



Hunter Water Corporation
Response to Atkins/Cardno
Overview Report


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Hunter Water Corporation
Newcastle

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TABLE OF CONTENTS

INTRODUCTION	1
<i>Supplementary Submission</i>	1
SECTION 4.1 ASSET MANAGEMENT	1
SECTION 4.2 WATER BALANCE	2
SECTION 4.3 OPERATING EXPENDITURE AND EFFICIENCIES	2
SECTION 4.4 CAPITAL EXPENDITURE AND EFFICIENCIES	3
<i>Capital Efficiencies</i>	3
<i>HWC Proposed Capital Expenditure 2005/06 to 2008/09</i>	5
<i>Future Capital Expenditure - Water Supply</i>	6
<i>Future Capital Expenditure - Wastewater</i>	7
SECTION 4.5 RECOMMENDATIONS	7
<i>Growth Expenditure</i>	7

LIST OF TABLES

Table 1	Capital Expenditure Summary – 1998/99 to 2004/05 (2004\$).....	2
Table 2	Capital Efficiency Targets	4
Table 3	Capital Expenditure 2005/06 to 2008/09 (2004\$m)	5

INTRODUCTION

The Independent Pricing and Regulatory Tribunal (IPART) has stated its intention to make a price determination to commence 1 July 2005 for the NSW metropolitan water agencies. In broad terms the progress towards this end is summarised in the timeline below:

July 2004	Issues Paper released by IPART
September 2004	HWC provides IPART with our Submission to the Review of the Metropolitan Water Agency Prices
October 2004	Atkins Cardno MBK commence work on the Capex, Asset Management and Opex Review associated with the price review
February 2005	Atkins Cardno submit Overview Report for the Metropolitan Agencies

This submission provides comments on the Overview Report dated February 2005. The Overview Report provides the consultant's (Atkins/Cardno) assessment of the Corporation's asset management and leakage detection practices, as well as, proposed operating and capital expenditure and target efficiencies. The comments in this submission follow these headings.

Supplementary Submission

In addition to this response, Hunter Water Corporation has provided to IPART, under separate cover, a supplementary submission (in line with previous practice). The supplementary submission provides further information and cost data in response to issues raised earlier by Atkins/Cardno and in the light of new information that has come available since the initial submission in September 2004.

It is important to note that, based on construction tenders received, condition assessment of major trunkmains, the completion of other investigation studies and further review of growth estimates, the Corporation's capital program is now projected to be \$20.6m¹ higher than in the initial submission. This increase is against the trends projected by Atkins/Cardno.

SECTION 4.1 ASSET MANAGEMENT

As part of its review of current asset management practices, Atkins/Cardno comment that, despite the systems Hunter Water has in place, significant slippage in expenditure for the wastewater program was evident over the two-year period of the previous price path.

The main reason provided to Atkins/Cardno for this slippage related to a deliberate deferral of works at the Cessnock wastewater treatment plant by Hunter Water. The Corporation deferred these works because concept design work revealed new options that would achieve both a reduction in the capital required for this project and an ongoing substantial operating cost saving. Deferring this work enabled these new design changes to be made. The Corporation strongly believes deferring this work to achieve these savings for the community was responsible management of the project.

¹ This figure is changes to capital project costs only. The Corporation's March 2005 supplementary submission outlines reductions to capital spending as a result of the introduction of International Financial Reporting Standards (IFRS). As discussed in that Supplementary Submission, the net change to the capital program will depend on how IFRS changes are treated for price setting purposes.

RESPONSE TO ATKINS/CARDNO OVERVIEW REPORT

The other two projects highlighted by the consultant involved slippage of only some 3 or 4 months of construction time on projects of total project durations of around 3 years. The important qualification overlooked by the consultant is that this relatively short slippage will take completion of these projects beyond the 30 June 2005 cut-off for the two-year period under review.

