parameters as set out under its legislation and within the terms of its operating license.

The Tribunal is required to have regard, amongst other things, to the commercial interests of the owner of Hunter Water - the State - in setting prices. This requires the Tribunal to form a view about appropriate "profit margins" or "rates of return" earned by Hunter Water. The Tribunal is also required to have regard to the payment of dividends by Hunter Water.

This does not mean that the Tribunal is able to nor should it guarantee a particular level of profits or rate of return to the operations of Hunter Water. Competitive markets do not provide such certain commercial outcomes. Rather, the Tribunal has attempted to form a view about what an "acceptable" commercial outcome might look like if Hunter Water operated within a competitive market, rather than as a monopoly supplier of water and wastewater services.

In forming a view about an "acceptable commercial outcome" over the period covered by this determination, the Tribunal has had regard to the interests of the customers of Hunter Water - both business and household - who have little , if any, choice in where they obtain their water and wastewater services. The Tribunal also has had regard to the overall financial position and performance of Hunter Water as it has developed since corporatisation and the initial assessment of the owner's equity at that time.

In all the circumstances surrounding this price-cap period, the Tribunal is satisfied that Hunter Water will be able to generate an "appropriate" level of profits and dividends.

The Environment

This price determination continues with Hunter Water's and the Tribunal's emphasis on good usage pricing signals for water. The Tribunal does not accept that residential sewerage usage charges provide a good signal to which households can reasonably be expected to respond and influence behaviour - particularly with respect to in-house water use. This contrasts with the impact of water pricing on more discretionary usage - especially outside the house.

The four year price path will see water prices increase to 88.8 cents per kl (in 1996/97 prices) by 1999/2000, but average household water bills will increase by 2.9% less than the CPI over the same period. The continuing reliance on increasing real water prices, as a part of an integrated demand management strategy, will ensure that Hunter Water maintains its outstanding performance in holding down per capita water consumption.

The Tribunal, however, recognises that more may well need to be done to reduce pressures on catchments and associated storage and delivery infrastructure. The peak environment groups have argued that there is scope for further efficient wastewater re-use initiatives across the State. It should be noted that Hunter Water has already negotiated substantial re-use arrangements with large customers, and is to be commended on its initiatives.

The Tribunal accepts that opportunities for re-use warrant further examination, and will establish a "re-use forum" to explore opportunities and options.

This determination is based on Hunter Water's business plan with respect to current and anticipated water and wastewater quality requirements over the next four years. Environmental objectives, standards and associated license conditions continue to evolve. Should there be an unanticipated significant change in such quality requirements which impact on Hunter Water during the price cap period, then Hunter Water may seek to re-open this determination. The mid-term review in 1998 may provide a good opportunity to consider whether the quality or other fundamental parameters underpinning this determination have or are likely to change to such an extent that this determination needs to be reviewed.

The Tribunal would be reluctant to see increases in prices greater than has been built in to this determination. However, substantial changes in basic operating conditions, especially in the area of environmental quality requirements, may require the Tribunal to consider the case for further price increases during the next four years. The Tribunal would investigate Hunter Water's capacity to absorb any such cost pressures before deciding on further increases in prices.

Thomas G Parry
June 19 1996
Chairman

REPORT TO THE PREMIER AND DETERMINATION

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

REPORT TO THE PREMIER ON THE DETERMINATION OF MAXIMUM PRICES UNDER SECTION 11 (1) OF THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT, 1992

Matter No.: SRD / 96 / 03

Report: No 5.2, 1996

Agency: Hunter Water Corporation Ltd

Services: Water supply, sewerage and drainage services.

Declaration of government monopoly services under Section 4 of the Act:

Order dated 27 August 1992 - page 6431, Gazette No. 105

TABLE OF CONTENTS

1 INTRODUCTION

As required by Section 11(1) of the Independent Pricing and Regulatory Tribunal Act 1992, the Independent Pricing and Regulatory Tribunal has investigated proposals by Hunter Water Corporation Ltd (a standing reference agency in Schedule 1 of the Act) for maximum prices to be charged from 1 July 1996 for declared water supply, sewerage and drainage monopoly services.

The Tribunal's determinations of the maximum prices for these services are attached with this report.

2 THE PRICE DETERMINATION PROCESS

The Tribunal called for pricing proposals from Hunter Water Corporation (HWC) for consideration of a medium term price path for the supply of water supply, sewerage and drainage services. Submissions were invited from interested parties and the public on these proposals and other issues relating to the pricing of these services.

A public hearing was held on 16 April 1996 at Newcastle City Hall.

Details of the HWC's proposals are shown below and a summary of other submissions received is shown in an attachment.

Copies of all submissions and a transcript of the hearing are available for inspection at the Tribunal's offices, Level 2, 44 Market Street, Sydney.

The Tribunal members who considered this determination were:

Professor Thomas G Parry, Chairman
Mr James Cox, Full-time Member
Ms Joan McClintock, Member
Mr Robert Bruce, Temporary Member

The Tribunal's price determination process involves consultation with stakeholders and interest groups. A briefing paper was prepared in August 1995 and was sent to the water agencies to outline studies and projects that were required to assist the Tribunal in developing medium term price paths. An information request was circulated in September 1995.

These price determinations are the culmination of a great deal of work by the water agencies, government departments and various customer groups and interest groups. The process involved:

- establishment of working groups and industry forums, including the demand management forum (report completed in December 1995), Developer Charges Forum (ongoing) and working group on price anomalies (report completed in December 1995)
- participation in the work of the Water Industry Asset Valuation Working Group which considered the issues of rate of return and asset valuation
- assessment of agencies' medium- and long term capital expenditure plans
- consideration of the agencies' commitment and/or requirement to meet higher environmental and service quality standards. This was linked to the willingness-to-pay

issue, consideration of the standard-setting procedures, and Hunter Water's capital works program
- assessment of the activities and proposals of the agencies regarding demand management
- consideration of the form of regulation
- analysis of the cost of supply including cost trend analysis
- review of the marginal costs for water services
- financial analysis of agencies' performance and financial modelling to examine various price cap scenarios
- completion of capital works audits with the focus on assessment of the process for making decisions about capital expenditure.

3 SUMMARY AND OVERVIEW OF THE DETERMINATION

3.1 Future Charges

This first medium term price determination is made after considering: Hunter Water's obligations; the interests of customers; returns to the shareholder; and the implications for environmental outcomes. The main features of this determination are:

- A four year price path from 1996/97 to 1999/2000 with a mid term review in early 1998.
- Overall periodic water, sewerage and drainage charges (excluding charges for the Hunter Sewerage Project) are to be reduced by 2% a year in real terms from 1996/97 to 1999/2000.
- Charges relating to the Hunter Sewerage Project:
  - the Environmental Improvement Charge will be reduced from the current $78 a year to $40 in 1996/97 and will be held constant in nominal terms (i.e. $40) until 1999/2000.
  - the Hunter Sewer Service Access Charge will be reduced from the current level of $3,059 to $2,780. This charge will remain at the reduced level in nominal terms until 1999/2000.
  - A refund of $441 plus accrued interest will be provided to owners who have paid the sewer service access charges in past years.
- Water charges
  - water usage charges (for water consumption below 1000 kl) will increase by 5.3 cents to 85.7 cents per kilolitre in 1996/97. The usage charge will then *increase* in small steps to 88.8 cents (in 1996/97 dollar terms) by 1999/2000.
  - the water service charge will decrease from $73.50 a year to $63.60 for residential and non-residential properties in 1996/97. The annual charge will then *decrease* progressively to $23.70 (in 1996/97 dollar terms) by 1999/2000.
- Sewerage charges
  - residential sewerage usage charges will *decrease* by 8.8 cents to 74.6 cents per kilolitre in 1996/97 and will then progressively decrease to 45.8 cents (in 1996/97 dollars terms) in 1999/2000. (This usage charge is multiplied by a discharge factor of 50% and then added to service charges to make up the residential sewerage bill.)
  - non-residential sewerage usage charges will *increase* by 2 cents to 39 cents per kilolitre in 1996/97 and will remain at this level in real terms to 1999/2000

  - the sewerage service charge for residential customers will *increase* by $16.20 a year to $172.50 (assuming a discharge factor of 50%) for residential and non-residential properties in 1996/97. The annual charge will then increase progressively to $195.00 (assuming a discharge factor of 50%) in 1999/2000

- Stormwater drainage service charges will be adjusted by CPI-2% a year over the price control period.
- The net present value method currently used by Hunter Water for calculating developer charges will be modified to be consistent with the methodology as determined by the Tribunal. This will generally imply an overall increase of approximately 50% over current charges. The new charges will be phased in progressively over the next four years.
- The new trade waste charges approved by the Tribunal in 1994/95 will continue to be phased in during 1996/97. The charges will then be adjusted by CPI-2% a year during the remainder of the price control period.
- Charges for miscellaneous customer services will be adjusted by CPI-2% a year over the four years from 1996/97 to 1999/2000.
- Hunter Water is permitted to enter into contractual arrangements with its large customers but subject to the framework to be developed by the Tribunal in consultation with the water agencies.
- All new charges will be reflected in customers' bills on or after 1 July of each year.

Table 1: Overview of Hunter Water's future charges

	1995/96 Current	1996/97	1997/98	1998/99	1999/2000
			in 1996/97 dollars [1]		
Water					
- service charge per annum	$73.5	$63.6	$49.5	$35.7	$23.7
- usage charge [2]					
< 1000 kl	80.4 c/kl	85.7 c/kl	86.8 c/kl	88.1 c/kl	88.8 c/kl
> 1000 kl	74.2 c/kl	78.9 c/kl	79.9 c/kl	81.1 c/kl	81.7 c/kl
Sewerage [3]					
- service charge per annum	$312.60	$345.0	$362.1	$377.4	$390.0
- residential usage [2]	83.4 c/kl	74.6 c/kl	63.5 c/kl	53.9 c/kl	45.8 c/kl
- non residential usage	37.0 c/kl	39.0 c/kl	39.0 c/kl	39.0 c/kl	39.0 c/kl
Stormwater drainage					
- residential service charge per annum	$24.1	$24.9	$24.4	$23.9	$23.4

Note:

1. Charges from 1997/98 to 1999/2000 will be indexed by the retrospective CPI to the year ending in each March quarter compared with the previous year.
2. Meters are read progressively throughout the billing period. As the new usage charges apply from 1 July in each year, which may be part way through a billing period, then average daily consumption will be assumed to be constant throughout the billing period for calculating the usage components of customers' bills.
3. Subject to a discharge factor - 50% for residential customers

3.2 Overview of determination

In the past five years, Hunter Water has made good progress in improving its efficiency. Real operating cost per property is projected to be 30% lower in 1995/96 than it was in 1989/90. The HWC expects to reduce real operating cost per property by 3% a year over the next five years.

Operating cost savings have allowed the Corporation to eliminate property-value based charges for water and sewerage. However, because of the difference between the residential

and non-residential sewerage usage charges, households (as a group) are now subsidising the business sector.

In making this medium term price determination, the Tribunal needs to ensure that Hunter Water can properly undertake its functions and meet its objectives. The Tribunal must also strike a reasonable balance between the interests of the customers and those of owners (represented by the Government).

This determination will permit continuing improvements in environmental quality and customer service. Hunter Water will be able to operate on a sound financial basis and achieve appropriate returns on all investments. This includes environmental works to meet existing standards and those enhancements to quality standards which are defined in the Memorandum of Understanding between Hunter Water and the Environment Protection Authority (EPA).

This price determination has been made after having regard to a range of financial indicators, including an overall return on a regulatory asset base. The opening value of this regulatory asset base has been set at a level ($680m) which is consistent with the current prices. New capital works (including environmental works) have been added to the (depreciated) asset base. The return (represented by earnings before interest and tax) on this regulatory asset base is projected to increase to 6% in 1996/97 and then to remain at that level over the remainder of the price control period.

Under this determination, usage charges for water will increase but sewerage usage charges for residential customers will decrease. As noted in its report "Inquiry into Water and Related Services", the Tribunal is not persuaded that the cost of providing sewerage services to residential customers varies greatly with water usage. Hunter Water's proposal to reduce the sewerage usage charge for residential households is consistent with the Tribunal's views and has been accepted. This charge will also reduce the amount of the cross-subsidy from residential to business customers that was discussed earlier. The increase in the water usage charges will maintain an adequate demand management signal.

The Tribunal has also considered the charges for the Hunter Sewerage Project. This project was undertaken to provide sewerage services in the Hunter Fringe Area. Hunter Water currently collects: (a) an Environmental Improvement Charge which is payable by all sewerage customers except pensioners; and (b) the Hunter Sewer Service Access Charge which is payable by owners of unconnected land within the Hunter Fringe Areas. There are a number of issues arising from these charges, including the extent of cost recovery and equity of the funding arrangement. Because the costs of constructing the works incurred to-date is less than was originally budgeted, the Tribunal has concluded that the charges for the Hunter Sewerage Project can be reduced.

The Tribunal has developed guidelines for the net present value (NPV) methodology to be used in calculating developer charges. This will overcome some of the problems that exists in the NPV method that is currently applied by Hunter Water. Under the parameters of the NPV calculation determined for HWC, there will be an average increase in developer charges of about 50% although the extent of increase will vary depending on the location of the developments. The new developer charges will be phased in over the four year price control period.

The price reforms implemented by Hunter Water have been achieved without adverse impacts on residential customers. The water and sewerage bills (including the environmental improvement charge) for the "average" household consuming 215 kl a year will *decrease* by $30 in 1996/97. The average household bill will *decrease* in real terms by 2.9% a year from 1996/97 to 1999/2000.

At present, Hunter Water has entered into agreements with two large customers regarding supply of effluent (i.e. supply of wastewater after treatment). The Tribunal intends to introduce a new charge for "sewer mining" (i.e. extraction of wastewater prior to any treatment). This will require the Tribunal to declare this service as a monopoly charge and resolution of issues such as the conditions for access to Hunter Water's sewer mains. The initial price will be set at "zero" or "at cost" until such time as the reuse market increases to 20% of total water use market. As recommended by the environmental groups, the Tribunal will establish a forum to consider processes to encourage greater reuse of wastewater.

It may be that during the four year price control period, there will be enhancements in environment standards (e.g. for sewer overflows) over and above those specified by Hunter Water. This will require separate consideration by the Tribunal. The Tribunal will need to consider the effectiveness of the options proposed by Hunter Water and the willingness of customers to pay for such improvements.

The next price review will take place in 1999/2000 to take effect from the following year. The 1998 mid term review will consider any new developments, especially the imposition of new obligations, that may arise.

4 SUBMISSIONS

4.1 Pricing proposals made by Hunter Water Corporation

The main proposals made by Hunter Water Corporation were:

- Two alternative five-year price paths based on CPI-1% and CPI-3% respectively.
- A real increase in water usage charges and a reduction in the water service charge
- A reduction in the residential sewerage usage charge and an offsetting increase in the sewerage service charge
- Continuation of the phase-in of revised trade-waste charges.

A summary of the proposed charges is shown below:

Table 2: Hunter Water Pricing Proposals

Real 1995/96 prices	Current	Case 1: CPI-1%		Case 2: CPI-3%	
	1995/96	1996/97	2000/01	1996/97	2000/01
Water charge					
Base (annual)	$73.5	$60.4	$12.0	$60.4	$12.0
Usage (cents / kl)					
< 1000 kl	80.4	83.4	93.4	81.1	83.9
> 1000 kl	74.2	76.7	86.7	74.7	77.2
Sewerage charge[1]					
Base (annual)	$312.6	$327.65	$386.05	$316.75	$334.70
Usage (c / kl)					
- residential	83.4	71	35	71	35
- non-residential	37.0	37	35	37	35
Impacts on households [2] - Average bill					
- low use (100 kl)	$430	$421	$394	$413	$359
- av. use (215 kl)	$570	$558	$521	$547	$475
- high use (400 kl)	$796	$778	$727	$763	$663

Note:
1. Subject to a discharge factor - 50% for residential customers
2. The bill includes environmental improvement charge

Two key objectives were: (a) to maintain revenue to meet Hunter Water's rate of return targets and (b) to continue reform of the tariff structure. Hunter Water believes that effluent reuse is the key to reducing demand to fit within the limits of the current supply.

4.2 Other submissions

The Tribunal received submissions from other parties, including NSW Treasury, Environment Protection Authority (EPA), the peak environment groups, customer and other interest groups:

- The NSW peak environment groups submitted that the move to a medium term pricing determination should be deferred for at least another year. This would increase public confidence in the water agencies' commitment to sustainable and accountable water management. These groups were also concerned about barriers to competition.
- The Hunter Sewer Service Access Charge Protest Group, the Rathmines Progress Association and a number of individuals were concerned about the Hunter Sewer Service Access Charge. They proposed that the access charge should be removed.
- BHP made submissions about the pricing of water and supporting the idea that large customer should be able to enter into contracts with water suppliers
- Incitec made submissions about cross-subsidies between customer groups and benchmarking. It supported the principles which had been adopted by the Tribunal in previous determinations.

Further details of these submissions are summarised in an attachment.

5 ISSUES CONSIDERED BY THE TRIBUNAL

Under Section 15 of the Independent Pricing and Regulatory Tribunal Act 1992 (formerly Government Pricing Tribunal Act 1992) the Tribunal is required to have regard to a number of matters and indicate what regard it has had to them. These matters are outlined below.

5.1 Costs and efficiency

* *the cost of providing the services concerned [S15(1)(a)]*
* *the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers [S15(1)(e)]*
* *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 [S15(1)(h)]*
* *the need to promote competition in the supply of the services concerned [S15(1)(i)]*

5.1.1 Operating expenditure

More than half of Hunter Water's operating costs are labour costs. The number of persons employed has fallen from over 1,000 in 1990 to 770 in 1995.

Table 3: Operating Expenditure (1995/96$m)

	91/92 Actual	92/93 Actual	93/94 Actual	94/95 Actual	95/96 Budget
Operations	64.2	59.4	59.7	57.3	53.1
Provisions	8.2	4.6	1.4	2.8	3.6
Cost of external sales	1.8	3.2	3.5	4.2	5.0
Total operating costs	**74.2**	**67.2**	**64.6**	**64.3**	**61.7**
Depreciation	39.5	41.1	42.6	40.4	26.6
Interest	30.3	26.9	21.9	11.4	6.6
Total operating expenditure	**143.9**	**135.3**	**129.1**	**116.1**	**94.9**
No of employees	1,021	934	832	770	757
No of properties	170,125	173,171	176,965	182,083	189,800

Total operating costs decreased by $10m or 13% in real terms in the three years to June 1995. Further cost reductions have been projected for 1995/96 and subsequent years.

