



Copy presented to: The Independent Pricing and Regulatory Tribunal (IPART)
Sydney Water Corporation (SWC)
Services Sydney (SS)
Media interests

Response to the Department of Environment and Conservations Submission ref. S6533 by R. Edwards

If ever there was a quest or battle that needed to be fought then this is that battle, for the stakes are far higher than many people might think. Not only is the future price of freshwater at stake, but so too are the benefits that could be gained from massive sewage recycling and expansion of a water credit scheme. In addition, the impact attributed to following the strategies and concepts presented in the *EdwardsHanlon approach* would both greatly aid the Environment and more importantly enhance Government Accountability.

With this in mind, perhaps its time to again awaken our sleepy population and focus their attention upon the history attributed to Government Conduct and Ethos. In this regard, perhaps metaphorically speaking, I am to be but a lone knight abandoned by his King, that now stands ready to fight against a foe who believes they will win. Should this be the case, then so shall it be, for this small flea of a Knight is armed and waiting with glee.

Therefore should you be concerned upon what you may read, your assistance would be most welcome to win this valiant deed. Those of you with pen in hand, now is the time to take that stand, note the points that have been raised, and question those who seek our praise. For all you town criers now go ring your mighty bell, hail out your mighty voices and stand upon the hill. For those who carry cameras this I say to you, direct your lenses likewise and give us all a thrill.

As for my King this I say to you, I now claim the crown of Valencia in the name of you.

The Cid

Table of Contents:

Part One: My response

1. The Objective of the report – see note on title page.
2. Overview of this submission – see pages 3 - 5.
3. Update in relation to my previous submissions – see pages 5 – 7.
4. The history attributed to Government Conduct and Ethos – see pages 7 – 8.
5. The Future for Environmental Funding – see pages 8 - 9.
6. The Portfolio Streams – see pages 9 – 10.
7. The brief history of the journey taken – see pages 10 – 13.

Part Two: The breakdown of the EPA (DEC) Submission.

1. The DEC Opening letter to the IPART see page 13.
2. The DEC Executive Summary broken down see pages 14 – 17.
3. The DEC submission section 1 see pages 18 – 21.
4. The DEC submission section 2 see pages 21 – 24.
5. The DEC submission section 3 see pages 24 – 29.
6. The DEC submission section 4 see pages 30 – 36.
7. The DEC submission section 5 see pages 36 – 40.
8. The DEC submission section 6 see pages 40 – 48.
9. The DEC submission section 7 see pages 48 – 50.
10. The DEC submission Appendix 1 see pages 51 – 52
11. References see pages 53 – 54.

Overview of this submission.

Firstly I wish to thank those of you who have provided feedback in relation to my initial submissions to the IPART. Your comments seeking further assistance have certainly been noted and your support is certainly most appreciated. Hopefully the contents of this submission will supply additional aid for some of the outstanding issues raised.

That said, no doubt many of you who have read my initial submissions to the IPART would be somewhat surprised with the recent turn of events. In this regard I am referring to the contents attributed to the Department of Environment and Conservation (DEC) submission known as S6533.

Although I welcome the involvement of the DEC within the framework of the Tribunals submission process, upon examination of the contents attributed to their actual submission a multitude of extremely concerning issues arose. Prior to highlighting these issues it would seem appropriate to address the actual government agency behind the DEC submission. In this regard I am referring to the NSW Environment Protection Authority (EPA). Hence, for the purpose of this submission, it is the EPA who will be addressed and not the entire DEC.

With this in mind, the removal of some of the camouflage attributed to the EPA (DEC) submission, has only aided in exposing that this submission is nothing more than a defensive strategy designed to uphold the Metropolitan Water Plan (MWP), uphold and expand the EPA's (DEC's) powers and protect the existing consolidated revenue stream obtained via Pollution Licences.

It is this last point of upholding the consolidated revenue stream obtained from Pollution Licences that is the most concerning. Many who have read "all" of the submissions contained under this IPART web site including that of mine, would be aware of the submission put forward by the organisation known as Services Sydney. Notably, the past theory attributed to stifling the access by private sector organisations to major sewage recycling projects seemed to constantly be related to competition concerns in relation to Sydney Water.

However, as will be demonstrated within this submission the real culprit is the threat to existing consolidated revenue methodology used by the EPA. Hence, the real reason for not proceeding down the path of major sewage recycling is that it reduces the revenue generated under existing Pollution Licence revenue methodology. Notably, the EPA's existing system relies heavily upon volumetric calculations that charge the polluters on the basis of how much they pollute. As an example in 2003 the Pollution Licence fees and approvals raked in just over \$31.4 million dollars. While Waste related levies raked in just over \$92.1 million dollars.

For a government agency such as the EPA, these licences, approvals and levies are seen as a wonderful source of taxable income that greatly offsets the expenses attributed to their daily operational costs. From the perspective of Government Accountability it would seem that this process of racking in more consolidated revenue than your actual Departments costs is viewed as extremely positive.

However, what if this strategy leads to bureaucratic complacency and perhaps the creation of yet another bureaucratic monopoly situation?

Throughout the EPA submission can be found numerous attempts to focus attention upon the question of improving the efficiency of Sydney Water. The EPA has even requested the IPART to include greater reporting mechanisms in relation to Sydney Waters future income and expenditure habits. Unfortunately, the EPA seems to have forgotten the old saying that goes along the lines of "people in glass houses shouldn't throw stones".