Reviewing the efficiency of managing major capital works programs over a short two-year period is misleading as illustrated by the comments in previous paragraph. A short slippage beyond the review cut-off date can, in reality, have little material impact on delivery of the project yet appear quite significant in terms of the dollar outlays within the review period. A more realistic assessment of an organisation's management of major capital programs is to review its performance over a longer period. Hunter Water provided such a review to the consultants showing that, between 1998/99 and 2004/05, the variation in its capital spending was less than 2% of that agreed with IPART as part of relevant price determinations. By any measure of capital program management, that is an enviable track record. The information furnished to the consultants is shown in Table 1.

Table 1 Capital Expenditure Summary – 1998/99 to 2004/05 (2004\$)

Price Period	IPART Agreed Capex \$m	Actual Spend \$m	Difference %
1998/99-99/00	109.73 (a)	111.99	2
2000/01-02/03	157.69	166.14	5
2003/04-04/05	134.20	130.00 (b)	-3
Total	401.62	408.13	2

(a) IPART did not set a capex target in 1998 (mid term review of 1996 to 2000 price path) so Hunter Water's mid term projection is used. (b) Forecast 2004/05 figure.

The Corporation was disappointed to see the comments about significant slippages in the Final Report, given the very defensible explanations provided to the consultants and IPART for the slippages, the fact that the analysis only covered a two-year period and that the consultants appear to have overlooked the Corporation's longer-term track record.

SECTION 4.2 WATER BALANCE

Atkins/Cardno observed that Hunter Water's leakage levels are in line with their expectations. The Corporation is pleased to note the consultant's confirmation of its leakage control activities and its progress on developing economic level of leakage assessment processes to determine optimum leakage control activity levels.

SECTION 4.3 OPERATING EXPENDITURE AND EFFICIENCIES

In the Final Report, the consultants claim that there are opportunities to optimise maintenance expenditure and drive an optimal level of capital replacement. This comment is made without any acknowledgment of Hunter Water's existing processes for optimising its maintenance and replacement expenditure and, as a result, implies that the Corporation has no such processes in place.

RESPONSE TO ATKINS/CARDNO OVERVIEW REPORT

Hunter Water Corporation has developed, over many years, a range of processes to optimise its maintenance strategies. These strategies have been developed by assessing the need for maintenance and rehabilitation of assets against their “risk signature” and whole-of-life costs.

This approach involves taking account of a range of critical factors including failure rates, consequence of failure and costs of maintenance and replacement. For example, using this approach, small pumps with a history of high failure rates, low consequence of failure and high maintenance costs optimally might be run to failure. At the other extreme, major trunk watermains with a high consequence of failure should be accorded a high maintenance spend to assure ongoing service and should be backed up by contingency plans for the rare event of a failure.

The optimised maintenance strategies were outlined to the consultants during the review. The risk assessment embodied in these strategies also takes into account Hunter Water’s obligation to meet operating and environmental licence requirements. Some of the strategies outlined to the consultants were:

- Trunk watermain risk assessment process, which ranks trunk watermains on a risk basis so that condition assessments can be carried out and remedial actions formulated to ensure continuous reliable performance of those mains.
- Reticulation watermain replacement model, which determines the optimal time to replace smaller reticulation watermains based on a comparison of operating costs (financial, social and environmental) and capital costs of replacement
- Critical sewermain inspection program, which is based on a risk model of sewer mains. Inspections are carried out so that failures with high consequences can be circumvented.

While the Corporation acknowledges that there will always be scope for improvement, and it is keen to pursue new approaches that deliver greater efficiency, it is disappointing that its significant achievements to date are not acknowledged. It is also worth noting that Hunter Water’s success in optimising asset management in this way has attracted attention from other agencies, both nationally and overseas (including the United Kingdom).