Hunter Water believes that many of the productivity changes potentially available have been made over the past five years. Further gains are possible (although at a slower rate) from the introduction of new technology and further structural reform. Whilst there will be some reductions in the cost of some inputs such as electricity, there may be increased in other input costs such as chemicals.

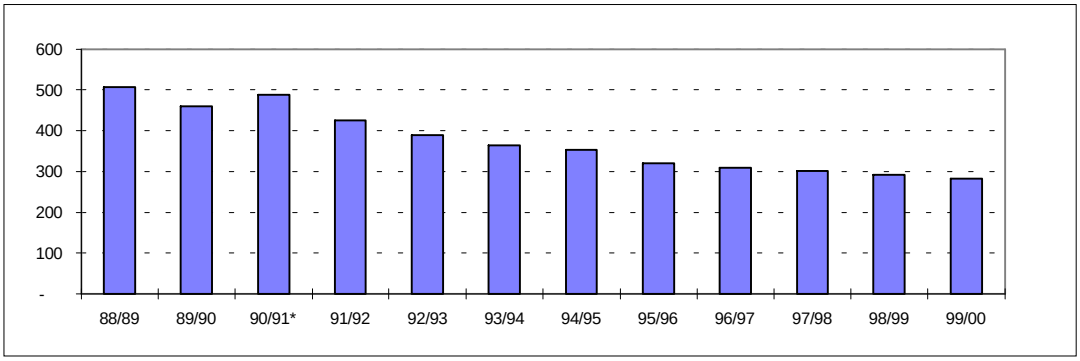
The total cost of services for Hunter Water (including depreciation and interest) fell by 20% in real terms over the three years to 1994/95. An additional major reduction is projected for 1995/96. This reduction has resulted from Hunter Water's cost reduction program, reduced depreciation expense (as a result of extended asset lives) and lower financing costs.

5.1.2 Trends in operating costs per property

Operating costs per property fell in real terms by 30% in the six years from 1989/90 to 1995/96.

Hunter Water intends to reduce operating cost per property by 3% a year over the five years to 2000/01.

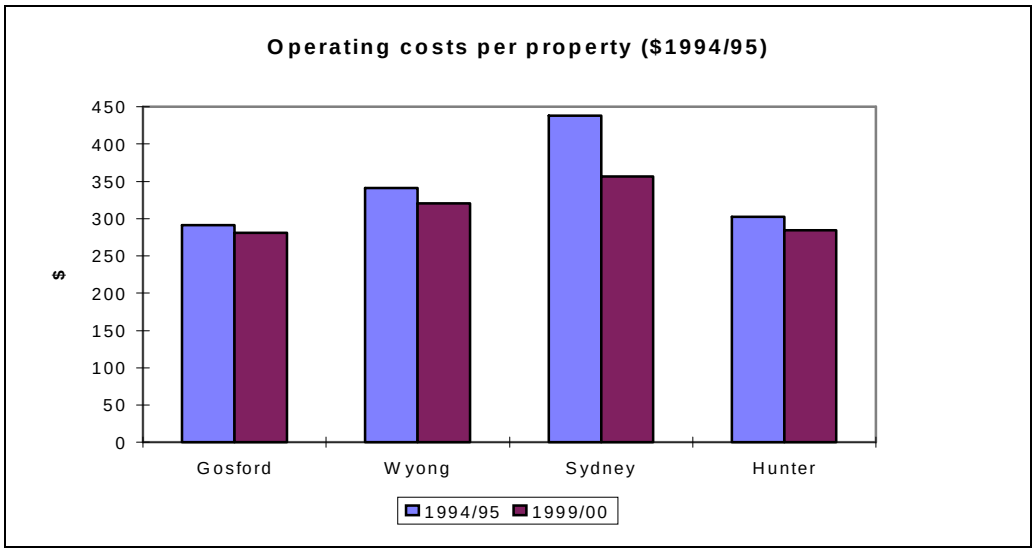
Figure 1: Real Operating Cost per Property [(1)] ($1995/96)



Note:
1. Includes provisions
2. *The figure for 1990/91 is higher than 1989/90 due to the large increase in employee provisions

Figure 2 compares operating costs per property for water and sewerage services for Wyong Council, Gosford Council, Sydney Water Corporation and Hunter Water Corporation.

Figure 2: Comparative Operating Costs per Property



Notes:
1. Figures exclude depreciation
2. Figures for Sydney include BOO costs and costs associated with increased standards
3. Figures for Sydney and Hunter exclude costs of external sales

At present, Hunter Water's operating costs per property compare favourably with those of the other authorities. The Tribunal commends Hunter Water for the cost reduction that has been achieved. Regular reviews should however take place to ensure that every opportunity for cost reduction continues to be explored.

5.1.3 Capital expenditure

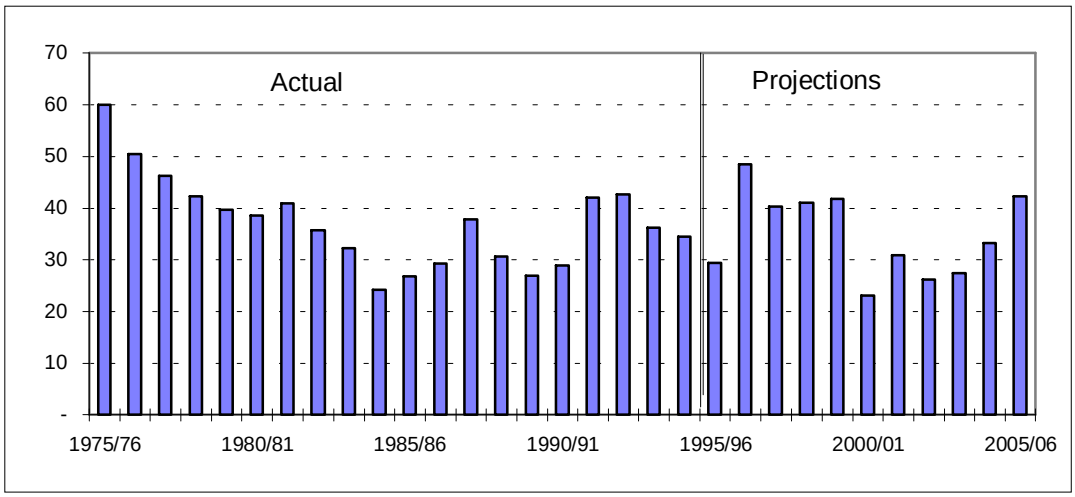
To remain viable, a water operator's prices should cover both operating costs and capital costs. As the water industry is a capital intensive business, asset-related costs are substantial.

The main drivers for capital expenditure are:

- system renewal to meet existing operational standards
- system amplification to meet growth
- environmental protection works to meet existing standards
- capital works to meet planned environmental standards
- special programs such as for sewer backlog and dams safety.

As shown in the following graph, Hunter Water has made substantial investments over the past twenty years. Capital expenditure has been relatively high in the past few years due to the undertaking of the Hunter Sewerage Project.

Figure 3: Capital Expenditure (real $1995/96m)



Note:
1. Figures are in 1995/96 dollars. Capital expenditure excludes developer funded assets.
2. The capital expenditure projected from 1996/97 was not included in Hunter Water's submission but was provided to the Tribunal as part of Hunter Water's response to the Tribunal's Information Request.

Over the next five years, Hunter Water will be required to undertake capital expenditure to meet existing commitments, undertake pollution reduction programs and complete the Hunter Sewerage Project. Hunter Water may also be required to undertake further capital expenditure during this period to reduce sewer overflows. There is some uncertainty regarding the amount of capital expenditure that is required to do these things (as has been shown by variations in the capital expenditure estimates that have been provided to the Tribunal).

5.1.4 Contracting out and external sales

All capital works are now constructed by contractors for ten years. Hunter Water has also established internal business units. Some services that are provided by these business units will be opened up to competition. Hunter Water will invite tenders for the provision of

maintenance services. The introduction of greater competition in the operations of Hunter Water should lead to cost reductions.

In early 1994, Hunter Water established a subsidiary company, the Hunter Watertech Pty. Limited. The company sells Hunter's technical expertise and skills including its telemetry system to external entities. It is expected that this external business will provide long term benefits to Hunter Water's owner, customers and employees.

It is important that further ring-fencing arrangements should be put in place to separate the core from external businesses and to ensure transparency. The Tribunal will further examine the effectiveness of accounting separation as part of the mid term review.

5.1.5 Competition

The submission from the environment groups discusses possible options for removing pricing barriers to competition. The submission recommends a single set of terms for water, sewerage and drainage services for all water agencies in NSW. The uniform format would be based on the terms contained in the Sydney Water Corporation submission. From the Sydney Water Corporation submission:

> "The key to the Tribunal's review of Sydney Water's prices in the light of competition policy is to achieve the regularisation of prices and pricing and charging methodologies, and thereby bring Sydney Water's pricing policies into line with the basis that the private sector could be expected to utilise were it to compete directly."

The submission from the environment groups contends that:

> "there is no incentive to customers to disconnect from the system (in the interests of self-sufficiency and reducing the stress on existing systems) or to use other service providers."

As a start to resolving this situation the environment groups recommend the following:

- a customer should be able to disconnect from water, sewerage or drainage infrastructure and pay their plumber who would then certify to the agency that the work had been carried out
- fixed charges for water, sewerage and drainage should cease upon disconnection
- no fixed charges should be payable by a customer who is not connected.

Hunter Water has removed charges for vacant land since 1 July 1995.

In its submission the NSW Department of Health was concerned about the potential health risks from customers disconnecting from water and sewerage networks. Such action could result in environmental damage and an extra administrative burden from ensuring that individual landowners satisfy environmental standards.

The environment groups also propose that the Tribunal should set a new charge for sewer mining at zero or "at cost". The groups also recommended that the Tribunal should create a forum to identify where markets for the reuse of wastewater can be encouraged. The Tribunal proposes to adopt both recommendations.

The submission from Sydney Water discusses the scope for competition within the distribution networks of the water agencies. The Tribunal notes that Sydney Water in

November 1995 prepared a draft protocol to govern access to its network. Similar protocol is being developed by HWC. The scope for removing impediments to competition will need to be reviewed as part of the National Competition Policy Package which was endorsed by the Council of Australian Governments in April 1995.

Although an understanding of the application of National Competition Principles to providing Third Party Access to the water industry is still evolving, when competitors bid for access to water agencies systems they will have to pay for such access. These issues are clearly of equal relevance to Hunter Water as they are for Sydney Water.

5.2 Consumer protection

* *the protection of consumers from abuses of monopoly power in terms of price, pricing policies and standard of services [S15(1)(b)]*
* *the effect on general price inflation over the medium term [S15(1)(d)]*
* *the social impacts of the determinations and recommendations [S15(1)(k)]*

5.2.1 Pricing

Hunter Water has, from the adoption of user-pays pricing in 1982, made many important pricing reforms:

- A two-part tariff structure was introduced in 1982
- Residential property-value based charges were eliminated in 1990/91
- Non-residential property-value based charges were eliminated in 1994/95
- Charges for vacant land were removed in 1995/96
- Charges for fire services were removed in 1995/96
- Water and sewerage service charges are now the same for residential and non-residential properties
- The net present value approach to the calculation of developer charges has been adopted.

As a result of the removal of property-value based charges, total revenue from non-residential properties reduced by approximately 20% in real terms between 1992 and 1995.

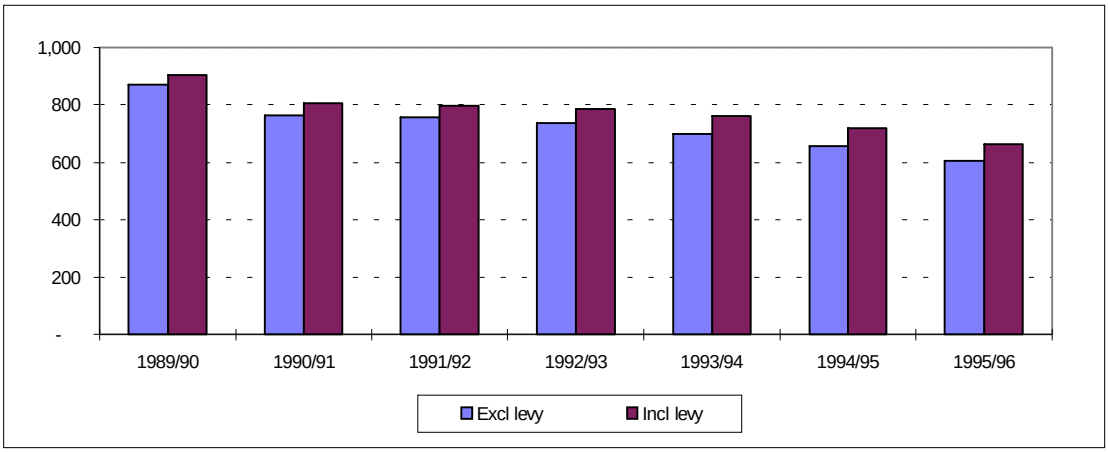
Most of Hunter Water's structural reforms were completed in 1995/96. The remaining structural anomaly is the imputed residential sewerage usage charge which involves a cross subsidy from the residential to the non-residential sector. This cross-subsidy is estimated to be $5m a year.

The sewerage usage charge for residential customers will continue to be reduced from 1996/97. Water usage charges will be increased to maintain the demand management signal.

5.2.2 Average revenue per property

As shown in Figure 4, average revenue per property (including the environmental improvement charge) decreased by 26% in real terms over the six year period to 1995/96.

Figure 4: Trends in average revenue per property (1995/96$m)



Productivity improvements and cost reductions have allowed the Corporation progressively to restructure its pricing arrangements without having adverse impacts on a typical household's water and sewerage bill. An appropriate return to the government has been maintained during the implementation of price reform.

5.2.3 Service standards

The Operating Licence and Customer Charter together define the Corporation's operational and customer performance requirements. The Licence spells out targets for, among other things, water quality, pressure, and continuity, sewerage system performance and customer service.

In July 1995, Hunter Water Corporation introduced a customer charter which outlines the Corporation's commitment to meeting key service standards. This is a landmark in terms of the relationship between the service provider and its customers. There is a rebate system in place for customers if specified service standards relating to water and sewerage services are not met during the year. This provides an additional incentive for a monopoly business to meet customer needs.

5.2.4 Effect on inflation

The Household Expenditure Survey conducted by the Australian Bureau of Statistics indicates that water and sewerage charges comprise 0.7% of an average household's weekly expenditure in NSW. The revised charges will therefore have a small but favourable effect on the overall cost of living in the Newcastle area.

5.2.5 Social impacts

Any changes to the basis of charging (e.g. removal of property taxes) will have differing impacts on various customers. In making its determination the Tribunal has attempted to make charges more cost-reflective to better signal the value of the resources consumed. This has been done with due recognition of the impacts on individual customers.

With increasing emphasis on water usage pricing, the Tribunal will continue to encourage water operators to provide demand management assistance to pensioners and large families with low incomes.

5.3 Financial viability

* *the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of NSW [S15(1)(c)]*
* *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 [S15(1)(g)]*

5.3.1 Rate of return and asset valuation - regulatory approach

The Tribunal is required by its legislation to consider what should be an appropriate return to Hunter Water's shareholders. The Tribunal also needs to consider the agreement of the Council of Australian Governments (COAG) that the full costs of providing water and related services should be recovered through prices.

There are a number of reasons why inclusion of a rate of return element in prices is important:

- New investment should only take place if a rate of return can be obtained on the funds that are employed or the investment is explicitly funded as a social program policy
- Because privately owned enterprises are expected to earn a rate of return on the funds that are employed, considerations of competitive neutrality suggest that government-owned enterprises should be expected to do the same
- It is reasonable for government to obtain a return from its commercial businesses.

The problem is to determine what an appropriate return to the government might be. A popular approach is to determine the reasonable return to the owner by applying a risk-related rate of return to the value of the business entity's assets. (Since the return to the owner is part of an overall revenue cap in CPI-X incentive based regulation, this is not rate of return regulation). The problem is then how to determine the rate of return and the asset value. These questions have been debated recently both in overseas jurisdictions and in Australia. It is useful to review briefly this debate before turning to the Tribunal's own answers to these questions.

The Tribunal has examined various approaches adopted by overseas regulatory authorities[1]. North American regulators principally rely upon asset valued at historic cost in determining the return to the owner. Their major concerns, not surprisingly, are what to include in the asset base and what is a "fair" return. The British price regulators have argued that applying a commercial return to the total asset stock valued *at replacement cost* would yield excessively high prices. This conclusion is drawn from an assessment of investors' expectations, customers willingness to pay and the assessment of cash required to finance the activities of the business[2].

---

[1] The Tribunal, in conjunction with the Australian Society of CPAs Public Sector Accounting Centre of Excellence, has undertaken a research project on "Asset valuation by Government Trading Enterprises - An Evaluation of Pricing Issues". A Final Report was completed in March 1996 and the report will be published in June/July 1996.

[2] Based on the research findings of the project on asset valuation undertaken by the Tribunal and the Australian Society of CPAs Public Sector Accounting Centre of Excellence.

The British regulators have distinguished between assets existing prior to regulation and new investments. They have been careful to ensure that commercial returns are earned on new investments but have effectively accepted the pre-existing return on past investments.

The Report of the Expert Group[3] on "Asset Valuation Method and Cost Recovery Definition for the Australian Water Industry" recommended the adoption of a deprival value methodology for asset valuation. The idea behind this methodology is that assets should be valued according to the service potential or future economic benefits that would be lost if the agency were to be deprived of the asset. This can be measured by:

- the current market price of a similar asset; or
- the current cost of replacing the same service potential; or
- the future economic benefits of the existing asset; or
- current reproduction cost.

It will be evident that the deprival value concept, which has its basis in insurance, is not an easy one to apply in practice. Many difficult judgements are required: for example, what allowance should be made for excess capacity or gold plating? As the British regulators have noted, the use of current cost asset values may imply a very large increase in revenues. Customers may be reluctant to pay the consequential price increases. In addition, there are real doubts as to what economic signals are sent to consumers by adopting this approach. The Tribunal therefore is reluctant to endorse the deprival value approach to asset valuation at this stage.