Prior to the EPA placing additional accountability demands upon another Government agency perhaps they should consider revising their own procedures. Did not the EPA greatly over spend their capital budget when they relocated their head Office to Goulburn Street, Sydney?

In addition, did not the EPA have a major blow out in budgetary expenditure related to their phone system around the same time?

With this in mind, it maybe of interest to note that the *EdwardsHanlon* approach to water reform includes a mechanism attributed to justifying forward income requirements for infrastructure needs against a factored levy amount. Just as this can be used as a possible tool for future infrastructure auditing requirements, the same principals can be applied to any project work provided the forward costs associated are known. Hence, adoption of our strategy would also result in improvements to Government accountability and improved government efficiency, reducing overall costs to our taxpayers.

Perhaps then the major learning curve in this regard for all Environmental Action groups to note is that volumetric methodology used in Pollution control does not encourage Governmental Agencies to take action upon reducing the actual volume of pollution discharged into the Environment. Even the EPA (DEC) admits that over the last decade the major emphasis has been to direct all the water pollution that used to flow into our rivers and estuaries directly into the ocean. Hence, it would now seem an appropriate time to establish a new methodology that actually improves the Environment.

From the perspective of the actual polluters it is perhaps time for them to have the ability to question increases in Pollution Licences, Approvals and Levies that exceed the annual CPI figure. This has no doubt been a major concern to many of them over the years. The fact that the EPA can increase their Licence fees above the actual CPI figure, without their being any form of accountability justification process, is absolutely astonishing. Perhaps this is an issue that also needs to be now addressed. Hence, the logical solution would be to place such decisions under the jurisdiction of the IPART. Such a move would enable Industry, Local Government, Environmental groups and others input into accountability issues related to the EPA's performance and hence justification for future revenue increases.

A further point to note is that it would seem imperative for any claim in relation to increasing the cost of Sydney Waters Pollution Licence be thrashed out prior to the decision being handed down by the IPART in relation to future water charges. In this regard, it is important not to proceed down the path of attempting to squeeze Sydney Waters financial position by threatening to increase Pollution Licence fees should the IPART not approve the EPA demands on water pricing. Perhaps the bureaucrats in the EPA and the various Labor Ministers should now take a moment to reflect upon the tremendous pressure that was applied to the head of the Utilities in Queensland and the terrible outcome that followed. Surely our bureaucrats and State Government Ministers have learned from the tragedy that befell the Head of Queensland Utilities?

That said, surely this is not the time for the members of our NSW State Parliament to now consider back room negotiations in relation to the issues raised. The issues identified and the possible solutions presented should be of concern to many of our parliamentary representatives. As such the topics presented should transverse all factions and Political affiliations. Our future, that of our children and the Environment is dependent upon your actions. So if what you now read is of concern to you, note the points that have been raised and let your voices now be true. Slam down your fist upon that table and let the opponents to this cause know where you stand. Speak not as one voice but stand united and show in your faces your conviction. Let all opponents now tremble at the immense power this will cause.

Hence, the most logical solution would be for our State Parliamentarians from all factions now urgently consider amendments to alter section 12B Notice of proposed access agreements, 12C Registration of access agreements, 13A Determinations of Pricing, 14A Setting of methodology for fixing prices, 16A Passing through efficient costs in price determinations, 24FC Licence auditing functions of Tribunal including 30A Review of Act, which are all sections attributed to the Independent Pricing and Regulatory Tribunal Act 1992 No 39.

It is for this reason that I can no longer support one of the proposed compromises put forward in my second submission in relation to the private sector acting as agents of Sydney Water. What needs to be considered now is for the IPART to uphold the request for full access to the sewage market by Services Sydney. So concerning are the issues that have been uncovered that there may even be grounds for Services Sydney to seek legal advice upon the past and present actions of the EPA (DEC) in preventing access to this market.

Thus my analysis of the EPA (DEC) submission identifies major concerns in relation to what would seem to be a deliberate attempt by the EPA (DEC) to undermine the perceived Independence of the Pricing Tribunal and that of the entire submission process. The EPA (DEC) has included a number of quotations that supposedly support their stand. In this regard, it is the intension of this submission to demonstrate that these quotes also support the *EdwardsHanlon* approach for the introduction of a major sewage recycling scheme.

Hence, the elimination of all supporting quotations included within the EPA (DEC) submission should highlight their actual hidden agenda. Which raises far more concerning questions then it provides answers for. In this regard, should you have any questions or concerns in relation to the EPA (DEC) submission, it is highly recommended that you do not direct your questions to the twenty or so pawns that put together their submission nor to Jim Booth the Executive Director and signatory of their document, but directly to Ms Elizabeth Corbyn the Director-General DEC.

On a final note, although there are a number of concerning issues contained within the EPA (DEC) submission, not all of the contents is attributed to doom and gloom. In actual fact, many of the statements presented support the need for a major sewage recycling scheme. As such, the entire EPA (DEC) submission has been retyped with my comments included in blue ink. I apologise if you perceive that there are errors in the EPA (DEC) statements, however if you examine the original document you will see that it too contains the same.

Update in relation to my previous submissions

A review of the various proposals contained within my previous submissions has now been conducted. Unfortunately one issue that did emerge was in relation to the notion of a subsidy to protect those on low incomes against the total effects of increasing the cost of freshwater.

As you would be aware, my submission attempts to address a number of issues, the primary ones being lack of infrastructure and sewage recycling. As the concepts and strategy is designed to utilise forward income from a proposed levy to address infrastructure needs, the majority of the solutions have been focused accordingly.