SECTION 4.4 CAPITAL EXPENDITURE AND EFFICIENCIES

Capital Efficiencies

This section of the Overview Report summarises the consultant’s assumptions on capital efficiency. The Corporation understands that the consultant’s approach to reviewing the Corporation’s capital program in essence involved a two-stage process:

- 1) The consultant adjusted the Corporation’s forward capital program based on a review of representative schemes and briefings by Hunter Water on the asset management and procurement practices. The adjustments reflected the consultant’s views about Hunter Water’s ability to deliver the capital programs, the need for works to meet population growth and the need for works at specified times to meet regulatory requirements.
- 2) Apply capital efficiencies in the form of:
 - Catch-up efficiency
 - Continuing efficiencies

RESPONSE TO ATKINS/CARDNO OVERVIEW REPORT

The catch-up efficiencies are those where, through improvements in process, a utility can progress towards best practice. The consultants identified four areas: asset management; cost estimation; procurement, and program management.

Continuing capital efficiency reflects the continuing improvements achieved over time by frontier utilities through new technology and innovation. The total efficiency adjustment (both catch-up and continuing) recommended by the consultants for Hunter Water over the period are shown in Table 2 below.

Table 2 Capital Efficiency Targets

	(% per annum)			
	05/06	06/07	07/08	08/09
Total Efficiency Applied	3.5	5.5	7.5	9.0

The Corporation's view of the capital efficiencies proposed is summarised as follows:

- The Corporation expects stretch efficiency targets and is willing to meet the challenge they provide.
- HWC has a track record of delivering efficiency improvements to its customers as is evident by the 45% reduction in operating costs per property delivered to customers since 1991
- In setting capital expenditure efficiency targets that will inevitably reduce the forward water and wastewater investment program by \$38m (see below), the Corporation would expect to see objective supporting argument rather than broad brush percentage reductions.
- Expecting a sound justification is reasonable because the Corporation's investment program is:
 - Largely regulatory driven
 - Supported by a rigorous approach to capital works planning and project delivery that relies on constantly updated service delivery plans, strategy reviews and option studies
- Hunter Water Corporation's procurement methods for capital works involve all major works going to the market and being delivered by market competitive process. In addition, the Corporation develops specific procurement plans so that appropriate risks are allocated between the Corporation and potential contractors. This ensures that contractors do not inflate contract prices to cover risks they cannot control or have not considered.
- The consultant has failed to acknowledge that the Corporation is finding that increasing environmental and safety issues are, in reality, driving up its project management costs. The Corporation provided the consultants with specific information about the nature of these additional costs. It is noteworthy that the Corporation has not specifically made an increase in its forward program to deal with these issues and, at this time, would hope to largely offset these through other efficiency gains.
- Finally, the Corporation noted a substantial difference in the approach taken by Atkins/Cardno when compared with that taken by the IPART consultant in the previous price review (in 2002).

Atkins/Cardno recommends substantial "pre-efficiency" cuts and/or re-phasing of the Corporation's programs before applying efficiency reductions of up to 9% in 2008/09.

RESPONSE TO ATKINS/CARDNO OVERVIEW REPORT

This contrasts markedly with the approach of the previous consultant who recommended only efficiency reductions (without any pre-efficiency cuts) and then at a maximum rate of 5%. By recommending both pre-efficiency reductions and a higher maximum efficiency target, Atkins/Cardno is implying that the Corporation is actually regressing in its approach. This is a view that the Corporation does not share.

HWC Proposed Capital Expenditure 2005/06 to 2008/09

Prior to commenting on the Atkins/Cardno review of the Corporation's capital program, this section provides an overview of the total program and the drivers or imperatives for investment.

As noted in the Corporation's September 2004 submission, the total capital expenditure for the proposed price path period (2005/06 to 2008/09) is \$337m. A breakdown of the forecast is shown in Table 3 below.