5.3.2 Line-in-the-sand and income entitlement approach

In July 1995, the NSW Treasury convened a Water Industry Asset Valuation Working Group[4] to consider pricing issues associated with asset valuation. The Working Group decided to adopt a "line-in-the-sand" (LIS) approach in which a distinction is made between past and new investments. As past investments were made for a variety of economic and political reasons, the Working Group concluded that it would be inappropriate to apply a commercial return to the written down replacement value of such investments. However, a commercial rate of return should be required for new investments.

The Working Group considered two options for the implementation of the LIS approach[5], namely the accounting and the annuity method.

Accounting method

This method determines allowable income (or revenue) for the agency to be the sum of:

- operating and maintenance costs
- accounting depreciation
- the existing rate of return on assets
- a 7% real return on new investments.

---

[3] An Expert Group was established by the Working Group on Water Resource Policy. A report was completed in February 1995 and was submitted to the Council of Australian Governments.

[4] In NSW, a Water Industry Asset Valuation Working Group was formed in July 1995 under the Treasury's GTE Consultative Council. The group is represented by NSW Treasury, Sydney Water, Hunter Water and the Tribunal Secretariat.

[5] Report of the Water Asset Valuation Strategy Group - A subgroup of the Water Asset Valuation Industry Working Group May 1996.

Annuity method

This method determines the allowable income for the organisation to be the sum of:

- operating expenditure
- a capital expenditure annuity for new investments; plus
- the current level of gross operating surplus (i.e. earnings before interest, tax and depreciation) which will be maintained in real terms.

Under the annuity method, past investments are valued at the present value of net cash flows at existing price levels. New investment is represented by calculating the equivalent annuity using a real rate of return of 7%. This annuity is added to allowable revenue from the investment decision point. In addition, the annuity proposed by the Working Group allowed for technological progress through a reduction of 1.5% a year in the amount of the annuity. Effectively, the capital expenditure annuity will be greater in earlier years and declines over time at the rate of 1.5% per annum. Under this method, the net present value of the capital annuity will be the same as the initial investment.

The Working Group preferred the annuity approach for the following reasons:

- it provides an alternative to basing prices on accounting measures of asset valuation and the rate of return
- it offers greater regulatory and planning certainty for the water agencies
- it links pricing with the investment appraisal process and commercial decisions to invest.

Sydney Water proposed the annuity approach in its pricing submission as an alternative to the Tribunal's recommended incentive-based price regulation. Although Hunter Water's proposed price paths are based on incentive based regulation (in the form of CPI - X), it supported the outcomes of the Working Party.

The Tribunal is grateful for the progress made by the Working Group. Although the Tribunal accepts that it should have regard to LIS asset value as one element in determining prices, it has not been persuaded that it should adopt the annuity approach to price regulation. This is for several reasons:

- The capital annuity is a form of cost-plus regulation. The guaranteed return (via the capital annuity) may provide incentives for inefficient investment or over-investment.
- Investments are usually made in large lumps and capacity is taken up gradually over time. In initial years, spreading the capital annuity over the existing customers may result in cross-subsidisation from these customers to future customers. The problem is compounded if the higher technologically adjusted annuity is applied. It is noted that, for large-scale private sector capital investments, returns to investors are either nil or very small in the early years. It may take many years before a project breaks-even and earns a profit.
- The annuity approach places a good deal of emphasis on the Tribunal's ability to scrutinise capital investments. It is not clear how well-placed the Tribunal is to do this.
- The capital annuity method may lead to volatile price increases whenever major capital investment is made. It is not clear that this is appropriate.
- There is a lack of direct relationship between prices and outputs / deliverables.

- Given the wide variation in the expected asset lives for water infrastructure assets, the use of annuity formula is more difficult to administer and monitor in the water industry than in other industries.
- The annuities approach is not easy to explain or understand. Other things being equal, a simpler approach would be preferable.

5.3.3 Establishing the regulatory asset base as one element in price determination

Although prices should allow a return on new investments, they should not be driven by the level of investments. Rather, the regulatory approach should encourage efficient operations and investment.

In its report on Inquiry into Water and Related Services, the Tribunal considered the advantages and disadvantages of different forms of price regulation in the water industry. It concluded that incentive based regulation (in the form of CPI +/- X) is the best approach.

As discussed, the Tribunal accepts that the return on a regulatory asset base should be considered when establishing the (CPI-X) price cap.

The regulatory asset base can be constructed as follows:

- an opening regulatory asset value for existing assets is established based on the net present value of future cash flows at current price levels
- the regulatory asset base is then adjusted through time to take account of renewals of existing assets and new capital expenditure.

Although the Tribunal has calculated a regulatory asset value to assist it in making this present determination, it wishes to consider further how the regulatory asset value should be established and, in particular, updated through time.

The regulatory asset value for Hunter Water's existing asset base is estimated to be $680m[6]. This asset base may not necessarily coincide with the amount reported in the annual accounts. It would be inappropriate to include customer funded assets and assets paid for by the State Government in the regulatory asset base[7]. To earn a rate of return on assets provided free of charge to the water supplier would be double dipping. That is, customers should not be charged a return on assets which have already been paid for (including a profit component). It is recognised that the water supplier has to maintain and ultimately replace such assets and that these costs should be included in the cost of providing services.

Similarly, it would be inappropriate to expect a return on investments which were made to satisfy community service obligations (for which no matching payment was received from Government) or on investments which were made to satisfy non-commercial objectives (e.g. to meet political objectives).

---

[6] This value is established based on the capitalisation of the current level of gross operating surplus. No allowance has been made for improvements in operating efficiency, capital refurbishment and property growth.

[7] HWC estimated that 39% of the asset base (valued at written down replacement cost) was externally funded by customers and government.

As the costs of undertaking new investments that are related to urban growth are to be recovered through developer contributions, these investments should be excluded from the regulatory asset base.

There are some outstanding implementation issues regarding the regulatory asset value that need to be addressed. The Tribunal will consult with the Water Industry Asset Valuation Working Group to progress these issues.

5.3.4 Assessment of rate of return

The NSW Government has set out its approach to defining the rate of return targets as follows[8]:

> "…. the fundamental investment decision rule is that investments should only be made where, over the lifetime of the investment, the expected rate of return on the assets employed at least equals the firm's weighted average cost of capital (WACC)."

Due to conceptual differences, the rate of return measured according to accounting data cannot be expected to be perfectly consistent with the cost of capital criteria used in investment decisions. This is because investment evaluation involves discounting estimates of future cash flows. The cash flow numbers are different from the accounting figures used for financial reporting because they exclude depreciation from operating expenditure and subtract capital expenditure from revenues in the year in which it is incurred. This means that the weighted average cost of capital cannot be translated directly into a financial target based on an accounting rate of return.

The financial targets in Hunter Water's Statement of Corporate Intent[9](SCI) are as follows:

Table 4: Financial Targets

	1995/96	1996/97	1997/98
Real rate of return [1]	1.6%	2.1%	2.3%
Return on historical cost of assets [2]	6.5%	6.9%	7.1%

Note:
1. The real rate of return is calculated on the written down replacement cost of operating assets excluding works in progress.
2. The return on historical cost assets is based on the actual cost of assets employed.

The financial targets in the SCI relate to *all operating assets*. The rate of return targets are therefore not comparable with the return on the regulatory asset base as calculated by the Tribunal.

The SCI also requires Hunter Water to achieve a return equal to at least the weighted average cost of capital on new investment. At the time of corporatisation, a weighted average cost of capital of 5.71%[10] (real post- tax) was used in determining the value of Hunter Water.

---

8 NSW Government, *A Financial Distribution Policy for NSW Government Trading Enterprises*, August 1992, p12.

9 The Statement of Corporate Intent is negotiated by the Board of Directors and the Government shareholders. It details the commercial objectives and targets that Hunter Water must achieve.

10 Estimated by a consultant engaged to establish the value of Hunter Water.

In its submission, Hunter Water has argued that it should earn at least a 5% real rate of return on commercial assets, excluding assets funded by customers and government. It believes that this target return can be achieved in the medium term by maintaining current returns on existing assets and ensuring that future investment yields a real return of 7%.

The required rate of return on investments should reflect the opportunity cost of capital, that is the rate of return that could be earned on an alternative investment of similar risk. At present, there is limited scope for competition in the water industry. It can therefore be argued that the risk margin for the water industry is relatively low.

The Tribunal has concluded that it should have regard to the consequences of a 7% return (pre-tax, real) on new investments as part of its consideration of the issues listed in section 15 of the IPART Act.

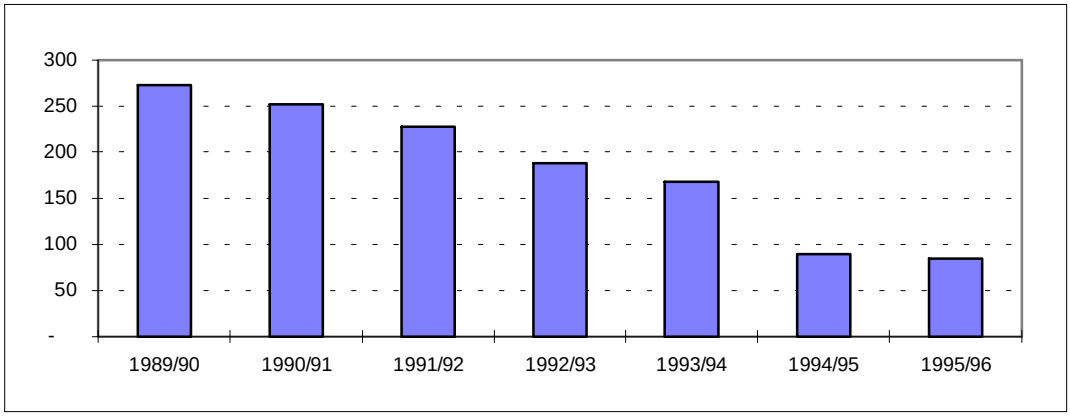
5.3.5 Return on environmental assets

The Tribunal considers that the costs associated with higher standards, including the return on any such investments, should be included within the water agency's cost base. The level of return must be considered in the light of the other objectives of the water agencies including environmental protection and promotion of ecologically sustainable development. The overall return on all assets (including environmental assets) will therefore be considered in the determination process. To manage the impact on customers, it may be desirable to phase in cost increases. The other requirements set out in Section 15 of the Act also need to be considered.

5.3.6 Capital structure

As shown in Figure 5, HWC has reduced substantially its level of debt in recent years:

Figure 5: Real External Debt (1995/96 $m)



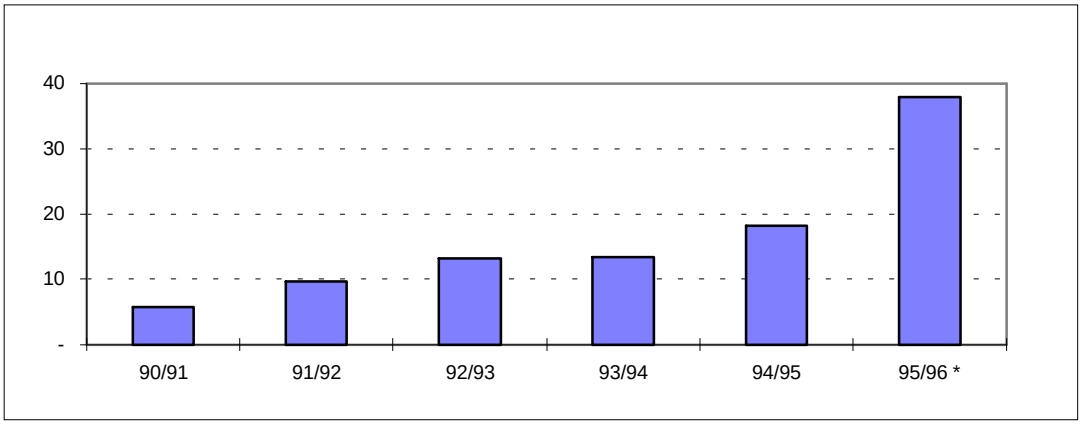
At the same time, Hunter Water continues to build up its cash and investments. A major contributor to the growth in the HWC's cash surpluses has been the environmental improvement charge which will cease in 2008/09. This is not recognised as income in the year it is received but is brought to account over the life of the assets which it finances.

Net debt (debt less investments) is projected to be $3m in 1995/96. Such a low level of debt when compared with a asset base of $1.6bn (valued at written down replacement cost) is exceptional by commercial standards. Whilst the capital structure is mainly a matter for the government and Hunter Water, the Tribunal needs to consider the implications of its determination for the generation of cash and whether this result is appropriate.

5.3.7 Financial distribution to government

The Tribunal is required to have regard to what, in all the circumstances, an appropriate dividend to be paid by Hunter Water to the Government would be. The Tribunal has noted the increasing level in recent years of the total financial distribution from Hunter Water to the Government. The projected increase in financial distribution in 1995/96 is due to a higher payout ratio and higher profits as a consequence of reduced depreciation.

Figure 6: Financial Distribution to Government ($1995/96$m)



Note:
* Projected distribution to be provided in 1995/96

5.3.8 Other financial performance measures

To enable a balanced assessment of Hunter Water's financial performance, the Tribunal has had regard to a number of accounting and cash based measures other than the rate of return. The following comparisons are made between Hunter Water with two large capital intensive private companies and several Government Trading Enterprises.

Table 5: Comparative Financial Performance (%)

Year	*Hunter Water 1995/96*	*Sydney Water 1995/96*	*Wyong Council 1995/96*	*Gosford Council 1995/96*	*Sydney Electricity 1994/95*	*BHP 1994/95*	*AGL 1994/95*
EBIT/Total Assets	2.4	2.2	3.2	3.9	4.7	10.1	10.5
EBIT/Gross Income	*29.3*	*24.3*	*35.4*	*42.4*	*9.1*	*15.8*	*19.7*
EBITD/Gross Income	48.1	29.5	58.0	63.9	18.2	24.8	26.6
(Interest + Dividends + Tax)/Gross Income	*26.9*	*24.3*	*13.5*	*18.3*	*7.6*	*11.4*	*13.7*
Depreciation/ Gross Income	18.8	15.2	22.5	21.6	9.1	8.9	6.9
Capital expenditure /Gross Income	*28.0*	*20.0*	*27.0*	*17.8*	*10.5*	*20.4*	*11.9*

Notes:
1. Hunter Water Corporation's Gross Income excludes proceeds from the environmental levy
2. Figures for water suppliers' Gross Income and Capital Expenditure include capital contributions

The accounting measures are affected by different approaches to asset valuation in the public and private sectors. If HWC's EBIT/Total Assets figure was measured on an historic cost basis then the rate of return would increase to approximately 8%, while the ratio of depreciation to gross income would decline from 18.8% to approximately 12%.

5.3.9 Funding of capital works

In the past five years, Hunter Water's capital program has largely been financed from internal sources, developer contributions and government contributions (for social programs such as the Hunter Sewerage Project). Given the current cash flow position, Hunter Water will be able to fund all of its capital works program from internal sources.

The Tribunal has recently engaged a consultant to undertake capital expenditure audits for the metropolitan water operators, including Hunter Water. The objective of the audit was to assess the reasonableness of the water operator's capital expenditure requirements with the emphasis on the process by which capital expenditure decisions are taken.

The audit found that Hunter Water has a detailed planning and approval process for capital expenditure. However, areas for improvements were identified such as the need for closer liaison between the environmental regulator and the water authorities.

The Tribunal believes that further audits of the capital program itself rather than processes are warranted. The issue will be examined further before the next price review.

5.4 Environmental issues

* *the need to maintain ecologically sustainable development by appropriate pricing policies that take account of all the feasible options available to protect the environment [S15(1)(f)]*
* *considerations of demand management and least cost planning [S15(1)(j)]*

5.4.1 Ecologically sustainable development

Ecologically sustainable development (ESD) is defined in the Report of the World Commission on Environment and Development as development which meets the needs of present generations while not compromising the ability of future generations to also meet their needs.

ESD is described in Part 3 of the Protection of the Environment Administration Act 1991 as requiring *the effective integration of economic and environmental considerations* and the implementation of *improved valuation and pricing of environmental resources.* In line with this objective the Tribunal has introduced a number of initiatives. The Tribunal has also requested guidance from the NSW Environmental Protection Authority (EPA) as to how it may practically incorporate ESD within its pricing determinations[11].

[11] IPART, Transcript of Public Hearing, Sydney Water Corporation, Hearing Volume Number 1, April 19, 1996.

In its submission to the Tribunal on the pricing proposals of Hunter Water Corporation the EPA stated[12]:

> "The EPA supports the inclusion of such a (specific environmental externality) component in the prices for water and related services supplied by water authorities."

If Hunter Water's water and sewerage operations satisfy current and known future environmental standards, then the Tribunal believes that this condition has been satisfied by ensuring that Hunter Water's prices cover the cost of services (including where appropriate a rate of return). However, the EPA has also argued for inclusion of a component in the usage price for water, above what is already in place, to account for environmental damage resulting from the use of water.

The EPA contends that as a general principle, ecologically sustainable development should become part of the business processes in place within an organisation. For example, environmental issues need to be considered before any capital works decision is made. In general,

> "It is a matter of having a certain culture within the organisation and it is a matter of having certain processes that do try to reinforce that culture and to make sure that environmental considerations become a part of every single decision or the decision making process that is employed within the organisation."[13]

The Healthy Rivers Commission was established in January 1996[14] to conduct public inquiries into the condition of the State's key river catchments and make recommendations on water quality objectives for these catchments. The Commission is required to make recommendations to the Government on objectives for water quality, river flows and other goals to achieve ecologically sustainable development in a realistic time frame. The Commission's recommendations will affect future standards and related pricing determinations. The outcome of the Williams River inquiry may also have implications for the conditions under which Hunter Water can extract raw water.

5.4.2 Hunter Water's Environment Management Plan

Hunter Water has developed an Environmental Management System (EMS) which sets out the processes for environmental planning, due diligence procedures, performance monitoring and auditing. The EMS was implemented in February 1995 and has been reviewed to assess its adequacy against the relevant draft international standards. Hunter Water's compliance with the EMS is assessed as part of the annual operational audit. Hunter Water prepares an Annual Environment Report.

The Tribunal has considered the Annual Environment Report and the findings of the Operational Audit for 1994 and the six months to June 1995. These findings suggest that Hunter Water has complied with the requirements of the Operating Licence. The Tribunal will continue to consult with the Licence Regulator[15] regarding Hunter Water's environmental performance.