In this regard it is acknowledged that I have not considered the substance or fairness of the existing system in relation to those in need. Therefore although my submission places an emphasis upon consideration attributed to protecting the less fortunate with a subsidy against future price increases, I would certainly support any move to introduce such a subsidy that would be applicable to the entire bill.

Perhaps consideration needs to be made for the introduction of a needs amount of freshwater. By this I mean that people on low incomes or with large families would be entitled to "x" amount of litres of freshwater per month for free (a survival clause). Naturally this would equate to a reduction in the overall bill payable to the water utilities.

Perhaps it should be noted that Business and Government heavily subsidise existing water usage. If you are wondering what I mean by this statement, think upon the last time you used a public toilet or that of the facilities provided by your employer. Hopefully the inclusion of this concept will aid the cause put forward by the Pricing Ombudsman, Local Shires Association and that of the Public Interest Advocacy Centre.

Secondly, the *EdwardsHanlon* proposal was to introduce a major sewage recycling target attributed to 43%. This figure was to be achieved over a period of twenty years. In truth this was an extremely conservative target introduced to test the markets and bureaucracies reaction. The market seems extremely interested while many in the bureaucracy now view the target as achievable.

In actual fact the same achievement can be accomplished within ten years. If the private sector becomes involved via entering into partnerships and obtaining direct access to the customers not only will the industry be revitalised through private sector investment in capital expenditure, but the new target of 43% sewage recycling in ten years could increase up to as high as 80%. At present in NSW there is only one Council that has achieved this level of sewage recycling, the Shoalhaven.

In addition, achieving such massive sewage recycling would enable the uptake of additional water reform. Hence, rainwater tanks being directly connected to toilets would increase the volume of water supplied. Stormwater outlets and business sector roof collection could also be gradually connected to the existing sewerage system increasing the volume of water beyond that provided by our existing dams. The excess freshwater produced after processing, could in the future be pumped directly into the existing Warragamba dam or other Coastal dam networks. Therefore creating a situation where dams such as Warragamba may have enough water to supply the Bathurst area and beyond.

Not only would this scenario address our communities concerns for freshwater, but other issues such as stormwater harvesting, reduced flooding in the Metropolitan area, less pollution from stormwater drains and additional water for genuine environmental flows and agricultural use could also be enhanced. As for the proposal to build such a huge desalination plant in Sydney and the proposed pipeline from the Shoalhaven, perhaps if such an outcome was to eventuate then there would be major grounds for a rethink of the existing strategy.

Yet surprisingly, although numerous policy officers have considered our existing proposals, one important element seems to have escaped their attention. Upon reaching the ten or twenty year target attributed to what ever percentage (in the example 43%), it should be noted that a large portion of the proposed levy will still remain.

It is this future funding arrangement that should provide the Water Utilities (Sydney Water and others) with sufficient funding to supply the excess water to the Water Catchment Authority free of charge. Notably, if the private sector is involved in some kind of partnership arrangement, this will entail the provision of funding to purchase excess freshwater produced by the private sector organisation/s.

As previously stated, it would seem appropriate for the IPART to continue the role of maintaining jurisdiction over all price determinations.

In relation to the uptake of water meters for new units and rainwater tanks for new dwellings, I again raise the concept as presented to the prior NSW Treasurer in relation to offsetting a portion of this expense against stamp duties payable. The provision of offsetting such expenses including retrofits against the stamp duties payable would seem a logical solution.

On a final note, it is important to remember the past pioneers who have travelled this same hard road attributed to pursuing major water reform. In this case, it should be remembered that not that long ago, the total amount of sewage recycling by both Wyong and Gosford Local Government Councils amounted to a figure less than 1%. Wyong will soon reach 5% sewage recycling which they now proudly display this achievement upon their web page. As for Gosford, very complacent Council representatives have publicly stated at a local Kincumber meeting that they are seeking a 10% sewage recycling outcome to be achieved in the near future. At the same meeting it was announced that Council were seeking jurisdiction over water syphoning activities and that a letter requesting such had been sent to the Minister for Local Government.

For those past pioneers who have put forward their suggestions to improve things or reform our government agencies, the concept of the bureaucracy either pouncing upon any income generated or adopting the concept as that of their own would not be unfamiliar. Thus, attempting to achieve recognition for one's work from the bureaucracy is often like attempting to get blood from a stone. To this end let this one example serve as a prelude to all such unique individuals.

In 1973 a documentary was made about a man called Francis Sutton who is reportedly one of the early pioneers in putting forward the concept of using sewage waister water on an extremely large scale and directing it further inland. This was reportedly updated for ABC television and shown back in early October 1999. It would be nice if the ABC could consider rescheduling this program again in the near future.

In addition, the ABC has on a number of occasions presented stories in relation to the work being conducted by the CSIRO in relation to sewage recycling, it would be nice to see a few of those stories again aired in the not so distant future.

The history attributed to Government Conduct and Ethos

Although it now seems a life time ago that our current Premier Robert John Carr was himself Leader of the Opposition in State Parliament, many will still recall the absolute outrage Mr Carr projected towards the developments that unfolded in relation to the Dr Terry Metherell incident and the ramifications for the EPA and certain Ministers that followed. A full transcript of this entire saga can be found within the NSW Hansard.

Another good source of information for this saga is that of the ICAC. Unfortunately, for some strange reason the ICAC search engine no longer associates the Dr Metherell incident with that of the EPA. Hence, instead of proceeding down the path of searching the ICAC data base with the key word "EPA" just use "Metherell". Upon locating the actual ICAC reports all the associated information in relation to who was involved and what transpired will be revealed.