Table 3 Capital Expenditure 2005/06 to 2008/09 (2004\$m)

Component	2005/06	2006/07	2007/08	2008/09	Total
Wastewater Treatment	\$11.9	\$20.2	\$22.9	\$4.7	\$59.7
Wastewater Transport	\$31.5	\$39.3	\$23.2	\$30.3	\$124.3
Water Supply	\$19.1	\$16.9	\$27.2	\$35.8	\$99.0
Priority Sewerage Project	\$8.8	\$6.4	\$8.5	\$4.6	\$28.3
Other	\$11.7	\$4.4	\$4.7	\$5.1	\$25.8
TOTAL	\$83.1	\$87.0	\$86.5	\$80.6	\$337.1

This is an average expenditure of \$84m per year in 2004\$ terms – a substantial increase on the average of \$65m projected for the current (2003/04 to 2004/05) price path. Approximately 63% of the program is for wastewater facilities. This reflects the significant investment to meet regulatory requirements for wastewater systems with increasing attention on emerging regulatory requirements and customer expectations for wastewater transport systems.

The major drivers for expenditure are as follows:

- **Growth** – Works to cater for growth (future development) in accordance with regulatory / statutory standards. Catering for growth is factored into most water and wastewater system upgrades. Expenditure is expected to be recovered over time through the developer charging process.
- **Regulatory and Statutory Standards** – Works to improve asset performance, levels of service for existing customers and to ensure compliance with mandatory regulatory and statutory standards. Expenditure in this area can occur to comply with existing standards or to meet new standards.
- **Business Decisions** – This includes items to enable the Corporation to effectively run its business such as IT, fleet, meters etc and capital expenditure that has an economic benefit by allowing Hunter Water to avoid ongoing operational, maintenance and risk costs (eg the watermain replacement program).
- **Government Programs** – This includes expenditure to meet specific Government Programs which may override other objectives such as commercial return eg Priority Sewerage Program.

RESPONSE TO ATKINS/CARDNO OVERVIEW REPORT

In all these aspects, the Corporation's approach to the formulation of its capital programs relies on the successive build-up of information through population studies, option studies, strategy reviews and consultation with key stakeholders.

Future Capital Expenditure - Water Supply

The impact of the Atkins/Cardno review on the Corporation's forward water supply program is presented below. The overall pre-adjustments (before efficiency adjustments) resulted in a \$8.1m reduction over the price path period. The consultant justified the largest reduction that of the investments in the major growth schemes, on the basis that in their view "*there was sufficient uncertainty in the timing of land releases, developer plans and other exogenous factors*".

The Corporation's offered the following justification for current growth rate servicing strategies that lie behind the investments proposed.

- New property forecast figures in price path submission is based on projections developed for Corporation's Integrated Water Resources Plan (IWRP) in 2002 which are still relevant.
- Current population projections by the Department of Infrastructure, Planning and Natural Resources (DIPNR) show a population increase for the region served by Hunter Water of 74,000 between 2006 and 2031. The DIPNR projections include a population increase of 16,500 in the region by 2011. It is worth noting that, as part of the Sydney Metropolitan Strategy, DIPNR will be exploring a range of population scenarios above that which has been projected. Recent public discussion has suggested increases of more 250,000 people over the next 30 years are possible.
- Actual data on customer connections over the last 2 years indicates a higher level than the historic trend
- Expenditure on water supply for growth in later years of the price path is also linked to the fact that Hunter Water has done little major water system augmentation over recent years. This is because there has been sufficient capacity in the network to cater for development due to demand being contained by pay-for-use pricing, better asset management and a number of major industrial customers closing and freeing up system capacity. This spare capacity now largely has been taken up. The Corporation has also seen changes to peak consumption patterns in recent hot summers. Together, these put additional stress on the system.
- Adjusting future capital budgets downward as proposed by Atkins/Cardno will only increase the risk that not enough funding is available to ensure regulatory requirements are met.

Given the above, the Corporation believes that the expenditure profile to address growth in the water supply systems, as outlined in its original submission, is justified.

The application of the efficiency adjustments recommended by the consultant would result in a reduction of \$5.9m over the proposed price path period. Given the detailed planning and procurement processes followed by the Corporation and its commitment to continuous improvement, the Corporation considers that this level of efficiency reduction proposed by the consultants is excessive and not sufficiently justified.