---

12 Environmental Protection Authority, *Determination of Maximum Prices for the Hunter Water Corporation from July 1996*, 25 March 1996.

13 Transcript of IPART, Op.cit. p55.

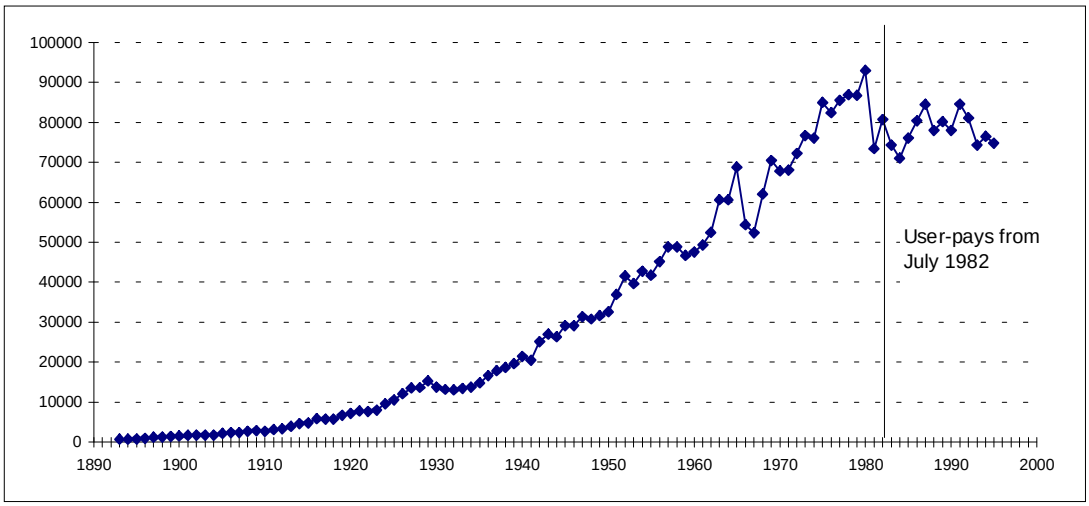
14 Healthy Rivers Commission, *Williams River Inquiry: Issues Paper*, March 1996.

15 A Licence Regulator has recently been appointed to review Hunter Water's performance as specified in its Operating Licence.

5.4.3 Demand management

The Hunter community has become increasingly concerned to save water since the introduction of charges for use in the early 1980s. Water supply since 1892 is shown in Figure 7.

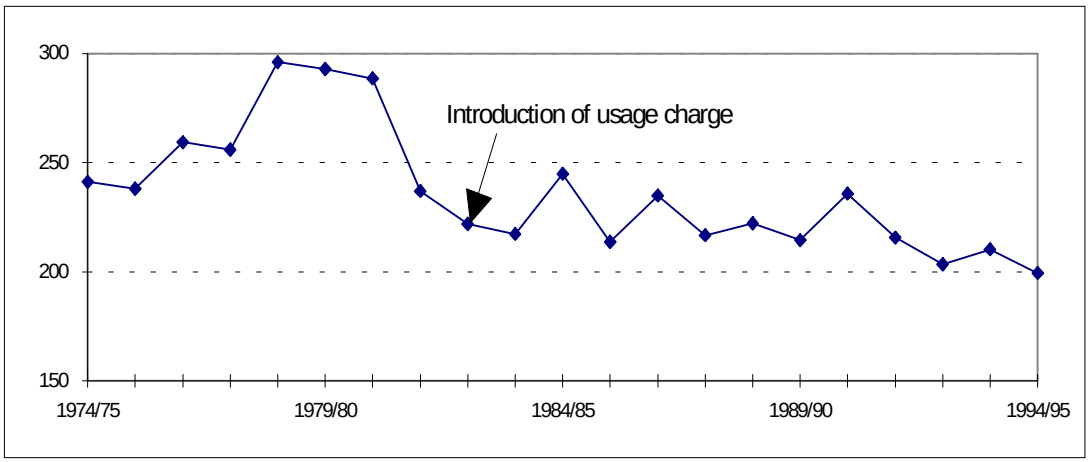
Figure 7: Total water supply from sources (1893 to date)



Source: Hunter Water

Average domestic consumption per property is currently 28% less than it was in 1978/79 when usage levels peaked at 296 kl per property. The trend can be seen in figure 8.

Figure 8: Average Domestic Use (kilolitre per property)



Apart from pricing measures, Hunter Water considers that the greatest impact on overall consumption will come from reuse of effluent. Priority will be given to the supply of effluent to large industrial customers. Reuse does not only reduce the demand for potable water but can avoid some of the problems that are associated with the disposal of wastewater.

The main uses for effluent in the Hunter region are:

- industrial uses such as power generation, coal washing and dust suppression (70%)
- golf courses (22%)
- other, including agricultural use (8%).

The major reuse initiatives in 1995 included:

- commencement of supply of effluent to Eraring Power station. This project will reduce demand for potable water by four million litres a day
- recycling of effluent for use in constructing the extension of the F3 freeway
- signing of an agreement with BHP for the supply of effluent to the Newcastle steelworks starting in January 1998.

The Tribunal acknowledges Hunter Water's achievements in promoting the reuse of water. At present, 10% of the inflow into wastewater treatment plants during periods of dry weather is recycled. Hunter Water aims to increase reuse to 15% of dry weather flows by 2000. This is ten times the current national average.

As a result of the combined effects of effluent reuse and reduced domestic demand, Hunter Water expects that water supply augmentation can be deferred by up to five years. The next major storage upgrade (Grahamstown Dam) will not be required until 2011.

An important issue is the relative weight that should be placed on price and non-price measures to achieve demand management. A high usage price for water encourages customers to use less but may give water agencies an incentive to sell more to the extent that the agency is governed by commercial incentives and the usage price exceeds the short run marginal costs of water. Many non-price demand management measures will be unattractive to an agency in these circumstances. An alternative would be less reliance on price and greater reliance on non-price measures (such as rebates for customers who purchase water efficient appliances). This issue will require further consideration in future price determinations.

During 1995 Hunter Water participated in a demand management forum[16] which was organised by the Tribunal to 'develop a framework for evaluating the merits of specific demand management measures'. Hunter Water is yet to report which non-price demand management measures it considers to be justified in terms of the framework. The Tribunal will continue to monitor progress.

5.5 Standards

* *standards of quality, reliability and safety of the services concerned [S15(1)(l)]*

5.5.1 Standards met by Hunter Water Corporation

Hunter Water must ensure that it complies with the standards for water quality, continuity, pressure and sewage surcharges that are set out in the Operating Licence. It is also required to comply with all effluent discharge licence conditions and pollution reduction targets of EPA.

---

[16] IPART, *Water Demand Management, A Framework for Option Assessment, Water Demand Management Forum*, March 1996.

Hunter Water's compliance with the licence conditions is subject to an annual audit. The Tribunal notes that the public has access to a board meeting each month at which reports are provided on: the extent to which water and wastewater operations meet the standards in the operating licence; water quality in the Williams River; and the amount of water in storage.

The Tribunal has to consider whether Hunter Water has fully met its obligations for quality, reliability and safety. The Tribunal has considered the findings and conclusions of the Operational Audit Report for 1994 and for the six months to June 1995. The Auditor concluded:

- full compliance with the requirements for water quality, water discontinuity and water pressure had occurred
- there was minor non-compliance with some aspects of the water quality discharge licence conditions
- conditions regarding sewer surcharges had not been complied with.

HWC is continuing to manage the problem of sewer surcharges, including through preventative maintenance. A commitment was made in 1995 to increase expenditure on this program.

The Tribunal will continue to consult the Licence Regulator regarding Hunter Water's performance in terms of its operating licence.

New standards and targets may be set for the following items during the price control period:

- surcharges and discharges from the sewerage transportation system
- pollution reduction plans for some of Hunter Water's sewerage treatment plant.

If this occurs, the Tribunal may need to consider the implications for prices.

6 BASIS OF THE TRIBUNAL'S DETERMINATION

6.1 The core income level

The Tribunal has considered revenues from the provision of water, sewerage and drainage services in determining Hunter Water's revenue requirement. Developer charges and charges in relation to the Hunter Sewerage Project (environmental improvement charge and sewer service access charge) are not reported as operating income[17]. They are, however, significant components of Hunter Water's revenue base.

Although the environmental improvement charge is an important contributor to Hunter Water's cash generation, this charge is not reported as operating income, nor is it available for financial distributions to the Government. However, the assets that comprise Hunter Water's backlog sewerage program are depreciated through the profit and loss account and have been included in HWC's asset base for calculating the rate of return.

[17] Incomes from these charges are treated as capital income. They are amortised and reported as deferred income rather than tariff income in the profit and loss statement.

6.1.1 Assessment of alternative pricing scenarios

The Tribunal has reviewed the implications of the prices that were proposed by Hunter Water and also implications of lower charges than proposed by the Corporation.

The following scenarios were considered:

- Scenario 1: CPI-1% as proposed by Hunter Water to 2000/01; no change to the environmental improvement charge; a phased increase in revenue from developer charges
- Scenario 2: CPI-3% as proposed by Hunter Water to 2000/01; no change to the environmental improvement charge; a phased increase in revenue from developer charges
- Scenario 3: CPI-2% to 2000/01; 50% reduction in environmental improvement charge; a phased increase in revenue from developer charges
- Scenario 4: As for scenario 3 but with CPI-3%.

In all the scenarios, it is assumed that revenue will increase by CPI-1% a year from 2001. It is also assumed that Hunter Water will pay $9m to Public Works during the price control period. This is the government's share of developer charges (arising from the Hunter Sewerage Project) that will be collected in future years.

Hunter Water's operating profits and net debt position under each of the scenarios are shown in Figure 9(a) and 9(b):

Figure 9 (a) Operating Profit Before Tax

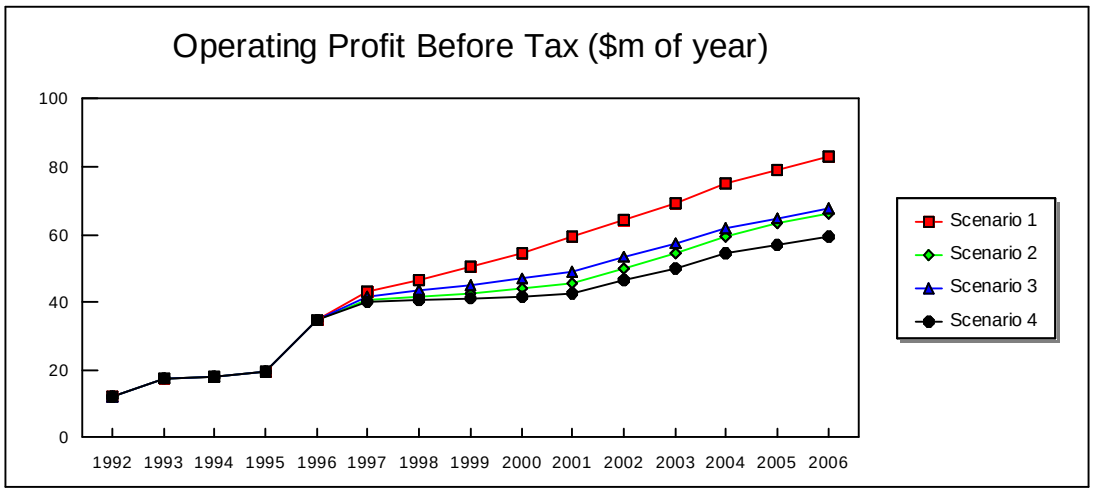
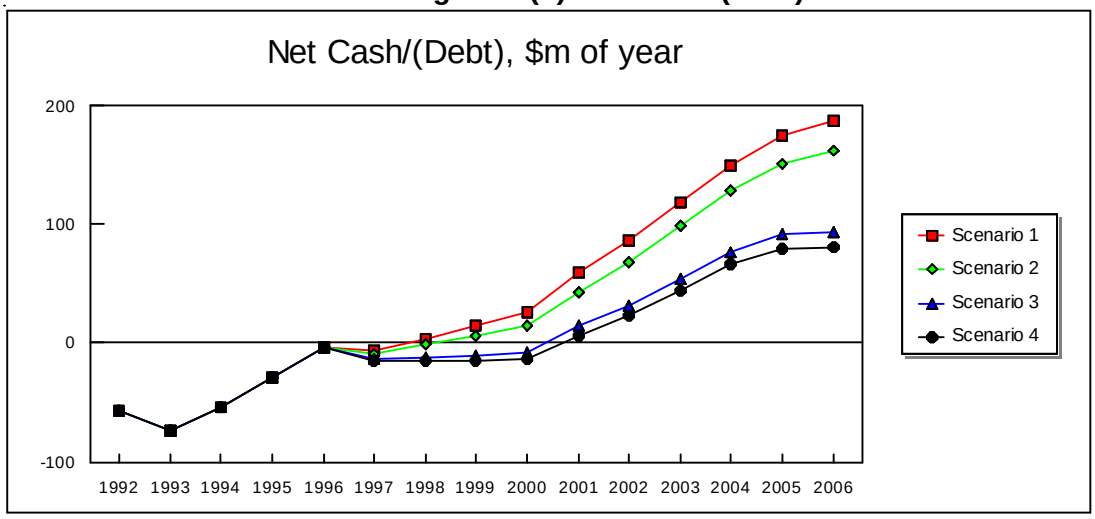


Figure 9 (b): Net Cash/(Debt)



Note: net cash / (debt) = debt less cash and investments

Under Hunter Water's CPI-1% proposal, there would be an accelerated growth in profit. But the growth in profits is less under Hunter Water's CPI-3% proposal. Under HWC's two proposals, there would be a rapid build-up in cash over the price control period.

Projected profit before tax and financial distributions to governments are shown *in real terms* in Figure 10.

Figure 10 (a): Real Profit Before Tax

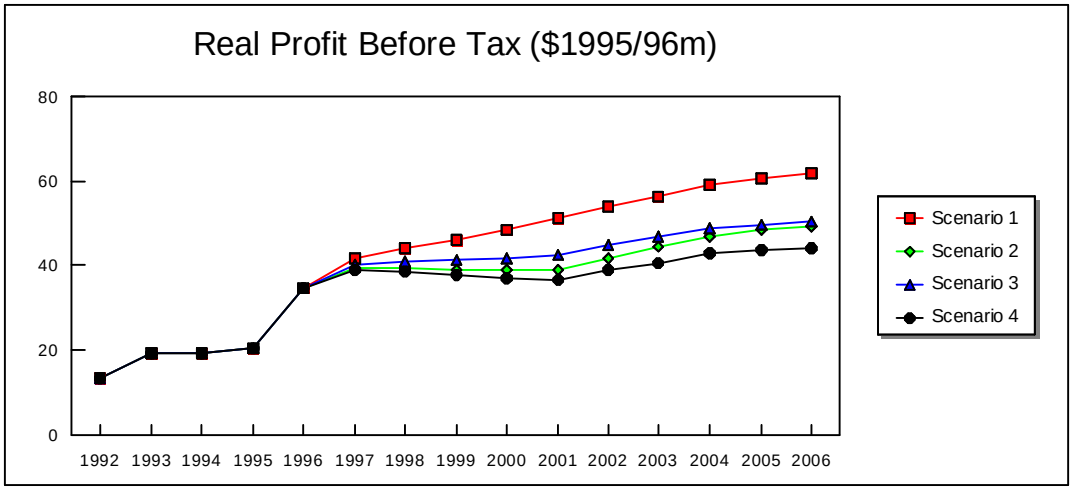
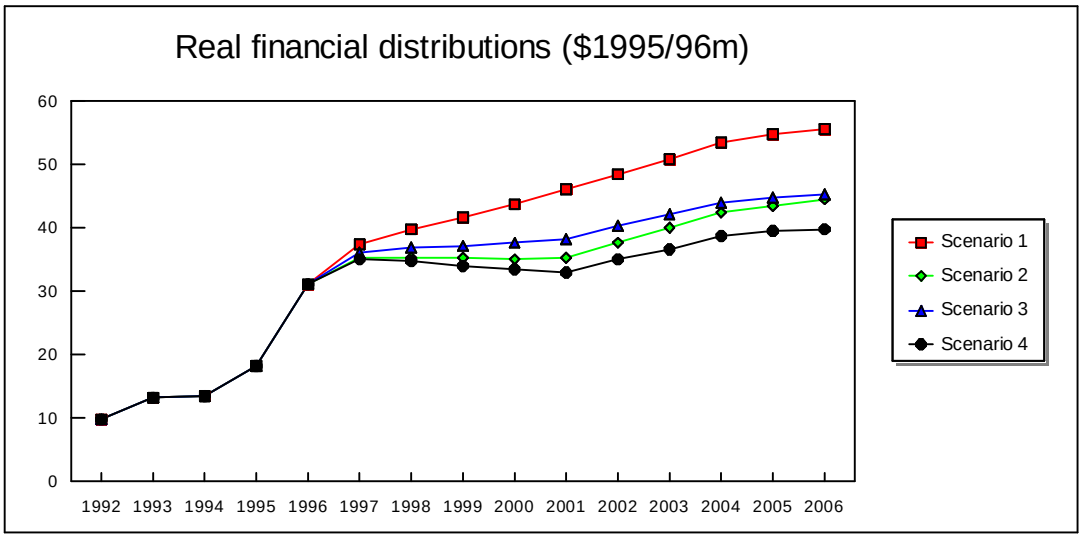


Figure 10(b): Real Financial Distributions



Under scenario 1 (CPI-1%), there would be a rapid increase in both real profits and real financial distributions. Under scenarios 2 and 4, real financial distributions would fall below the level in 1996/97 by the end of the price control period. Under scenario 3, there would be an improvement in both profits and financial distributions to government in 1996/97. These would then remain at 1996/97 level in real terms over the remaining price control period. The net debt position would be approximately $10m in 1999/2000.

The Tribunal has considered the interests of both customers and owners; and the return on the regulatory asset base. On balance, the Tribunal has concluded that scenario 3, which provides price reduction to customers without compromising the rate of return outcomes for Hunter Water, is the best available option.

6.1.2 Revenue path and X factor

A price cap of CPI-2% will therefore apply over the four-year price control period from 1996/97 to 1999/2000. In addition, the Environmental Improvement Charge will fall by

approximately 50% in 1996/97 and will remain at that level during the rest of the price control period.