As many would recall the eventual outcome was the resignation of the then Premier the Hon Nicholas Frank Greiner MP and a number of Coalition Members of State Parliament. This led to the formation of a new Coalition Government and raised the stature of the Independent MP's. In addition, the importance of the newly created Independent Commission Against Corruption (ICAC) was certainly demonstrated.

After the Dr Metherell incident, all NSW Government Agencies proceeded down the path of developing Departmental Codes of Conduct and Ethos. The response from the EPA was to be at the forefront of not only developing such codes but being the first NSW Government agency to do so. This was later followed with the first investigation of a corrupt EPA employee by the ICAC. Notably, the EPA and ICAC received a lot of due credit for the work that was conducted in relation to this particular investigation.

Not long after the findings of the EPA/ICAC corruption investigation had been handed down, a new corruption issue surfaced in an affiliated government agency. This being the National Parks and Wildlife Service and the notorious "Smoking Gun" incident as reported by the Channel Nines Sunday program.

At the time questions arose related to allegations of possible intervention by unnamed parties over the handling of the ICAC investigation. So concerning were these allegations to the then ICAC Commissioner Ms Irene Moss that she temporarily stepped aside. For a more in-depth understanding of what transpired please view the actual ICAC transcripts via the ICAC web site search engine related to this case.

Although the "Smoking Gun" incident turned out to be a bit of a fizzer, the actual reporter from the Sunday program received quite a public grueling from the then ICAC Commissioner. With this in mind, perhaps Channel Nine may now consider reviewing their footage in relation to the recent appointment of the Director-General Community Services Department, as presented by our Premier.

If upon reviewing all of the above, the underlining question that you are left with is something along the lines of "does our existing system of Government enhance the ability of the bureaucracies to influence or threaten the Independence of our Tribunals and Commissions?"

Then perhaps one answer to this question is for a sceptical review of the amendments to the ICAC Act that are being currently debated in the NSW Parliament. For our Parliamentarians perhaps reviewing the past events may give additional incentive to now consider urgently reviewing the existing legislation attributed to the powers of the IPART prior to any determination being made in relation to the current water pricing.

The Future for Environmental Funding

Instead of attempting to redirect a target of \$30 million dollars each year for four (4) years from Sydney Waters revenue base into the Metropolitan Water Plan (MWP) managed fund, perhaps it is time to consider an alternative solution that would certainly enhance environmental improvements throughout the State.

Hence, it is proposed that fifty (50) percent of the annual consolidated revenue achieved from Pollution Licences, Approvals and the Waste Levy be directed to a managed fund attributed to environmental improvements.

In short, this would provide the Environmental movement with a guaranteed source of income (approximately \$61.7 million dollars per year), that could be used to address all kinds of Environmental projects. It is noted that there exist hundreds of Environmental groups eager to fix the various problems found due to pollution and land clearing activities. In addition, it is noted that several high profile organisations such as the Nature Conservation Council of NSW, Total Environment Centre and Central Coast Community Environment Network and others already have the necessary expertise to administer such projects.

Notably, elements within the EPA will naturally be on the defensive against such a proposal. However, perhaps it should be remembered that the EPA values “innovation”. Hence, should this proposal be adopted by the Carr Labor Government, there should be plenty of scope for talented Officers within the EPA to now demonstrate their innovative thinking.

Further, proceeding down the path of major sewage recycling has additional benefits that flow onto a number of portfolio areas. The following are just a few.

The Portfolio Streams

- Treasury – The *EdwardsHanlon* approach should be of interest in relation to the potential income generated by the scheme and the improvements to Government Accountability.
- Infrastructure and Planning – As the *EdwardsHanlon* approach involves supplying additional income to address massive infrastructure projects, the employment opportunities and ability to commence capital projects sooner should be of interest.
- Environment – The impact attributed to massive sewage recycling on the environment speaks volumes.
- The Hunter – The Hunter has large catchment areas but unfortunately small dams, the ability to improve the size of its dams or consideration for building additional dams would enhance the Hunters ability to aid its neighbours. Such activity would reduce the future risk of flooding and hence as the Hunter currently recycles just over 7% of its sewage the possibility of earning additional income from selling water credits is enhanced.
- Utilities – The *EdwardsHanlon* approach increases the ability of the Utility to address issues in relation to sewage leakage, new plant & equipment, improves their public standing and ensures future revenue and viability. It further lays the ground work for the involvement of the Private sector in sewage processing and mining activities.
- Sport and Recreation – Large scale sewage recycling improves community sporting fields while reducing the risk of injuries due to hard surfaces. This results in fewer injuries and potentially a reduction in the insurance premiums.
- Rural Affairs and Local Government – Just imagine the benefits if the scheme went State wide.
- Regional Development & Illawarra – Expansion of the *EdwardsHanlon* scheme State wide should aid in supplying additional income to regional areas which should enhance the potential for innovative ideas to resolve our water crisis. Potentially if additional water could be supplied to the West then perhaps the effects attributed to server droughts such as job losses, stock deaths and crop failures could be lessened. Although the *EdwardsHanlon* approach will not resolve all our drought problems, it has the potential to lay down the frame work associated with supplying funding for innovative people to step forward and meet such challenges.