The total reduction to the Corporation's forward water supply program over the price path (excluding the adjustment for opex capitalisation) is \$14m. This represents a reduction of 14.2% on the Corporation's proposed investments of \$99m over the price path, as shown above in Table 3.

Future Capital Expenditure - Wastewater

The impact of the Atkins/Cardno review of the wastewater forward capital program is evident in three main areas.

Firstly, the re-phasing of the expenditure related to new mandatory standards. Mandatory standards in this case are requirements set by the Department of Environment and Conservation (DEC) in the Hunter Water's wastewater system licences. These investments principally relate to the abatement of wet and dry weather sewerage overflows in the Newcastle and Lake Macquarie wastewater systems by 2007.

The consultants view was that there is sufficient uncertainty in the scope and timing of the proposed schemes to warrant a re-phasing of the works and they have therefore deferred \$12m to later years.

Hunter Water concedes that uncertainty remains over the nature and timing of subsequent works in the longer term. However the investments programmed for the 2005/06 to 2006/07 period correspond to meeting existing DEC licence standards. The references to the DEC licences to support these investments were provided to the consultants.

Two examples of works that will be affected by the \$12m deferral are the Newcastle Stage 1 and the Lake Macquarie Wastewater Transport System Upgrades. Both of which have pollution reduction requirements by 2007 under their respective DEC wastewater system licences. Failure to undertake these works will mean that the Corporation will be in breach of licence obligations.

The second area of concern to the Corporation is Atkins/Cardno's proposed reduction of the capital works for wastewater systems in response to future growth. The consultant argues that there is sufficient uncertainty in the timing of schemes related to land releases and developer plans to warrant a reduction of \$8.9m over the proposed price path period.

The Corporation's reasoning behind its growth assumptions is outlined above in comments on the water supply investment program. The risk to the community in this case is that should the works need to proceed (and they have not been incorporated in developer charges), it will be up to the community at large to finance the investments rather than the developers. Failure to program these works may also inevitably lead to delays for developers.

The final point to make on the Atkins/Cardno review is the impact of the efficiency targets on the wastewater program. The efficiency targets proposed by the consultants would result program reductions of almost \$13m over the price path. As noted earlier in relation to capital efficiency targets, the Corporation finds the justification for such a reduction weak especially in the face of increasing environmental and safety obligations that drive up project management costs - a factor not acknowledged by the consultants.

SECTION 4.5 RECOMMENDATIONS

Growth Expenditure

Atkins/Cardno comment in this section that current growth proposals require customers to fund substantial growth expenditure and implies this is justification for re-profiling the growth expenditure.

RESPONSE TO ATKINS/CARDNO OVERVIEW REPORT

This comment overlooks two important considerations. First, major water capital works are almost always lumpy in nature – that is, a large investment at a particular point will accommodate growth for many years. This lumpiness means that the steady-state balancing of capital contributions and growth capital expenditure referred to by the consultants is unlikely in reality. This situation is recognised by the IPART developer charges methodology, which calculates these charges from a cash flow analysis extending over 30 years. This methodology also has the effect of having new entrants pay a holding charge on capacity built in advance for their needs.

Secondly, IPART's regulatory financial model makes adjustment for assets provided by developers by not including new assets in the regulatory asset base. This is done by deducting developer contributions from new capital additions to the regulatory asset base.

While an increase in growth capital expenditure is foreshadowed for the next few years, this is taken into account by the developer charges methodology, which will recover these costs over time. Naturally, in years when there is high capital expenditure on growth assets, developer contributions will not balance this expenditure. On the other hand, in years of low capital spending on growth assets, capital contributions may exceed growth spending.

The reality, therefore, is that capital contributions and capital expenditure on growth will never balance on a year-to-year basis but this is appropriately taken into account through the developer charges methodology and the adjustments to the value of new capital before inclusion in the RAB. On these grounds, the imbalance between developer contributions and the capital spend on growth in any one year is not a rationale for rephrasing the growth capital program.