The projected core income level and reductions in average revenue per property (the X factor under CPI +/- X regulation) are shown in Table 6.

Table 6: Revenue path and X factor ($m)

	1995/96 (forecast)	1996/97	1997/98	1998/99	1999/2000
Excluding environmental improvement charges					
Real 1995/96 dollars (1)	110	109	109	108	107
Dollars of year	110	115	118	120	123
X factor (real reduction in average revenue per property)	-6%	-2%	-2%	-2%	-2%
Including environmental improvement charges					
Real 1995/96 dollars (1)	122	115	114	113	112
Dollars of year	122	121	124	126	129
X factor (real reduction in average revenue per property)	-6%	-6.8%	-2.1%	-2.1%	-2.1%

Note:

(1) Real income projections are based on retrospective CPI to the year ending in each March quarter compared with the previous year. The inflation used is: year ending March 1996 - 5.3%; year ending March 1997 to 2000 - 3% a year.

(2) Projected income includes water, sewerage and drainage charges and miscellaneous customer service charges.

The four-year cumulative X factor (revenue including environmental improvement charges) will be -13.1% over the price control period or an average of -3.3% a year. The reduction in revenue is possible because of the success of Hunter Water in reducing its operating costs.

6.1.3 Expected outputs and deliverables

This determination is based on the expectation that, over the four year price control period, Hunter Water will:

- maintain existing standards of services as specified under its Operating Licence, including in regard to sewer surcharges
- continue to meet higher drinking water quality standards (the 1995 draft NHMRC guidelines)
- undertake the pollution reduction programs that are specified in the Memorandum of Understanding between Hunter Water and the EPA.

6.2 Expenditure Projections

The Tribunal believes that the determination provides sufficient revenue to finance the operating and capital expenditure that is required to achieve the above outcomes and in addition provide an appropriate return to the government.

6.2.1 Operating expenditure

Based on the financial information provided by Hunter Water:

- Hunter Water will be able to provide its existing levels of service at lower costs. There will be a reduction in operating costs for existing services of 10% in real terms from 1996/97 to 1999/2000.
- Obligations to achieve pollution reduction targets will involve increases in operating cost above the level that would otherwise have occurred. These increases are not considered to be significant.
- Overall operating costs will decrease in real terms.

6.2.2 Capital expenditure

Capital expenditure of $172m (or an average of $43m a year) over the four years from 1996/97 to 1999/2000 has been allowed for in the determination. It will be spent as shown in Table 7:

Table 7: Capital expenditure projections by major business drivers (1995/96 $m)

	1995/96	1996/97	1997/98	1998/99	1999/2000	4 year total
Statutory requirements	1	8	5	0	0	13
Operational standards	3	23	10	22	22	77
Hunter Sewerage Project	13	9	12	3	0	23
Business requirement	12	8	14	16	20	59
Total	29	48	40	41	42	172

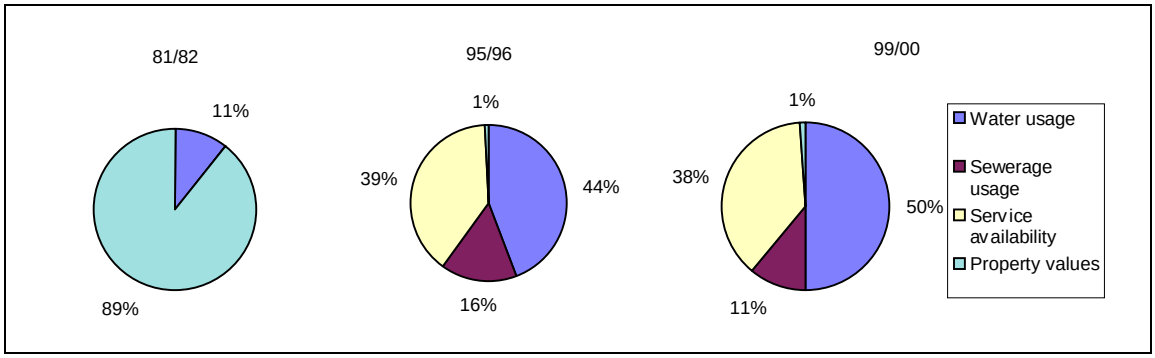
Note:
1. Statutory requirements include dams safety and EPA standards
2. Operational standards include sewage treatment, sewage transportation, water quality, water discontinuity and water pressure
3. Business requirements include various capital expenditure items including land, buildings, computers, fleet, growth, metering etc.
4. Excludes free assets and the government share of the Hunter Sewerage Project.

Future capital expenditure will be dominated by investments to meet operational standards. Expenditure to meet requirements for the sewer overflows may have an effect in the later years of the price control period.

6.3 Revenue projection

As a result of this determination, the share of revenue from water and sewerage usage charges will increase to 61% in 1999/2000. Water usage charges will become more important and sewerage usage charges (especially for residential customers) will become less significant. The shares of property tax, service charges and usage revenue in 1981/82, 1995/96 and 1999/2000 are shown in Figure 11.

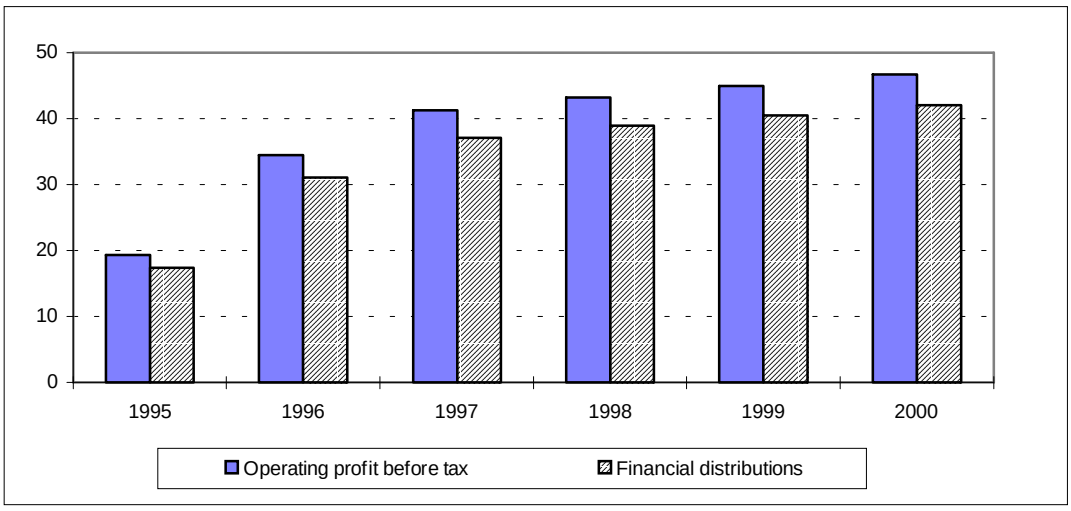
Figure 11: Components of Revenue



6.4 Financial performance

The Tribunal's determination is considered to be financially sustainable. The operating profits and financial distributions which are projected over the next four years are shown below:

Figure 12: Financial Projections ($m of year)



Note: Financial distributions include the amounts provided for tax equivalents and for dividends.

Profitability will improve over the price control period. Hunter Water will be able to increase financial distributions to its shareholders (i.e. the government) through taxation and dividends over this period.

The return (EBIT, excluding investment income) on the regulatory asset base will increase from 5.3% in 1995/96 to 6% in 1996/97, and will be maintained at the 1996/97 level over the remaining price control period. If EBITD is used as a measure of returns, the return will increase from around 9.2% in 1995/96 to 9.8% in 1999/2000. This is broadly consistent with Hunter Water earning its targeted 7% on new investments.

6.5 Hunter Sewerage Project

In a number of areas on the fringe of the area served by Hunter Water, housing development were carried out without sewer services being provided. Residents therefore installed septic tanks or pump-out facilities and these were not always operating

satisfactorily. Further, some development occurred adjacent to sensitive waterways, in particular Port Stephens and Lake Macquarie. These two waterways were polluted through seepage from septic systems.

The Hunter Sewerage Project was initiated by the NSW Government, relevant local government councils and Hunter Water in the late 1980's to address the environmental problems arising from sewerage backlog.

The NSW Government's Capital Works Committee noted the important environmental benefits that would flow from these projects. It was decided that the cost of the project would be shared between owners of vacant land in the relevant area, the Hunter community generally and the NSW Government.

The following funding arrangements were adopted:

- Fifty percent of the capital costs were to be funded by the Government as a community service obligation;
- Fifty percent of the capital costs were to be funded by Hunter Water.

Hunter Water's share of the capital cost was to be recovered through the following:

- A $35 per annum "Environmental Improvement Charge" (EIC) was decided on in 1989. The EIC would be levied from 1989 to 2009 on all properties served by Hunter Water. Following changes to the scope of the project, the EIC was increased to $69 per annum in 1990. This charge will eventually recover 25% of total project costs.
- A $2,500 sewer service access charge (SSAC) was decided for vacant land that is serviced by the scheme. This charge is levied only on land that was vacant as at February 1989. The SSAC is similar to the developer charges that are levied for other developments. Owners of existing properties within the backlog areas were exempted.

These charges have increased since 1991 in line with inflation. The charges for 1995/96 are $78 per annum for EIC and $3,059 for SSAC.

As part of this determination, the Tribunal has examined the level of cost recovery for the Hunter Sewerage Project.

6.5.1 Review of cost recovery

The EIC and the SSAC were originally set so that, after taking account of government subsidies, the present value of revenues from the project equalled the present value of costs.

Currently the HSP is about 85% complete and about $250m has been spent on construction of the relevant assets.

There are a number of developments since 1989 which indicate that a review of the charges is now desirable:

- capital expenditure incurred up to 1996 is 10% below budget as a result of the efficiency achieved;
- developer charges have been received at a faster rate than originally expected;
- connections to the system have been occurred at a faster rate than originally projected; revenue has therefore been greater than projected.

When the initial funding analysis was carried out, it was thought that the Hunter Sewerage Project was primarily backlog in nature and growth expectations (new properties) were limited. Only a low level of cash was expected to be generated from developer charges. However development has proceeded more rapidly than was originally expected. Hunter Water levies developer charges on new development within the HSP area. These developer charges when collected are applied to offset the capital costs of the project. A lump-sum of $5.95m was paid to the Government in 1995 for its share of the developer charges received to-date.

As a result of these developments, it is now estimated that (using a 7% discount rate) the net present value of the project will be around $15m.

Based on the results of the revised benefit cost analysis, the Tribunal has determined reduced charges for both the Environmental Improvement Charge and the Hunter Sewer Service Access Charge. These are set out below. In considering the relative size of reduction for each of these two charges, the Tribunal has considered the interests both of all property owners (who pay the environmental Improvement charge) and those who also pay the Sewer Service Access Charge.

6.5.2 Environmental Improvement Charge

The existing charge of $78 per annum will decrease to $40 per annum and then remain constant in nominal terms. The level of this charge will be considered in the next pricing review by which time construction of the project should be completed.

6.5.3 Hunter Sewer Service Access Charge

The Tribunal received submissions from individual properties owners, the Hunter Sewer Service Access Charge Protest Group and the Rathmines Group. These groups were concerned about the Hunter Sewer Service Access Charge - a specific charge which applies to newly constructed properties in the Hunter Fringe Area.

Hunter Water argued that the original intention of the project was:

- to service existing houses in backlog areas
- to recover from private owners of vacant land part of the cost of providing a sewer service in HSP areas in recognition that these landowners (who were not part of the initial backlog) would otherwise obtain an excessive windfall benefit from the HSP.

All households in HSP areas, including those who are liable for the SSAC, benefit from substantial subsidies from the NSW taxpayers (who provide 50% of the project funding), and subsidies (through the EIC) from all of the Corporation's sewerage customers.

Owners of existing properties (or owners of previously vacant land who built their homes prior to February 1989) would have paid for an alternative septic systems *and* the additional plumbing costs to connect to the sewer. Without the SSAC, those people building in HSP areas (after February 1989) would have been provided with a sewerage service at no upfront cost.

On balance, the Tribunal considers that the SSAC should be maintained. However, some reduction in the SSAC is warranted given the capital savings achieved to-date. The SSAC will decrease to $2,780 from 1 July 1996 and will remain at the reduced level in nominal

terms until 1999/2000. This translates into a $441 reduction - being the difference between the reduced charge of $2,780 and the indexed charge of $3,221 which would have otherwise been levied in 1996/97. A refund of $441 plus interest accrued at 7% (real) will be paid to owners who have paid the SSAC. The accrued interest will be calculated using a real interest rate of 7% between the end of the year of payment and 1 July 1996. The HWC has developed a policy to identify customers who are eligible for the refund.

The Tribunal notes that there is a specific group of customers who may have been particularly adversely affected. These are home owners who built after February 1989 but before the sewer was actually made available to their area. As a result, this group has had to pay for the capital costs for an alternative sewerage system at the time they built their homes *and* pay the access charge at the time they connect to the sewer.

The liability to pay the SSAC (should connection occur) remains with ownership of the land. Hunter Water should be careful to continue to identify the affected properties and to ensure that purchasers are fully informed about this liability at the time the property is purchased.

6.6 Future water and sewerage charges

At present, the main elements of Hunter Water's water prices include:

- *water service charges* which are based on size of the water main
- a two-step *water usage charge* - a charge of 80.4 cents per kilolitre for consumption up to 1000kl and a discounted rate of 74.2 cents for consumption above 1000kl
- *sewerage service charges* which vary according to the water meter size and are adjusted by a discharge factor. For households, a uniform discharge factor of 50% is assumed
- *sewerage usage charges* which are higher for residential customers (83.4 c/kl) than non-residential customers (37 c/kl). Sewerage usage charges are applied to measured water consumption after adjustment by the discharge factor
- *trade waste charges* which are applied to those non-residential properties which discharge conventional substances at levels greater than domestic strength.

Hunter Water has put forward two proposals for water and sewerage charges under CPI-1% and CPI-3% respectively. In both pricing proposals, Hunter Water proposes to reduce the price differential between the residential and the non-residential sewerage usage charges. As noted, however, the Tribunal has determined that water and sewerage charges should be subject to a cap of CPI-2% a year.

There are a number of factors that should be considered in deciding how to apply the CPI-2% price cap to the different components of the charging structure, including:

- demand management signals
- the marginal cost for water services
- returns on water and sewerage businesses
- impacts on residential and non-residential customers.

6.6.1 Marginal cost study

Travers Morgan estimated Hunter Water's marginal costs in 1992 using a technique known as the Turvey method. The Tribunal updated these estimates in 1996 using a similar method. Hunter Water has also made its own estimates of marginal costs.

Table 8: Estimated Marginal Costs

	Network access ($/property/year)	Water usage ($/kl)	Wastewater discharge ($/kl)
1992 Travers Morgan study	>230	1.30	>0.22 (ocean) or >0.64 (inland)
1996 Tribunal's update	>156	0.77	>0.23 (ocean) or >0.53 (inland
HWC's own estimate	180	0.85	between 0.36 and 0.40

As shown in Table 8, the recent estimates of marginal cost for water and wastewater are lower than those in the 1992 study. The lower marginal cost estimated for water in 1996 can be explained by the deferral of the next major water augmentation due to Hunter Water's successful program to encourage industry to reuse water.

6.6.2 Usage charges

In the report of its "Inquiry into Water and Related Services" and in subsequent determinations, the Tribunal has identified a number of difficulties in applying sewerage usage charges for *residential* customers. Hunter Water, in its 1996 submission, stated that:

> "Because of the relationship between imputed sewer use and actual water use, sewer-use charges have been criticised frequently as being little more than an additional, but poorly understood water-use charge. "

Because of these difficulties, the Tribunal has decided to reduce sewerage usage charges for residential customers but to increase sewerage service charges for these customers. However, to maintain demand management signals to residential customers, the phased reduction of the residential sewerage usage charges will be offset by some increases in water usage charges.

Table 9: Water and Sewerage Usage Charge c/kl

Tribunal determination	95/96 Current	96/97	97/98	98/99	99/2000
			in 1996/97 dollars		
Water usage charge					
< 1000 kl	80.4	85.7	86.8	88.1	88.8
> 1000 kl	74.2	78.9	79.9	81.1	81.7
Sewerage usage charge(1)					
- residential	83.4	74.6	63.5	53.9	45.8
- non-residential	37.0	39.0	39.0	39.0	39.0

Note:

1. Sewerage usage charges are adjusted by the appropriate discharge factor before application to customers' accounts. The discharge factor is assumed to be 50% for residential customers.

The price differential between residential and non-residential sewerage usage charges will be greatly reduced from 46 cents/kl in 1995/96 to 7 cents/kl by 2000. The next pricing review will consider whether the remaining differential should continue.

The environmental groups proposed that there should be a single price for water and that there should be not be a discount for higher water users. The Tribunal has not been able to agree to this proposal at this stage because it wishes to avoid adverse impacts on non-residential customers with higher water use (who will not benefit from the reduction in residential sewerage usage charge). The Tribunal will further consider this issue in the next pricing review.

The combined usage price for water and sewerage is shown in Table 10:

Table 10: Combined Water and Sewerage Usage Charges for residential customers (cents/kl)

	95/96	96/97	97/98	98/99	99/2000
Tribunal determination					
In real 1995/96 dollars	122	117	113	109	106
In nominal dollars (1)	122	123	122	122	122
HWC proposal (in real 1995/96 dollars)					
CPI-1%	122	119	116	115	113
CPI-3%	122	117	112	109	101

Note: (1) Inflation is assumed to be 5.3% in 1995/96 and 3% p.a. from 1996/97

The effective water price for residential customers with water and sewerage services will be maintained at current levels in nominal terms until 2000. The greater emphasis on water usage charges will, however, send a stronger and clearer signal to customers than the one they receive at present.

6.6.3 Service charges

Hunter Water has proposed that water and sewer service charges should be adjusted to:

- maintain the revenue share and return of both the water and the sewerage businesses
- avoid a cross subsidy from the water business to the sewerage business.

The service charges under the CPI-2% price cap will therefore be as follows:

Table 11: Service Charges

Tribunal determination	95/96 Current	96/97	97/98	98/99	99/2000
			in 1996/97 dollars		
Water service charge	73.5	63.6	49.5	35.7	23.7
Sewerage service charge (1)	312.6	345.0	362.1	377.4	390.0

Note:

1. Sewerage service charges are adjusted by the appropriate discharge factor before application to customers' accounts. The discharge factor is assumed to be 50% for residential customers.