- Primary Industry – The introduction of massive sewage recycling should certainly improve the fisheries by lessening the impact of pollutants entering the ocean. In addition, each adult size playing field has the potential to eat up to a quarter of a mega litre of recycled wastewater per week. In Sydney's western suburbs where the temperature gets somewhat higher, the uptake of recycled sewage water on the playing fields maybe even higher. In any event, each playing field watered via recycled sewage water will greatly enhance the growth of grasses. Hence this creates the potential for future drought relief through harvesting grass clippings if required.
- Western Sydney – In addition to the benefits mentioned above, the uptake of massive sewage recycling should address concerns raised by the Gardening Industry, including long term job security for greens keepers and jobs growth in associated industries.
- Central Coast – As Wyong Shire has embraced efforts to utilise sewage recycling and is looking into other innovative ventures associated with harvesting freshwater from Industry, perhaps this could prove to be the pilot area to launch the scheme officially State-wide.

The following is a brief history of the journey attributed to finding this solution.

- 10th October 2002 letter sent to local member Chris Hartcher MP regarding "grass clippings" proposal to aid in supplying fodder to farmers in West similar scheme as operating in Queensland (attributed to just a concerned resident).
- 14th October 2002 letter sent to local member Chris Hartcher MP regarding possible "stock feed bank" involving the storage of hay bails being established (this was my first attempt at policy in this area).
- 16th February 2003 letter sent to local member Chris Hartcher MP regarding possible "Farming Policy Issue" for Coalition to consider. Concept of utilising Taxation credits to offset cost of obtaining hay bails for drought preparation and redirection of GST funding in relation to the transportation of goods too and from market to offset administration costs. Scheme was to involve the NSW Dept of Agriculture and Federal Taxation Department. (Unfortunately the only saving attributed to such a scheme would have been the effects attributed to droughts. The costs of the scheme where too high). To Chris Hartcher MP's credit he still forwarded the concept over to the Hon Duncan Gay MLC for consideration.
- 12th September 2003 letter to Hon Duncan Gay MLC in relation to Nationals policy titled "Managing Water for Stronger Communities and Sustainable Environment". (Existing policy had taken into consideration 99.99% of all areas attributed to the current thinking in relation to water reform. I could not contribute any additional material of significance).
- 12th September 2003 letter to Minister Frank Sartor MP containing proposal for consideration of new dam on upper Colo River and pipeline linking coastal dams to inland dam (Warragamba). (At this stage I was unaware that most of the dams were already linked via pipelines established years ago).
- 20th November 2003 letter to Hon Duncan Gay MLC in relation to parliamentary consideration in relation to Governments water strategy.

- 20th November 2003 letter to Minister Robert Debus MP in response to his unexpected response dated 10th November 2003. In the Ministers response he had highlighted the Labor Governments Policy in relation to Dams and water reform. (My response to the Minister reminded him of the table water supply under the Sydney basin which could be accessed to help resolve Sydney's water problems in the short term. In addition major concerns in relation to possible future flood risks applicable to Sydney residence as a result of the huge developments and lack of flood risk planning were highlighted).
- 26th November 2003 letter to Hon Duncan Gay MLC in relation to a new strategy and concept for the Nationals to consider in an attempt to address the inland water crisis. (Unfortunately although the strategy would have been extremely beneficial to the Farmers, the concept was too cost inhibitive involving huge capital expenditure with no real mechanism available to offset the expenditure presented).
- 9th January 2004 letter to Minister Michael Egan MLC in relation to a request to consider offsetting some of the future funding attributed to Stamp Duty collections against increasing the rebate applicable to the installation of rainwater tanks.
- 28th January 2004 with the aid of Ray Hadley 2GB radio station, the Labor Governments water strategy and current policy is exposed over the airwaves (*The Government's plan for existing and future water supply in Sydney are based on reducing our demand for water. Improving water efficiency and making better use of our existing water resources, for example, through more efficient appliances, water recycling, and through community awareness of their water use, is more sustainable and cheaper than building very expensive and environmentally damaging dams.* Bob Debus 10 Nov 2003).
- 15th March and 5th April 2004 letters to Graeme Head Managing Director Sydney Catchment Authority in relation to attempts at gaining further support for incentives in the uptake of rainwater tanks in Sydney Basin (positive outcomes in relation to reduced stormwater flows, water demands from catchments and aiding Gardening Industry were included in my supporting arguments).
- 5th April 2004 letter to Minister Robert Debus MP reminding the Minister of his presentation on ABC Stateline program and the positive aspects attributed to Dams, such as the survival of native fauna and flora in the upper tributaries of dams.
- 23rd April 2004 Minister Frank Sartor MP has interview with Quentin Dempster ABC Stateline program and presents concept to build the 12th dam for Sydney at Welcome Reef to assist in servicing Sydney's future water needs.
- 7th May 2004 letter to Federal Ministers the Hon Warren Truss MP, the Hon David Kemp MP and the Hon Phillip Ruddock MP Federal Attorney-General; in relation to hypothetical legal question concerning "cloud seeding" and "just who owns the clouds" (this was just an attempt to have a few intellectual minds activated upon such developments).
- During May to July 2004 I presented a few concepts for consideration in an attempt to address the Gosford / Wyong water needs via Liberal Mayor of Gosford Malcolm Brooks and local Councillor Trevor Drake. The concept was to increase the height of Ourimbah weir hence increasing its catchment potential.
- 25th June 2004 letter to Minister Frank Sartor MP containing a few ideas for consideration that were in line with the Labor Government Policy.
- 25th June 2004 letter and associated papers sent to Opposition Spokesperson Brad Hazzard MP in relation to a possible solution to our water crisis.