6.6.4 Trade waste charges

In 1994, the HWC completed a review of trade waste charges based on the strength and content of the wastes that were discharged. New charges were proposed for 11 sewage treatment plants (at which the trade wastes were treated). The Tribunal determined a three year phase-in of the new trade waste charges for these treatment plant catchments from 1994/95 to ease the impacts for non-residential customers.

To complete the schedule of trade waste charges for all treatment plants, the HWC seeks to add the remaining 11 treatment catchments although there are no trade waste permits issued in these catchments. HWC also indicated that it will seek revision of some of these charges from 1997/98 to cover additional costs in some catchments.

The Tribunal has accepted Hunter Water's proposal for trade waste charges for the new catchments. Hunter Water will continue to phase in the new charges during 1996/97. The charges will then be adjusted by the CPI-2% cap. Any proposal for revised trade waste charges will be considered in the mid-term review.

6.6.5 Charging for effluent

At present, Hunter Water has entered into agreements with two large customers (Eraring Power Station and BHP) for the supply of effluent (i.e. supply of wastewater after treatment). For each agreement, the terms of the contracts are negotiated based on the costs involved by both parties in the project.

6.6.6 Sewer mining

The Tribunal intends to introduce a new charge for "sewer mining" (i.e. extraction of wastewater prior to any treatment). This will require Tribunal declaration of the relevant service and resolution of issues such as access to Hunter Water's sewer mains. The initial price will be set at "zero" or "at cost" until reuse reaches 20% of total water use.

6.7 Developer charges

In the June 1995 price determination for Hunter Water[18], the Tribunal noted that it had not been able to complete its investigations into developer charges for the provision or upgrading of water supply and sewerage services. The outstanding issues were considered by an Industry Forum consisting of representatives of the Tribunal's secretariat, the water agencies, Government agencies, environment groups and the housing development industry. The Forum was to facilitate discussion between developers and water suppliers, enable them to reach agreement on a number of specific issues, and advise the Tribunal of significant outstanding issues.

Under the Independent Pricing and Regulatory Tribunal Act 1992, the Tribunal may set maximum prices or may determine a methodology for setting maximum prices. The Tribunal has chosen to determine a methodology for fixing the maximum prices for developer charges under Section 14A of the Act.

---

[18] Government Pricing Tribunal, *Gosford City Council Prices of Water, Sewerage and Drainage Services from 1 July 1995*, June 1995.

The reasons for this decision have been outlined previously[19] and appear below.

> "Developer charges are levied to recover water infrastructure costs incurred to service a large variety of developments. Individual price determination by the Tribunal could not cover the required diversity of developer charges. If agencies had to return to the Tribunal each time they received an application for an assessment of developer charges this would cause unworkable delays. The Tribunal would have to devote considerable time and resources to mechanically calculating charges, and would be completing work much better done by the agencies."
>
> "The Tribunal has stressed that developer charges must be calculated by a consistent and transparent methodology and recover efficient costs. However, it is impractical and inefficient to have the Tribunal do the great number of actual calculations and updates required. Developers include developer charges in their planning and investment decisions, they need a rapid response when applying for an assessment of charges. The NPV methodology will ensure agencies regulated by the Tribunal recover only the efficient costs of water and sewerage works, while allowing the actual calculations to be completed by the agencies in-house. The methodology will be applied in a transparent manner which can be tested by developers and monitored by the Tribunal."

The HWC has, from 1992, used a net present value approach to calculate developer charges. However, the Tribunal has concerns about two aspects of HWC's approach:

1. the relatively high discount rate used by Hunter Water
2. Hunter Water has not allowed for the time value of money in calculating capital costs in relation to existing infrastructure.

Under the Tribunal's Guidelines for developer charges, both these problems will be overcome.

Consistent with the determination for Sydney Water, the parameters determined by the Tribunal for Hunter Water are:

- a three percent (3%) real discount rate on existing assets
- a nine percent (9 per cent) real discount rate on future assets
- a forecast horizon for expected net revenue (30 years).

These three parameters, which have been determined by the Tribunal, will be subject to review as part of the next price determination.

Table 12: Indicative examples of developer charges under existing approach and the Guidelines

	Current	Tribunal's Guidelines	% Increase
Warners Bay	2,953	5,101	73%
Rutherford	1,423	2,147	51%
Minmi	1,995	3,260	63%
Anna Bay [1]	7,673	8,898	16%
Medowie [1]	7,181	7,353	2%

Note: 1. These are new developments which mainly rely on new infrastructure.

Hunter Water estimates that increase in developer charges will vary depending on the location of the development.

---

[19] Government Pricing Tribunal, *Sydney Water Corporation, Prices of Developer Charges for Water, Sewerage and Drainage Services*, December 1995, p3.

To ease the transition to the method for calculating developer charges, the Tribunal has determined that the new developer charges will be phased in over the four years from 1 July 1996. The increase in each of the four years will be 25% of the overall increase (in dollar terms) in the charges (i.e. the difference between developer charges calculated under Hunter Water's existing method and the Tribunal's Guidelines).

The new methodology applies from the date of this report for all new developments or stages of developments unless a compliance certificate has been issued by the Corporation.

6.8 Quality enhancement, environmental standards and pricing

In its "Inquiry into Water and Related Services" in 1993, the Tribunal was concerned about the extent of pressures then existing for increased water bills. The Tribunal recommended that the setting of environmental objectives should include a sub-process to ensure that community is well-informed about the options, the costs and benefits of each option, and the implications for bills. Improvements in licence conditions should be subject to economic evaluation.

At present, two types of standards are set: ambient environmental objectives (water quality and river flow objectives) consistent with the broad direction of the National Water Quality Management Strategy; and EPA licence conditions. The NSW government has made progress towards setting water quality and river flow objectives. This is being done in two stages:

- Stage 1 will produce interim objectives based on community preferences, current scientific knowledge and a broad economic analysis.
- Stage 2 involves an independent public inquiry for priority catchments by the Healthy Rivers Commission. The first inquiry into the Williams River catchment began in March 1995.

The EPA also argued that decisions to upgrade licence conditions have regard to formal or informal economic analysis. The Tribunal is encouraged by the progress which has already taken place. It believes, even so, that the relationship between the process for setting water quality objectives and that for setting licence conditions require careful attention to ensure that the views of customers are adequately considered especially in deciding how rapidly enhanced licence conditions are to be phased in by the water agencies. The Tribunal recommends that the government further consider this issue.

The Tribunal anticipates that the standard-setting process will be further developed and that this will reduce the uncertainty facing the water agencies. In the meantime, the Tribunal will make pricing decisions on the basis of information available to it.

As discussed earlier, the Tribunal accepts that the costs associated with higher standards, including the return on any such investments, should be included in Hunter Water's cost base for purpose of price determination. However, prices should include only the efficient costs of meeting environmental standards. Moreover, the Tribunal is unable to guarantee that a commercial rate of return will always be earned on investments by Hunter Water. Business that operate in competitive markets do not have the benefits of such guarantees.

6.9 Demand management

This determination will support Hunter Water's demand management objectives. The usage composition of the average residential water bill will increase from 46% in 1995/96 to 48% in 1999/2000.

As noted earlier, the Tribunal considers that the relative importance to be placed on price and non-price measures to achieve demand management requires further consideration by Hunter Water over the price control period.

The Tribunal requests Hunter Water to review progress in applying the water demand management framework to the assessment of options for non-price demand management. Hunter Water should report back to the Tribunal by 30 November 1996.

6.10 Customer Impacts

6.10.1 Residential impacts

As a result of the price changes in this determination, bills for residential customers will fall in real terms in each of the next four years. The major reduction in bills will occur in 1996/97 as a result of the reduced environmental improvement charge.

The water and sewerage bill for the "average" household consuming 215 kl a year will decrease by $30 in 1996/97. The reductions in residential customers' bills are shown in Table 13.

Table 13: Impacts on Residential Customers in 1996/97 ($ of year)

Consumption kl per annum	1995/96 $	1996/97 $	Decrease Per annum $	Decrease %
Water and sewerage customers				
100	429.9	399.1	-30.8	-7.2%
215	570.3	540.6	-29.8	-5.2%
300	674.1	645.1	-29.0	-4.3%
400	796.2	768.1	-28.1	-3.5%
Water, sewerage and drainage customers				
100	454.0	424.0	-30.0	-6.6%
215	594.4	565.5	-29.0	-4.9%
300	698.2	670.0	-28.2	-4.0%
400	820.3	793.0	-27.3	-3.3%

Note: Includes Environmental Improvement Charges

Over the next four years, the average households (consuming 215 kl a year) will have an average real reduction of 4.2% a year. As shown in Table 14, the reduction will be greater for low water users.

Table 14: Impacts on Residential Customers 1997/98 - 1999/2000 (in 1996/97$)

Consumption kl per annum	1996/97	1997/98	1998/99	1999/2000	Average change 1996/97-1999/2000	Average change 1995/96-1999/2000
Water and sewerage customers						
100	399.1	387.9	377.2	367.0	-2.8%	-4.6%
215	540.6	524.3	509.5	495.5	-2.9%	-4.2%
300	645.1	625.0	607.3	590.4	-2.9%	-4.0%
400	768.1	743.6	722.3	702.1	-3.0%	-3.8%
Water, sewerage and drainage customers						
100	424.0	412.4	402.3	390.5	-2.7%	-4.4%
215	565.5	548.7	533.4	518.9	-2.8%	-4.1%
300	670.0	649.4	631.2	613.8	-2.9%	-3.9%
400	793.0	768.0	746.3	725.5	-2.9%	-3.7%

Note: Includes Environmental Improvement Charges

6.10.2 Impacts for non-residential customers

The elimination of the price differential between residential and non-residential sewerage usage charges will remove the cross subsidies from households to businesses. However, businesses will experience minor increases in bills, in real terms. The real increase is estimated to be 0.6% in 1996/97 and an average of 0.7% a year over the price control period.

Table 15: Impacts on Non-residential customers Real change in bills

In real terms	1996/97	Average change 1995/96 to 1999/2000
Large water consumers	0.5%	0.7%
Commercial	0.6%	0.6%
Industrial	0.6%	0.7%
Schools, hospitals	0.6%	0.7%

Many non-residential customers of Hunter Water will be able to reduce their water bills by modifying their water use through initiatives such as improving water efficiency, internal recycling and effluent reuse.

6.11 Other pricing issues

6.11.1 Stormwater drainage area charges

Stormwater charges will be determined by adjusting charges by CPI-2% each year over the four year price control period.

6.11.2 Water supply to BHP

BHP is Hunter Water's largest industrial customer. In December 1995, an agreement was entered into between BHP and Hunter Water in relation to the supply of effluent. BHP also

intended to enter into a supply contract arrangement with Hunter Water for potable water. BHP argued that the cost of water delivery to large customers is lower than that for other customers because of the savings in the retail function.

In principle, the Tribunal accepts that water agencies should be able to negotiate individual contracts with very large customers provided that:

- water agencies publish clear guidelines explaining the basis for negotiating individual contracts
- the prices set under negotiated agreements at least cover the costs of the services supplied.

The Tribunal considers that a framework should be developed and that the principles adopted should be consistent between water agencies. The Tribunal will facilitate the development of such a framework.

6.11.3 Miscellaneous customer services charges

Hunter Water proposes to change a number of these charges. For example, some services will be opened up to competition and hence no longer subject to price control.

Apart from these minor changes, miscellaneous customer charges will be adjusted by applying CPI-2% each year over the four year price control period.

6.12 Regulatory issues

6.12.1 Form of regulation

The Tribunal's Inquiry into Water and Related Services[20] concluded that the most appropriate form of price regulation for water and related services is a CPI±X cap applied to average revenue per property. This form of regulation encourages continuing efficiency gains.

The determined revenue path is equivalent to CPI-2% a year for water, sewerage and drainage charges for the next four years 1996/97 to 1999/2000. The relevant CPI measure is the increase in the average CPI for the four quarters to March compared with the four quarters to the preceding March.

6.12.2 Compliance

Compliance with Tribunal determinations is an issue that will need to be addressed under section 18 of the Independent Pricing and Regulatory Tribunal Act 1992. Hunter Water will need to provide evidence of compliance on an annual basis for the duration of the price determination.

The allowed revenue path does not provide for rebates to customers due to service interruptions. This implies that actual revenue outcomes will be grossed up to include the amount of rebates (i.e. the revenue foregone) for purpose of compliance review.

---

[20] Government Pricing Tribunal, *Inquiry into Water and Related Services*, October 1993.

7 NEXT PRICE DETERMINATION

Price caps have been set for 4 years ahead. It is not the intention of the Tribunal to revisit these price caps during the price control period. However the opportunity exists, as part of a mid-term review to be held in 1998, to consider any new issues that may have arisen subsequent to the date of this determination. If new environmental obligations arise, prices to customers may need to be further increased. This would be considered by the Tribunal in terms of the various section 15 requirements.

Thomas G Parry
Chairman
17 June 1996

Attachment - Summary of Submissions

Submissions were received from:

Environment Protection Authority (EPA)

- Proposed HWC to "move toward cost reflective pricing, inclusive of environment costs" to their key objectives
- EPA compared the effective water price falls in each of the two price path proposals and questioned the reduction in the effective water price for residential consuming less than 1000 kl a year.
    - Under CPI-1%: effective water price will fall from $1.22 per kl to $1.19 kl in 1996/97 and $1.11 per kl in 2000/01
    - Under CPI-3%, effective water price will fall from $1.22 per kl to $1.17 /kl in 1996/97 and to $1.01 /kl in 2000/01.

Peak Environment Groups, NSW

- No immediate five year price determinations
    - There is no evidence that agencies are in a position to allow removal from public scrutiny for more than one year. Important issues need to be examined: re-use markets; water conservation; implementation of previous Tribunal recommendations; ecologically sustainable development (ESD).
- Setting a framework for achieving ESD
    - Environment groups wish to know what steps the Tribunal has taken to meet the Section 15 requirements of its Act, especially regarding ESD.
- The need to remove pricing barriers to competition
    - Support a uniform water, sewerage and drainage pricing terminology across agencies. The Tribunal is requested to create one set of terms for water, sewerage and drainage pricing in NSW.
    - Insert new, and amend existing, pricing categories as outlined in Attachment 1 of submission.
    - Remove current price barriers to competition. Pricing may create barriers to recycling, reuse and customer self sufficiency.
    - Insert a new category of pricing for sewer mining. The Tribunal should recommend a zero or 'at cost' price for sewer mining as an incentive for re-use schemes.
- Issues relating to fixed charges
    - Fixed charges for water, sewerage and drainage should be reduced. There needs to be greater clarity in the rationale for arriving at the current fixed charges.
    - Costs should be passed on as part of fixed charges
- Demand management
    - All water agencies should move toward a single price for water. Water restrictions should be maintained, particularly given community education objectives.

- Evidence required before price determination
    - The environment groups would like access to further information which they consider essential if they are to maximise their limited resources and continue to make submissions.

Hunter Sewer Service Access Charge Protest Group

- The charge is highly discriminatory. The charge has placed substantial financial burden on home owners, many of them are elderly or retired people.
- Property owners are not warned at the time of purchase of property.
- The year-to-date project costs were below budget. However, the savings have been applied to open new areas for sewer connection.
- They propose alternative funding arrangement:
    - the charge can be waived and funded by dividend reduction over the next 8-10 years
    - this charge can be replaced by increasing the amount of Environmental Improvement Charge to all 20,000 properties ($13.67 per quarter) directly benefited from the project or to all the customers who are currently paying the Environmental Improvement Charge ($1.82 per quarter)
    - All 20,000 properties in the HSP to be charges an access charge ($625).

Rathmines Progress Association

- The Association represents 140 home owners in Rathmines who built their home between 5 December 1988 and the availability date of sewer service. They considered that they have inequitably treated by the funding structure imposed by the State Government and Hunter Water. In addition to the capital cost of approximately $3,000 for septic tank system, they have to pay the standard connection fee as well as the Sewer Service Access Charge ($3,059 in 1995/96)
- Special relief should be provided. This can be funded by the saving in the Hunter Project and in capital works as a result of the Morrisett/Eraring Power Station recycled water program.

BHP

- Recommends the Tribunal to:
    - further review the cost structure of Hunter Water
    - review the application of CPI in price regulation and rates of return targets
    - recommend the Government to ease the burden of tax equivalent and dividend payments that currently impact on prices.

The NSW Treasury

- Supports the HWC's base case (CPI-1%) pricing proposal. The alternative case of CPI-3% would erode the current value of the Government's equity.
- Any proposed review of the funding arrangement of the Hunter Sewerage Project would require extensive consultation with all stakeholders. It may be that the Environmental Improvement Charge is outside the ambit of the Tribunal.

Incitec Limited

- Endorses the price setting principles set out in Hunter Water's pricing submission
- Proposes that the Tribunal to consider:
  - setting CPI-X revenue cap at a level which provides strong encouragement for HWC to pursue improved efficiency in it service delivery
  - encouraging HWC to undertake benchmarking of its services
  - ensuring that the purported cross-subsidisation of non-residential sector water charges by the residential sector is in fact borne out by a comparison of the costs of services in these different sectors. The existence of different charge levels between sectors does not of itself imply the existence of a cross subsidy.
  - ensuring that any upward revision of water charges faced by Incitec and other industrial consumers required to counter-balance residential sewer-use charges are in fact justified on the basis of a current over-charging of the latter, and under-charging of the former
  - encouraging HWC to support their advocacy of effluent reuse by including indicative charges for recycled effluent in their schedule of prices.

Other submissions from individual customers and a petition

- Opposes the imposition of Hunter Sewer Service Access Charge.

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

REPORT TO THE PREMIER ON THE DETERMINATION OF MAXIMUM PRICES UNDER SECTION 11 (1) OF THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT, 1992

Matter No.: SRD/96/03

Report: No 5.2, 1996

Agency: Hunter Water Corporation Ltd

Services: Water supply, sewerage and drainage services.

Declaration of government monopoly services under Section 4 of the Act:

Order dated 27 August 1992 - page 6431, Gazette No. 105

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

DETERMINATIONS UNDER SECTION 11 (1) OF THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT, 1992

Matter No.: SRD / 96 / 03

Determination: No 5, 1996

Agency: Hunter Water Corporation Ltd

Services: Water supply, sewerage and drainage services.