- 7th July 2004 unsuccessfully applied to become an honorary member of the WaterPlan 2050 Community Liaison Group for Gosford-Wyong Councils Water Authority. Set back was disappointing for me, but this only furthered my efforts at finding a solution to address water needs.
- 19th July 2004 State Water Reform Draft Blue Print is finalised after a breakthrough is finally found in relation to a problem with the formula. With all components of the formula worked out, the creation of the scheme is highly probable. A decision is made to present the draft solution to representatives of the Coalition and members of the Labor Government for serious consideration.
- 27th July 2004 letters to local member Chris Hartcher MP and Opposition Spokesperson for Utilities Brad Hazzard MP in relation to concepts associated with the possibility of future water supply augmented via Desalination processes and controlled via the IPART. Additional correspondence is dispatched in relation to the concept of massive sewage reduction being another way to address our water needs.
- 28th July 2004 letter to Greg McDowall A/Executive Director Department of Infrastructure, Planning and Natural Resources. (As new floodplain management manual is completed, request to expedite its gazettal and address section 733 of the Local Government Act. Attention drawn to Southern Queensland and the efforts made by both State Government and local Councils in attempts to address future flood risks).
- Between late 2002 and December 2004 the NSW Attorney-General and I become embroiled in other issues related to Departmental Codes of Conduct, their actual significance and the fact that they are nothing other than window dressing. Although the defensive strategies pursued by the bureaucracy (EPA and ICAC) are constantly eroded the stakes in the battle continue to climb. Yet despite the Attorney-Generals activities in this regard, he surprisingly acknowledges the effort being waged in relation to attempting to seek a solution to our water crisis, which was certainly appreciated. To this end, an unexpected response is received from the Hon Robert Debus MP in relation to the draft blue print. This being a copy of the Metropolitan Water Plan that has finally after months of delay been completed. The two significant points to note where the surprise changes in opinion in relation to desalinated water (If you recall the Premier even mooted the concept of building desalination plants up and down our coast) and that the focus of attention was now on reviewing the variable tariff applicable to freshwater. Hence all water Utilities and State Government departments focused their attention upon this feature. Was it for review or due to the income it produces?
- During September – November 2004 a draft “State water reform blue print” document was presented to various members of the Labor Government for consideration. As the current thinking in relation to resolving our water problems seemed to be opting for Desalination, examples of just how enough funding could be obtained to build a multitude of such plants was presented. Notably, contained within the same document was the concepts attributed to sewage recycling and a water credit scheme. Which option and income do you think the Government was interested in?
- By December 2004 the Government had presented to the IPART their preferred options to resolving our water crisis. Unfortunately the methodology used only leads to increasing the actual cost attributed to our water. As the solution I found seemed a

better way to go, I presented the Minister Frank Sartor MP with a comparison of the funding attributed to both schemes. In an attempt to obtain a by partisan approach to this issue, the Opposition Spokes person Brad Hazzard MP was supplied the same information.

- In late January 2005 Minister Sartor finally sent his response, in short it is the Metropolitan Water Plan that the Government is now locked into defending. Hence, this submission now attempts to highlight the threat to the MWP that major sewage recycling can have.
- On 7th February 2005 a last ditch effort was made to inform the representatives of the Labor Ministry about the positive aspects attributed to following the *EdwardsHanlon* strategy in pursuing major sewage recycling and involving the Private Sector. Did this last minute lobbying achieve anything? Perhaps not this maybe true for the winner of this hear argument is now in the hands of you?

Part Two: The Breakdown of the EPA (DEC) Submission

Note: all my comments are in blue.

The DEC opening letter to the IPART.

The following extract is attributed to the covering letter dated 31 Jan 2004 and addressed to Mr. J Cox Chief Executive Officer IPART.

“For the purpose of this review, DEC is principally concerned with the effect of pricing and related financial matters on environmental impacts, particularly those associated with resource depletion.

DEC recommends that:

- *The full cost of water supply (including delivery, storage, treatment) should include environmental costs and taken into account long run costs of provision; and*
- *The pricing determination should support the over-arching framework provided by the Metropolitan Water Plan”¹.*

The concerning issue with the first point is that the argument would seem more appropriate to be made under the bulk water review and not the metropolitan pricing review.

In regard to the second point the major concern is the perceived threat to the Metropolitan Water Plan (MWP). As will be demonstrated within this submission, the perceived threat attributed to the MWP is one of a number of reasons why the EPA (DEC) has put forward such a controversial submission to the IPART.

The DEC Executive Summary

“The implementation of appropriate price structures and levels for water services is an important element of the search for sustainable development. DEC’s submission recommends

that steps be taken towards eventual implementation of efficient water pricing, commencing with a move to usage-based charging and a retail inclining block tariff, consistent with Government decisions on the Metropolitan Water Plan”¹.

This statement also supports the principals applicable to the *EdwardsHanlon* strategy. Notably the strategy is at odds with the existing logic attributed to the Metropolitan Water Plan.

“Full cost recovery- including environmental costs

DEC submits that the full cost of water supply (including delivery, storage and treatment) should include environmental costs and take into account long run costs of provision. As described further below, DEC also submits that in the medium to long-term, efficient water pricing must recognise the growing imbalance between consumptive demand and sustainable yield from the catchments for water in the metropolitan area”¹.

Question: Is this an argument for consumers to reduce their demand for water or an argument raising concerns that increasing sewage recycling on a massive scale will lead to reduced demand from the catchments?

“Pricing determination must be made in the context of Metropolitan Water Plan

This pricing determination should support the over-arching framework provided by the Metropolitan Water Plan (MWP), consistent with the MWP’s robust assessment of supply and demand-side measures across the water cycle, while also allowing SWC and private sector participants to pursue cost-effective management and supply augmentation measures over time”¹.