Declaration of government monopoly services under Section 4 of the Act:

Order dated 27 August 1992 - page 6431, Gazette No. 105

Maximum prices determined under Section 14 of the Act to be charged from 1 July 1996 for water, sewerage and drainage monopoly services (excluding water supply and sewerage developer charges for the provision or upgrading of water supply and sewerage services for new developments).

The maximum prices to be charged from 1 July 1996 and the commencement dates for their applicability are shown below. Each price applies from 1 July in each year unless otherwise specified.

Each price is expressed in 1996/97 dollars unless otherwise stated. In the three years from 1997/98 to 1999/2000, the maximum prices will be adjusted by CPI unless otherwise specified. The CPI is the increase in the average all-groups for Sydney for the four quarters to March on the average index value for the four quarters to the previous quarter.

(a) Water Reticulation and Supply

(i) Water Service Charges

The maximum annual prices for water service charges (in 1996/97 dollar terms) are:

Meter Size (mm)	**1996/97 $**	**1997/98 $**	**1998/99 $**	**1999/00 $**
20	63.60	49.50	35.70	23.70
25	95.40	74.25	53.55	35.55
32	159.00	123.75	89.25	59.25
40	254.40	198.00	142.80	94.80
50	397.50	309.38	223.13	148.13
80	1,017.60	792.00	571.20	379.20
100	1,590.00	1,237.50	892.50	592.50
150	3,577.50	2,784.38	2,008.13	1,333.13
200	6,360.00	4,950.00	3,570.00	2,370.00
250	9,937.50	7,734.38	5,578.13	3,703.13
300	14,310.00	11,137.50	8,032.50	5,332.50
350	19,477.50	15,159.38	10,933.13	7,258.13
400	25,440.00	19,800.00	14,280.00	9,480.00
500	39,750.00	30,937.50	22,312.50	14,812.50

The maximum annual price for *fire service charges* is zero.

(ii) Water Usage Charges

- The maximum water usage charge for consumption to 1000 kilolitres a year (in 1996/97 dollar terms):

	1996/97	**1997/98**	**1998/99**	**1999/00**
Cents per kilolitre	85.7	86.8	88.1	88.8

- The maximum water usage charge for consumption in excess of 1000 kilolitres a year (in 1996/97 dollar terms):

	1996/97	**1997/98**	**1998/99**	**1999/00**
Cents per kilolitre	78.9	79.9	81.1	81.7

(b) Sewerage Reticulation and Disposal

(i) Sewerage Service Charges

The maximum annual prices for sewer service charges (in 1996/97 dollar terms) are:

Meter Size	**1996/97**	**1997/98**	**1998/99**	**1999/00**
mm		**with 100% discharge**		
	$	$	$	$
20	345.00	362.10	377.40	390.00
25	517.50	543.15	566.10	585.00
32	862.50	905.25	943.50	975.00
40	1,380.00	1,448.40	1,509.60	1,560.00
50	2,156.25	2,263.13	2,358.75	2,437.50
80	5,520.00	5,793.60	6,038.40	6,240.00
100	8,625.00	9,052.50	9,435.00	9,750.00
150	19,406.25	20,368.13	21,228.75	21,937.50
200	34,500.00	36,210.00	37,740.00	39,000.00
250	53,906.25	56,578.13	58,968.75	60,937.50
300	77,625.00	81,472.50	84,915.00	87,750.00
350	105,656.25	110,893.13	115,578.75	119,437.50
400	138,000.00	144,840.00	150,960.00	156,000.00
500	215,625.00	226,312.50	235,875.00	243,750.00

The above figures are multiplied by a discharge factor. The discharge factor is the assessed percentage of water purchased from the Hunter Water Corporation discharged into the sewer. The discharge factor is a standard 50% for residential customers.

The maximum price payable by a customer whose sewerage service charge would otherwise be:

less than $172.30 is $172.30 in 1996/97
less than $181.05 is $181.05 in 1997/98
less than $188.70 is $188.70 in 1998/99
less than $195.00 is $195.00 in 1999/2000.

(ii) Sewerage Usage Charge

The maximum prices for sewerage usage charges (in 1996/97 dollar terms) are:

Property Type	**1996/97**	**1997/98**	**1998/99**	**1999/00**
		Cents per kilolitre		
Residential	74.6	63.5	53.9	45.8
Non-residential	39.0	39.0	39.0	39.0

The above figures are multiplied by a discharge factor. The discharge factor is the assessed percentage of water purchased from the Hunter Water Corporation discharged into the sewer. The discharge factor is a standard 50% for residential customers

(c) Drainage Management

(i) Valuation Based Charges (for non-residential properties only)

The valuation based charges are not to exceed (in 1996/97 dollar terms):

Proportion of AAV	**1996/97**	**1997/98**	**1998/99**	**1999/00**
		Cents in the AAV dollar		
Less than or equal to $2,200	1.93	1.89	1.85	1.82
Greater than $2,200	1.75	1.71	1.68	1.65

(ii) Drainage Service Charge

The service charges for residential properties are not to exceed (in 1996/97 dollar terms):

	1996/97	**1997/98**	**1998/99**	**1999/00**
Residential properties	$24.90	$24.40	$23.90	$23.40
Non-residential properties	$16.20	$15.90	$15.60	$15.20

(d) Environmental Improvement Charge (see note 1)

The maximum environmental improvement charge is $40 from 1 July 1996 to 30 June 2000.

Note 1:The maximum environmental improvement charge will be held constant in nominal terms (i.e. $40) until 30 June 2000.

(e) Trade Waste Services

1996/97 charges

The maximum annual charges for trade waste services are:

(i) *Heavy Metal Charge*

Burwood Beach	$24.65 / kg
Farley	$10.33 / kg

(ii) *Caustic Charge*

$0.0947 / kL

(iii) *BOD/NFR Charge*

Trade Waste Strength Charges for BOD / NFR Ranges (Cents per kilolitre)

Treatment Works	**<350**	**351-500**	**501-1000**	**1001-1500**	**>1500**
Belmont	0	19.4	105.5	236.8	131.3
Bolwarra	0	23.4	125.1	281.5	156.4
Boulder Bay	0	15.1	81.8	182.9	101.1
Branxton	0	39.2	208.6	469.2	260 .7
Burwood Beach	0	9.7	53.8	120.6	66.7
Cessnock	0	9.7	52.8	119.5	65.7
Dora Creek	0	94.0	501.5	1128.3	626.9
Edgeworth	0	13.9	76.4	172.2	95.8
Farley	0	11.9	62.4	141.0	78.6
Kearsley	0	25.1	134.0	301.5	167.6
Kurri Kurri	0	9.7	53.8	120.6	66.7
Medowie	0	20.7	110.2	248.0	137.8
Minmi	0	26.8	142.6	320.7	178.2
Morpeth	0	10.7	56.0	125.9	69.9
Paxton	0	61.9	330.0	742.5	412 .5
Raymond Terrace	0	17.3	91.5	206.6	114.1
Shortland	0	9.3	49.5	111.3	61.8
Stockton	0	26.7	142.0	319.6	177.6
Tanilba	0	57.6	307.4	691.6	384.3
Toronto	0	23.7	124.9	281.0	156 .1
West Wallsend	0	24.6	131.2	295.2	164.0
Windale	0	7.5	39.9	89.4	49.5

Shaded area denotes charges for additional treatment plants.

Notes:

1. BOD / NFR concentrations are expressed in units mg / L.
2. Charges for strength bracket 351-500mg / L are applicable only if discharge exceeds 500kL / year.
3. For strength bracket >1500mg / L charges shown apply for each 500mg / L concentration increment above 1500mg / L and are additive to the 1001-1500 mg / L charges.

(iv) Permit Fees

Description	**Maximum Price**
Major (Category 1)	
Annual Fee	$355 / annum
Establishment	
Extra Establishment	$81 / hour for negotiations in excess of 10 hours required to finalise permit conditions.
Minor(Category 2)	$86 / annum
Establishment Fee	$107 on issue of permit
Minor(Category 3)	$86 / annum
Establishment Fee	$107 on issue of permit

1997/98 - 1999/2000 charges

The maximum charges for trade waste services will be adjusted by CPI-2% a year from 1997 / 98 to 1999 / 2000.

(f) Other Water Supply, Sewerage and Drainage Services for which no alternative supply exists

The maximum charges for these services are listed in Attachment 1.

Methodology for the determination of maximum prices under Section 14A of the Act for water supply and sewerage developer charges for the provision or upgrading of water supply and sewerage services for new developments.

The reasons the Tribunal has chosen to make this determination by setting a methodology in terms of section 13A(1)(b) of the Independent Pricing and Regulatory Tribunal Act, 1992 are set out in Attachment 2 to this determination.

The determination is as follows:

1. A Net Present Value (NPV) methodology is to be used by Hunter Water Corporation to calculate developer charges for water and sewerage infrastructure works.

2. Details of the methodology are set out in the guidelines in Attachments 2 and 3 to this determination.

3. The methodology applies from the date of Gazettal of this determination for all new developments or stages of developments.

4. The parameters of the NPV calculation for Hunter Water Corporation are:

    a) A three (3 per cent) discount rate on existing assets
    b) A nine percent (9 per cent) real discount rate on future assets
    c) A forecast horizon for expected net revenue of 30 years.

5. The new developer charges will be phased in over the four years from 1 July 1996. The increase in each of the four years will be 25% of the overall increase (in dollar terms) in the charges (i.e. the difference between developer charges calculated under Hunter Water Corporation's existing method and the Tribunal's Guidelines).

Thomas G Parry
Chairman
17 June 1996

ATTACHMENT 1:

MISCELLANEOUS FEES

1996/97 charges

Water Supply [1]

Application to connect to a watermain	$23.00
Application for a Non-Standard Water Service	$145.00
Cutting off Water Supply on Request	
a) Between hours of 8.00am & 3.30pm	$76.50
b) Between hours of 3.30pm & 8.00am	$195.00
Reconnection of Water Supply	
a) Between hours of 8.00am & 3.30pm	$76.50
b) Between hours of 3.30pm & 8.00am	$195.00
Locating Position of Water Service Pipes Maintap or Leak in Service Pipe	
a) Between hours of 8.00am & 3.30pm for the first hour or part thereof	$80.50
b) For each hour in excess of 1 hour	$60.50
c) Between the hours of 3.30pm & 8.00am Monday to Friday, weekdays, public holiday for first 2 hrs or part thereof	$203.50
d) For each hour in excess of 2 hours	$101.00
Inspection of initial connection of a Fire Service larger than 50mm	$87.50
Hand delivered notice to shut off water supply for non payment of service & usage charges	$14.00
Reconnection of Water Supply where disconnected for non payment of service & usage charges	
a) between the hours of 8.00am & 3.30pm	$23.00
b) between the hours of 3.30pm & 5.00pm	$64.50
c) between the hours of 5.00pm & 8.00am	$167.00

Sewerage

Permit to connect to sewer Alterations & Additions	
a) Residential	$32.00
b) Non - Residential	$89.50
Application to pump effluent	$87.50
Permit to Connect to sewer where inspection has previously been made for drains Point A (non-residential only)	$87.50
Permit to disconnect a Sewerage Service from a Sewermain	$77.50
Permit for temporary connection to sewermain for building purposes	$39.00
Combined application for Water / Sewer Services	
a) Residential	$50.00
b) Non-Residential	$105.00

Plans & statements

Section 47 Certificate	$16.00
Statement of available water pressure	$48.50
Copy of Diagram of sewermain availability & of existing sewerage services	$11.00
Supply of Statement of Date of Connection to a sewermain	$11.00
Supply sewer diagram showing approximate depth & position of sewermain	$11.00
Supply statement that no sewer is available	$11.00
Plumbcheck Inspection Report Application	$11.00
Plumbcheck Inspection Report	$127.00

Ancillary services

Where no fee prescribed for a service per hour plus materials & travel	$47.50
METER TEST	
a) In situ (20mm & 25mm)	$61.50
b) Bench Test 20mm & 25mm	$140.00
c) Bench Test 40mm meter	$193.50
d) Bench Test 50mm meter	$236.50
SPECIAL READING OF A METER	$32.00
EXAMINE & APPROVE HYDRAULIC PLAN	
a) up to 20 residential units, no fire requirements or tradewaste	$43.00
b) light commercial sites where no hydrants and / or tradewaste and a maximum of three hose reels	$59.50
c) all work proposed beyond the above criteria up to 400 units	$159.00
d) for each 100 units in excess of 400	$52.50
IRREGULAR / DISHONOURED CHEQUE	$18.00
HSP SEWER SERVICE ACCESS CHARGE	$2,780.00
WYEE EAST WATER CONTRIBUTION FEE [(2)]	$1,322.00
Special Inspection on Plumbing Works as Requested per hour	$57.00
Special Inspection for Non-Compliance on Plumbing Works per hour	$57.00
METER KITS	
a) 20mm	$97.00
b) 25mm	$107.50
STANDPIPES	
a) 20mm	
Monthly hire or part thereof	$32.00
Cycle hire	$66.50
b) 50mm	
Monthly hire or part thereof	$43.00
Cycle hire	$112.00

Fees and charges for subdivision and/or development applications

	$
Subdivision/Development Application Fee **(Payable at the time of lodging the application)** *This fee includes the issue of the Corporation's Section 50 or Compliance Certificate*	237.00
Administration Fees	
Category 1 *Remote-system unavailable, no new works, no amplification charge. Application fee covers cost of identifying land parcel with respect to the Corporation's services and other developments, correspondence etc.*	Nil
Category 2 *No new work, amplification charges applicable for share of system capacity consumed. Fee covers cost as per Category 1 plus assessment notification and administration of amplification contributions.*	291.00
Category 3 *Small works required, amplification charges applicable. Fee covers cost as per Category 2 plus determination, notification and administration of small works requirements.*	409.00
Category 4 *Large subdivisions, major works required, amplification charges applicable. Fee covers costs as per Category 3 plus contract preparation and administration.*	1001.00
Lodgements of Security Bonds (Includes bank guarantees and cash bonds) *This fee covers the lodging and release of the bond and one reduction in the interim period.*	162.00
Fee for Each Subsequent Reduction of Security Bond	54.00
Preliminary Amplification Charge Enquiry Fee *This fee includes assessment of the proposed development using the Corporation's financial model to determine the probable amplification charge.*	54.00
Revision Fee *Applicable when offer not accepted by expiry date and reassessment is requested.*	129.00

Notes on 1996/97 miscellaneous charges:

1. Hunter Water's fee to undertake a watermain drilling is not included in the "Application to connect to a watermain". From 1 July 1996, drillings of 20 & 25mm maintaps on 100, 150 and 200mm watermains will be de-regulated, removing Hunter Water's monopoly over this work. From 1 July 1996, accredited private licensed plumbing contractors may be engaged to perform this work. However, customers can still elect to have Hunter Water undertake this work, at a fee. This fee is determined by our internal contractor, and will be advertised separately for comparison by the customer, with other contractors. The application to connect to a watermain is therefore only an administrative charge to cover the cost of processing the application.

2. The Wyee East Water Contribution Fee has been included in the list of charges for 1996/97. The Wyee East Reticulation scheme commenced in 1991 following a commitment by the Corporation to provide a reticulated water supply to the township of Wyee East. It is a charge payable by the affected landowners prior to connection to Hunter Water's watermains.

1996/97 to 1999/2000 charges

The maximum charges for miscellaneous customer services will be adjusted by CPI-2% a year.

Attachment 2:

The Tribunal's preferred methodology for the determination of developer charges

Under the Independent Pricing and Regulatory Tribunal Act, 1992, the Tribunal may set maximum prices or may determine a methodology for setting maximum prices. Section 14A lists a range of additional matters the Tribunal must take into account when setting a methodology. The Tribunal has chosen to determine a methodology for fixing the maximum prices for developer charges. In accordance with Section 13A(3) this section explains the reasons for this decision.

Developer charges are levied to recover water infrastructure costs incurred to service a large variety of developments. Individual price determination by the Tribunal could not cover the required diversity of developer charges. If agencies had to return to the Tribunal each time they received an application for an assessment of developer charges, this would cause unworkable delays. The Tribunal would have to devote considerable time and resources to mechanically calculating charges, and would be completing work much better done by the agencies.

The Tribunal has stressed that developer charges must be calculated by a consistent and transparent methodology and recover efficient costs. However, it is impractical and inefficient to have the Tribunal do the great number of actual calculations and updates required. Developers include developer charges in their planning and investment decisions, they need a rapid response when applying for an assessment of charges. The NPV methodology will ensure agencies regulated by the Tribunal recover only the efficient costs of water and sewerage works, while allowing the actual calculations to be completed by the agencies in-house. The methodology will be applied in a transparent manner which can be tested by developers and monitored by the Tribunal.

Attachment 3:

Guidelines for methodology to be used in calculating developer charges

1 INTRODUCTION

In its Final Report, Inquiry into Water and Related Services, the Tribunal emphasised the importance of ensuring that developer charges reflected the costs of providing water and waste-water infrastructure for urban development. In the absence of recurring charges which vary between different locations to reflect the 'true' costs of providing such services, up-front developer charges need to:

- provide better signals for resource allocation and usage
- provide better signals to reflect the environmental effects of urban development
- ensure the financial viability of extensions of urban water infrastructure.

However, the Tribunal is also mindful of the possible effects of such up-front charges on housing affordability. In setting the parameters for the calculation of developer charges the Tribunal will have regard to management of the impacts on affordability while ensuring that the charges provide a clear signal on the relative costs of urban development.

The Tribunal's Final Report endorsed in principle the use of the net present value (NPV) approach to the calculation of developer charges. In order to provide the framework for the implementation of the NPV method for calculating developer charges, the Tribunal:

- will from time to time set key parameters such as cost of capital, efficiency adjustment factors for asset values and the period of the analysis
- has published these guidelines for the calculation of developer charges
- has established the Developer Charges Forum to advise on issues associated with the calculation and levying of developer charges.

These Guidelines, which form the basis for calculating developer charges, should be read with reference to the principles outlined in the Tribunal's report 'Inquiry into Water and Related Services', October 1993.

The starting point is the principle that, subject to the need to maintain housing affordability, new development (and redevelopment) should meet the full efficient cost of the infrastructure provided for the development through either developer charges or annual charges. In general this objective is met by developers' constructing local distribution systems and paying for their share of off-site infrastructure works to service the development (allowing for future net annual revenues). In calculating developer charges the following factors need to be taken into account:

- major infrastructure works (existing or planned) serving the development,
- assets to which any new development should contribute and the proportion of those assets serving the development
- value of the infrastructure
- risk borne by the authority that is providing the infrastructure and the appropriate return to cover this risk
- contribution, in the form of future net annual charges, which will be paid by future occupiers of the development towards the efficient cost of infrastructure works less the

future expected annual operating, maintenance and administration costs of providing water related services. (This contribution must be deducted from any upfront charge.)