This is nonsense, but clearly demonstrates the threat of large scale sewage recycling upon the MWP, the planned pipeline to the Shoalhaven and the planned large scale desalination plant. Perhaps instead of describing this as an “over-arching framework” it is better described as “underpinning existing Pollution licence revenue raising methodology”.

“A strong case for pricing reform to promote efficiency

Given the measures under the MWP, the potential for price to reduce consumption is strengthened. DEC encourages IPART to use this opportunity to build on the work already carried out on step pricing to better reflect the constrained nature of Sydney’s water supply. Water is not like other commodities for which IPART has a price-setting role, because it is a naturally limited resource.

As such, DEC submits that IPART should take a broad approach and a long-term view by investigating efficient pricing frameworks while this next price determination is running its term”¹.

Question: Is this an attempt to claim that IPART has no jurisdiction over water pricing? If so, then this should be an extremely concerning development.

“Price structures for this determination

DEC supports the use of a retail inclining block tariff in the short to medium-term, as discussed by the Tribunal. If IPART chooses to implement a retail inclining block tariff, there should be a clear message provided about the purpose of the tariff and the rationale for the level of the

step price and the water usage point at which it commences (eg by relating the step price to a benchmark sustainable yield from the catchments).

DEC submits that water charging should be based on usage as far as possible, to maximise the conservation signal and reward consumers who use water sparingly. By giving water users greater control over their bills, pricing structures with a greater focus on water usage maybe a fairer and more efficient.

DEC recommends that IPART consider allowing costs of providing treated, recycled water to be recovered through the potable water price where this reduces the cost of environmental impacts of discharges from sewage treatment plants or reduces the need for costly augmentation of water supply or sewage treatment plants”¹.

Question: Is this a suggestion from the EPA (DEC) to the IPART or a direction to do what they now say?

Surely if this is a direction then does it not demonstrate that the bureaucracies can and do attempt to influence the decisions of our Tribunals and what then of our so called Independent Commissions?

Is the perceived Independence of the IPART now at risk?

The above statements again contain nonsense, as any first year Commerce student could vouch for, increasing the cost of water to reduce consumption only reduces the sale of water to the water Utilities. As the water Utilities need to sell water in order to make a profit, such action can only result in a spiralling effect meaning that less revenue only leads to increase water pricing. Hence, just how truly beneficial is this philosophy?

“Equity

DEC is concerned that if pricing reform ignores water scarcity and the long-term cost of water supply, prices will be higher than necessary for all users, including low-income households. While DEC notes that equity considerations can be accommodated through the price structure, a pricing determination that places primary consideration on affordability and equity impacts may forgo opportunities to encourage much-needed behaviour change”¹.

Although this statement surprisingly supports the inflationary warning signs, it totally ignores the concept of introducing any such survival clause.

“Revenue Risk

DEC considers that any increase in revenue due to price rises is not cause for concern per se, and should be considered by IPART as a potential funding stream for the demand management fund under the Metropolitan Water Plan”¹.

Question: Is this entire process being conducted to scrutinise the submission put forward via Sydney Water or are we to be scrutinising the submission put forward by the EPA (DEC)?

Hence, surely both submissions can not be true as one says one thing while the other says something new.

Recovery of costs for environment protection and water demand management programs

Both Sydney Catchment Authority and Sydney Water Corporation will invest in new infrastructure and programs as the supply and demand management measures presented in

the Metropolitan Water Plan are progressively implemented.

Pricing reform will involve integrating the water management effort across the water cycle and responsible agencies, allocating appropriate responsibility and costs. DEC submits that IPART should:

- allow SCA to recover through prices many supply-side options needed to implement environmental flows and other necessary catchment management activities.
- require that Sydney Water's recoverable costs relate to measures that influence consumer demand for water and polluting behaviour, where these measures are demonstrated to be the most cost-effective available
- include a risk premium in the retail water tariff to protect Sydney Water Corporation from financial instability
- allow demand management investments to be depreciated over a time frame that reflects the physical life of the investment.

Question: Is proceeding down the path of pursuing such a strategy a threat to the future stability of Sydney Water?

Just exactly how much is being guaranteed to be placed into the MWP fund \$25 million or perhaps is it \$30 million?

And just exactly how much of the revenue increase in cents per kilolitre of water would this amount too?

“Price determination must be integrated with operating licence requirements

DEC considers that the price determination cannot be considered in isolation from the operating licence reviews for the water agencies. DEC considers that the following points from its submission on Sydney Water Corporation's operating licence review are relevant to the pricing review:

- *Sydney Water Corporation's demand forecasts should be subject to regular independent review, assessing consumption forecasts against actual consumption to inform whether the forecasting method is appropriate and robust. (Forecasting should incorporate climate change impacts and the effects of measures implemented as part of the MWP.)*
- *IPART require SWC to demonstrate annually how capital and operational expenditure relates to the price path allocation for asset management, whether funds were expended as intended, and if additional funds have been used in any reporting year (and the source of those funds).*

Program-specific demand management targets under SWC's operating licence be linked with approved demand management expenditures under the price path review, to assist IPART to assess whether SWC's investment decisions produce efficient outcomes in line with broader Government directives”¹.

Question: Are the EPA (DEC) stating that the Labor Government is against major sewage recycling?

What about the effects upon the Environment, is the Minister for the Environment also against the expansion of sewage recycling?