- the impact on housing affordability of applying a developer charge.

2 COVERAGE OF METHODOLOGY AND GUIDELINES

The NPV methodology and these guidelines are to be used by Sydney Water (SWC), Hunter Water (HWC), Gosford City Council and Wyong Council. Subject to any specific limitations included in the Tribunal's determinations for each agency, the NPV methodology is to be used for:

1. all new developments from the date of the Tribunal's endorsement of these guidelines for use

2. all redevelopments from the date of endorsement of these guidelines for use, and

3. existing staged developments other than in respect of stages where a current development approval has been issued by the authority.

In the interests of equity, current charges should be used for existing developments (ie. developments or stages of development for which a relevant approval was issued prior to the date of endorsement of these guidelines and such approval is still current).

The Tribunal may set different parameters for the NPV model for each of the authorities. This will provide a necessary degree of flexibility in the model's application.

3 MAXIMUM PRICES

Charges calculated using this methodology are maximum prices (Section 13A and Section 14A of the Independent Pricing and Regulatory Tribunal Act 1992). The authority and developer can negotiate a charge below this maximum charge. In these circumstances, the Treasurer must agree to the negotiated charge (Section 18 (2) of the IPART Act).

This could be achieved through specific case-by-case approvals. Alternatively, a more general approach for negotiation within defined limits may be possible.

4 RELATIONSHIP TO PRICE PATHS AND ANNUAL DETERMINATIONS

Existing developer charges are not the subject of review in accordance with these guidelines. An existing developer charges would exist where a consent approval for the development or stage has been issued by the water authority as at the date of endorsement by the Tribunal of these guidelines. Adjustments to existing developer charges will be made in the annual determinations and / or medium term price paths.

5 CALCULATION OF DEVELOPER CHARGES USING THE NET PRESENT VALUE (NPV) APPROACH

The net present value approach calculates the developer charges as:

- the cost of the assets used to service the development
- less the future net operating profits (or losses) expected to be derived from providing services to the development area.

The components of this calculation are as follows:

K - the capital charge for the existing or future assets calculated on a NPV basis which will serve the development or release area (see section 6.4)

$\mathbf{R_i}$ - the future periodic revenues expected to be received from customers in the development area in each year (i)

$\mathbf{C_i}$ - the future expected annual operating, maintenance and administration costs of providing services to customers in the development area

r - the cost of capital to be used in the calculation of the net present value of future revenues and costs

n - the forecast period for the assessment of future revenues and costs.

The definition and derivation of each of these components is discussed in detail below. The developer charge (**DC**) is calculated from estimates of each component as follows:

$$\mathbf{DC = K - NPV_r(R_i - C_i)\ for\ i = years\ 1, ..\ n;\ n \leq 30}$$

This charge is assessed for the development as a whole. Calculation of this charge requires estimates / projections of:

- the efficient cost of existing and proposed assets servicing the development
- the amount and timing of any investment in new infrastructure required to be built or advanced in timing due to the development
- the take-up rate of lots in the development and the take-up of asset capacity
- future annual revenues and costs per equivalent tenement (ET) or other appropriate charging criteria (e.g. hectare).

The following sections describe each of the components of the calculation in more detail and provide guidelines for the estimation or projection of costs and revenues.

6 ASSESSMENT OF ASSET COSTS

6.1 Identification of relevant assets

Water authorities may seek to obtain contributions for providing, extending or augmenting services which the developments will, or are likely to, require. In assessing the costs of assets to be included in the developer charge, water authorities shall demonstrate that there is a nexus between the development and the assets which are to serve that development. These assets should be clearly identified in the Development Servicing Plans described in Section 12 of these guidelines. The efficient cost of these assets should be taken from an

asset register or other source acceptable to the Tribunal (Such costs may be expressed as a cost per equivalent tenement (ET)).

Assets which are provided to service the development may be assets:

- which were already in the ground prior to the implementation of this methodology,
- constructed after the implementation of this methodology but prior to the commencement of the development, or
- which are constructed or to be constructed after the development.

6.2 Valuation of existing assets

Assets should be valued on the basis of replacement, or modern equivalent asset, costs. As a transitional measure, a reasonable proxy of these costs may be used Where necessary, proxies for replacement costs may be established by:

1. the Tribunal setting adjustment factors to be applied to a utility's initial construction costs, or
2. the utility undertaking case studies to estimate relativity between initial construction costs and replacement costs. The case studies and estimates would be subject to external, independent review and discussion with relevant parties.

However, the Tribunal is concerned that such estimates should reflect the least cost and most efficient means of providing the service.

Where MEA costs are used, cost estimates should be based on the provision of the same quality of service using a modern equivalent asset within an optimised system design. The MEA value will vary from indexed historical costs as a result of relative productivity improvements due to technological change, variations between planned and actual urban development patterns and densities, and any past sub-optimal investment or development decisions. The values should not automatically assume the replacement of the assets in the same form or configuration. The Tribunal is concerned to ensure that prices reflect efficient costs. Where asset values based on actual costs exceed efficient costs, given today's knowledge and technology, asset values should be reduced accordingly.

The revision of asset values to MEA may create disincentives for the authorities to develop new technologies where these would devalue some of their current assets unless the anticipated rate of technological change is incorporated into the model.

In calculating the value of existing assets, the cost of design, construction and administration should be included.

The Industry Forum on Developer Charges will provide an opportunity for discussion and agreement on a set of efficient costs and may maintain a register of suitable unit costs for assets as a reference point for calculation of developer charges contributions.

6.3 Apportionment of assets

In respect of assets shared by a number of development service plans or forming part of a system, it is necessary to calculate the relevant capital charge for the system based on expected system utilisation estimates. The per unit capital charge can then be applied to

each development on the basis of the expected capacity utilisation within the development. Typically, each asset will need to be assessed in terms of its design criteria and the calculated demand for the area to be serviced by it.

6.4 Calculation of capital charge to the development for existing assets

Given the estimate of the value of the assets, a capital charge may be calculated as follows:

- Estimate the period for full take-up of asset capacity. If information is readily available, actual take-up rates to date should be used. If not, the water authority could use an average based on similar release or development areas' take-up rate or other (better) estimates if available. An estimate of the take-up of existing unused capacity should also be made.
- Estimate the capital charge per ET (or hectare) necessary to equate the net present value of the stream of charges which would be derived from annual per ET (or hectare) charges and the costs of the assets.
- Calculate the charge for the development by multiplying the per ET (or hectare) charge by the number of ETs (or hectares) proposed in the development.

The Tribunal will set the cost of capital. A real cost of capital will be used and the resultant per ET (or hectare) charges may be indexed by the average increase (or decrease) in annual charges determined by the Tribunal.

Where:
1. the full capacity of an asset will be taken up by a development; or
2. the period of development covered by the DSP includes the full take-up period for the relevant asset,

the same calculation can be achieved through the following steps:

- The capital cost of the assets are fully assigned as a cost for the number of ET's in the DSP.
- The capital charge per ET is the NPV of a stream of projected contributions predicted by the DSP.
- The charge per ET may be iterated or calculated as the capital cost divided by the NPV of the ET take-up rate.

6.5 Exclusion of existing assets

In general, all assets providing services to the development should be included when calculating developer charges. The costs of an existing asset should be excluded from the calculation of developer charges:

1. if its capacity is unlikely to be fully utilised over the planning horizon relevant for that asset, or
2. if the required capacity was created before 1970, or
3. if capacity was made available by changes in land use patterns.

Exclusion due to excess capacity will occur most commonly in the case of infill development in long-established areas. If an asset was constructed to service earlier development and

changes in land use have made surplus capacity[1] available then it is appropriate to delete the asset from any subsequent contribution calculation. This will reduce the contributions payable for developments utilising these assets and encourage the use of under-utilised assets.

6.6 Estimation of costs of assets yet to be constructed

Two methods are available for inclusion of the costs of assets yet to be constructed. In either case it is essential that feasible options for meeting future needs be examined, including pricing and demand management options, and that the lowest cost alternative be chosen. In the first case, the assets may be specific to the development or related developments. In such cases, it may be assumed that if the development did not proceed, the assets would not be built. In other cases, such as dams, the expenditure is driven by growth widely dispersed throughout the system. In such cases, the development may affect the timing of the expenditure rather than whether the expenditure will occur at all.

In the first case the expected future expenditures would be included in the stream of future incomes and expenditures and discounted back to current values. If the assets will serve more than the area covered by the development, the capital charge applicable to the whole asset should be apportioned on the basis of the share of the capacity of the assets expected to be taken up by the development.

In some cases the development may temporarily use the capacity of an existing asset before construction of a new asset has been completed. If so, inclusion of the costs of both the existing and new assets would result in double counting. Only the costs of the new assets should be included.

Where the assets are part of a more general expansion of the system (i.e. the second case), the effect of a decision to proceed with development or not may be to alter the timing of the expenditure. In such cases, expected expenditures should be included using the second method which involves:

1. estimating the extent to which the development would bring forward the timing of the expenditures, compared with the timing if this development did not proceed

2. calculating the difference in the net present value of the expenditures due to the change in the timing of the expenditures

3. including the calculated cost as a cost to the development only if it exceeds the cost of any equivalent existing assets used by the development. The costs of the comparable existing assets would be excluded from the calculation.

In practice, standard per ET (or hectare) factors could be calculated for major planned works to avoid the re-calculation of steps 1 and 2 for each development.

Step 3 is necessary to avoid the double counting which would occur if the costs of both existing assets and the additional NPV cost for advancing future assets were included.

---

1 "Surplus capacity" exists where the asset has capacity which is unlikely to be fully utilised over the relevant planning horizon.

6.7 Demographic assumptions

Demand for services will, in part, be driven by assumptions on population growth and density (e.g. occupancy rates). Forecasts of population and densities should have regard to the latest projections published by the NSW Department of Urban Affairs and Planning for the same or a comparable local government area. Demographic assumptions used should be locality specific (e.g. at the LGA level) for local works and system wide (e.g. for all Sydney) for headworks such as dams and treatment plants.

6.8 Demand projections

Projections of the demand for water per household or discharges of waste water should have regard to corporate goals and objectives and estimates of future costs and revenues. This includes targets or objectives included in licence agreements or corporatisation frameworks.

7 PROJECTION OF OPERATING COSTS

The operating, maintenance and administration costs (excluding depreciation and interest) of providing services to a development area should be based on the most efficient and lowest cost means of providing the services. The calculations should assume that current service standards will continue rather than anticipate possible increases in service standards. Subject to the Tribunal passing through costs, the costs of meeting higher standards will be recovered through periodic charges.

The costs should reflect costs associated with the specific services provided. System-wide averages should not be used if the costs of providing services to the development area vary significantly from the system-wide operating, maintenance and administration costs.

8 PROJECTION OF OPERATING REVENUES

Operating revenues should be projected on the basis of the efficient operation of the authority's assets to best meet the needs of its customers given current service standards. On this basis, additional revenues to fund future backlog sewerage programs, for example, should be excluded. Unless differential charges have been approved by the Tribunal, it should be assumed that residential charges are uniform across the region of operation.

The Tribunal will set the parameters to be used for the projection of future revenues by each authority. These will incorporate the 4-5 year price paths to be agreed with each authority and take into account the structural changes for prices proposed in the Tribunal's report, *Inquiry into Water and Related Services.*

Estimates of future revenues will also depend on projections of future lot take-up in the development area. These will necessarily be specific to each proposal.

9 DISCOUNT RATE

The Tribunal may set different cost of capitals for each water supplier. The real cost of capital will contain two components:

1. the risk free cost of capital. A proxy for this may be the Commonwealth bond rate or an indexed bond benchmark,

2. the business risk to the authority of providing infrastructure for future urban development which may vary.

In providing infrastructure prior to development, authorities face a number of uncertainties. These include the rate of connection, the cost of construction, and interest rates. To compensate authorities for accepting these risks, a risk adjusted return on capital investment should be built into developer charge calculations.

Typically, this return should represent the risk taken by the authority. Where the authority reviews charges regularly, for example, every five years, the risk factor should be less than for an authority which sets a charge (adjusted only for inflation) for the life of a scheme. The return on existing assets will be less than that on new assets.

10 PERIOD OF ANALYSIS

Future operating costs and revenues should be projected over a 30 year period. Theoretically, operating revenues and costs could be projected over the life of the assets. In practice, a 20 year period is a long period for the analysis of a return on investment. However, in recognition of the long planning cycles and asset lives, the Tribunal considers that the inclusion of future incomes and expenditures should extend out beyond the twenty years. The discounting of future values reduces the impact of forecast errors, the further out in time these errors occur.

11 ADJUSTING FOR IMPACTS

The impact of calculated developer charges will depend primarily on the valuation and treatment of past assets. It seems that, for some developments, the charges calculated using the methods outlined in these guidelines would be higher than those currently charged.

The Tribunal is concerned that developer charges should provide signals on the relative costs of servicing urban development. However, it is also concerned about the effect on housing affordability and needs to balance competing interests.

The Tribunal may seek to manage these impacts through transitional adjustment arrangements.

This adjustment may vary between authorities reflecting concerns with regard to the relative impacts of the charges.

12 TRANSPARENCY

The Tribunal wishes to establish mechanisms which ensure that developer charges are fair and transparent. Transparency in the water authority's processes for calculating developer charges will assist in reducing the extent of regulation required and the likelihood of disputes.

In order to provide a transparent approach the Tribunal requires that, at a minimum, the water authorities provide the following information for each development.
The water authority is to prepare a Development Servicing Plan (DSP). The DSP is to specify, amongst other things:

- a summary of the contents of the DSP
- relevant land use planning information
- the extent of the catchment/supply zone
- the extent of services required to be staged over the anticipated development period
- estimates of future capital and operating costs
- standards of service that will be provided and design parameters
- estimates of lot and dwelling production including demographic assumptions
- timing of works and expenditures related to anticipated development and demographic assumptions
- the calculated developer charge and how it is projected to move through time
- a reference to other relevant DSPs.

The water authorities are to allow developers access to the models used in calculating the charge and provide copies to local councils and development industry associations.

Once the relevant approval has been issued, the calculated developer charge is to be registered with the Tribunal and should be published in an appropriate document at least annually.

13 DISPUTE RESOLUTION

The Tribunal prefers that appeals be avoided as much as possible through a transparent and consultative process. These guidelines, in conjunction with the transparency requirements and the Industry Forum provide such an approach.

Despite this, it is possible that a developer may wish to appeal the charge levied by the water authority. A developer who is dissatisfied with how an agency has calculated a developer charge has a right to have the dispute arbitrated under section 31 of the Independent Pricing and Regulatory Tribunal Act 1992. The dissatisfied developer should first complain to the agency and the chief executive officer of the agency is to have the complaint reviewed. The developer, if still dissatisfied, may required the matter to be decided by an arbitrator who's decision is binding. (Copies of relevant section of the Act are attached).

The Water Industry Forum strongly supported having mediation available as an option for customers. The Tribunal supports the Forum's unanimous view that mediation should be available to the parties if they so wish. The Forum will compile a panel of possible mediators and will recommend to its constituents that they attempt mediation as a preliminary step to resolve any disputes.

Extracts from Independent Pricing and Regulatory Tribunal Act, 1992

Determination of methodology for fixing prices

14A. (1) A determination of the Tribunal of the methodology for fixing the price for a government monopoly service may be made in any manner the Tribunal considers appropriate.

(2) In making such a determination, the Tribunal may have regard to such matters as it considers appropriate, including, for example, the following:

(a) the government agency's economic cost of production;

(b) past, current or future expenditures in relation to the government monopoly service;

(c) charges for other monopoly services provided by the government agency;

(d) economic parameters, such as:

(i) discount rates; or

(ii) movements in a general price index (such as the Consumer Price Index), whether past or forecast;

(e) a rate of return on the assets of the government agency;

(f) a valuation of the assets of the government agency;

(g) the effects of pricing on environmental outcomes (including the sustainability of eco-systems) and the use of natural resources by the government agency.

Matters to be considered by Tribunal under this Act

15. In making determinations and recommendations under this Act, the Tribunal is to have regard to the following matters (in addition to any other matters the Tribunal 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 protection of the environment (within the meaning 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.

Disputes regarding application of determination of methodology

31. (1) A customer who is dissatisfied with the way in which a government agency applies the methodology in a determination referred to in section 14A may complain to the agency.

(2) The chief executive of the agency is to review the complaint or cause it to be reviewed.

(3) The customer, if still dissatisfied, may request the agency that the matter be reviewed by way of arbitration by an arbitrator, who is to be appointed by agreement between the customer and the agency. The agency is, subject to this section, to comply with any such request.

(4) Costs of the arbitration are to be borne equally by the agency and the customer.

(5) The regulations may exclude classes of determinations from the operation of this section and may make provision for or with respect to reviews and arbitration under this section, including:

(a) the times within which complaints and requests are to be made;

(b) the circumstances in which complaints and requests may be dismissed without consideration;

(c) the determination of costs of arbitration.

(6) Subject to this section and the regulations, the Commercial Arbitration Act 1984 applies to any such arbitration.

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

REPORT TO THE PREMIER ON THE DETERMINATION OF MAXIMUM PRICES UNDER SECTION 11 (1) OF THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT, 1992

Matter No.: SRD / 95 / 03

Report: No 5.1, 1996

Agency: Hunter Water Corporation Ltd

Services: Water supply and sewerage developer charges for the provision or upgrading of water supply and sewerage services for new developments.

Declaration of government monopoly services under Section 4 of the Act:

Order dated 27 August 1992 - page 6431, Gazette No. 105

Background

In Report No 1, 1995 on the determination of maximum prices for Hunter Water Corporation Ltd from July 1995, the Tribunal indicated that it had not completed its investigations of prices for water supply and sewerage developer charges for the provision or upgrading of water supply and sewerage services for new developments. Those issues were to be the subject of a separate report and determination at a later date.

The Tribunal has now considered the determination of maximum prices for such developer charges with its investigations of a medium term price path for water supply, sewerage and drainage prices for Hunter Water Corporation from July 1996. These matters are contained in Report No 5.2, 1996 and Determination 5, 1996.

Accordingly the Tribunal will not be making a determination on developer charges under this matter.