Is this a major defensive stand by the EPA (DEC) to protect the revenue stream obtained via Pollution Licences?

Is this an attempt by the EPA (DEC) to further expand their existing powers?

Are we focusing attention upon the existing Sydney Water Monopoly situation and perhaps ignoring the threat that the EPA (DEC) are perhaps becoming yet another bureaucratic monopoly?

Does the EPA (DEC) perceive the IPART as just being a Government agency designed to do their bidding?

Is this the future for the IPART?

If this is not to be, then surely now our Government Politicians from all factions and affiliations need to urgently focus their attention upon the IPART legislation and sort out this mess.

The actual submission continues from this point onwards

1. "INTRODUCTION

This submission to IPART's 2005 Review of Metropolitan Water Agency Prices responds to issues raised in IPART's Review of Metropolitan Water Agency Prices Issues paper.

The context of this submission is DEC's obligations as the relevant authority for the (EPA) licences held by Sydney Water Corporation (SWC) under the Protection of the Environment Operations Act. DEC has also more general responsibilities defined in other legislation and contributes to Government decisions that can affect river flows and the environment impact of the management of our water resources.

Section 1 outlines the background to the 2005 Pricing review. Section 2 discusses the role (or relevance) of water pricing to environmental issues. Section 3 discusses IPART's current approach to setting water prices, how this affects the outcomes of the determination and consequently environmental outcomes. Section 4 responds to specific issues raised in IPART's Issues paper. Sections 5-7 outline DEC's views on costs of water supply, water conservation, and re-use and recycling"¹.

Does the toothless tiger now need to grow teeth?

Would major sewage recycling enhance the ability to generate actual river flow?

1.1 "DEC's interest in water prices

As the primary environmental regulator in NSW, DEC is concerned that SWC has sufficient funds available to ensure it can meet its environmental obligations. DEC advises IPART on the priority environmental outcomes required for SWC to comply with licence requirements under the Protection of the Environment Operations Act 1997. Efficient expenditures incurred by Sydney Water to ensure compliance with these licence requirements should be passed on to water users through prices.

In addition, DEC considers pricing should encourage efficient water use. The Metropolitan Water Plan addresses not only the imbalance between supply and demand for water in the Sydney Basin but also the measures needed to improve the health of the Hawkesbury Nepean river system. "Incorrect" pricing signals increase incentives for over-consumption, continue user demand for inefficient supply augmentation, provide either no or a limited incentive for recycling, and promote over-reliance on high-cost regulation. By using water prices to affect patterns of consumption, significant environmental benefits can be achieved.

DEC's preferred approach is where IPART's pricing determination supports the overarching framework provided by the Metropolitan Water Plan (MWP), ensures a robust assessment of supply and demand-side measures across the water cycle, and facilitates recovery (through water prices) of costs associated with the efficient supply of water"¹.

Is the EPA (DEC) just a surrogate taxation department?

The second paragraph is too confusing perhaps others can make some sense of it.

In relation to the MWP perhaps it's done its time, to put it more straight forward its time for it to unwind.

1.2 "Context of the Pricing Review

The 2005 Pricing Review is taking place within a wider Government agenda aimed at ensuring the provision of sustainable water supplies for Sydney. Other processes relating to urban water management in NSW will affect the pricing review. These include:

1.2.1 Metropolitan Water Plan

The Metropolitan Water Plan (MWP) provides the Government's long-term plan for Sydney's water supply and sets out actions over the next 25 years to ensure sustainable water supplies for Sydney and to protect the health of the region's rivers. The plan is being coordinated across Government and:

- *responds to the recommendations of the Hawkesbury Nepean River Management Forum including the Forum's recommended environmental flow regimes. The environmental flow regime will be included in the Water Management Licence for SCA and will affect the secure yield available from the storages: and,*
- *drives demand management and supply augmentation actions across Government agencies and water agencies"¹.*

"The MWP refers to water pricing reform and discusses the importance of smarter water pricing"². "However, the implementation of measures under the MWP depends on the ability of the water agencies to earn sufficient revenue through water prices recommended by IPART.

The MWP includes both actions that will be effected immediately (such as accessing deep water in storage dams) as well as actions to set up and support measures into the future (such as the environmental assessment of increased transfers from the Shoalhaven River). Therefore the ongoing costs of the 25 year MWP will involve some uncertainty depending on the difference between the actual and estimated costs of the actions, the actual impact on consumption of proposed demand management measures and the costs of implementing new supply measures over time"¹.

Question: Is it now time to put the MWP in the bin?

How much water was put into river flow last week?

What about in the last six (6) months?

Is it now back to the old drawing board for those who came up with the MWP?

Note that yet again there is evidence that the EPA (DEC) wants money achieved from this pricing determination to be directed to their "Managed Fund".

The arguments presented surely only help demonstrate that the *EdwardsHanlon* strategy is the better way to go.

1.2.2 "Operating Licence Review

IPART's End of Term Review for SWC and SCA Operating Licences commenced in October 2003 with the release of the first issues paper. This paper addressed the role of the operating licences in managing the agencies' impact on the environment, the need to improve the agencies' asset management practices, streamlining administration and the review of environmental indicators.

A second issues paper (on 'demand/supply' balance), released in January 2004, discussed the role of the operating licences in ensuring a sustainable water balance in Sydney. The timetables for the reviews of operating licences for SWC and SCA were subsequently extended and the new operating licences are expected to take effect from 1 July 2005 (for SWC) and 1 January 2006 (for SCA).

The impending finalisation of the next Operating Licences for SWC and SCA will improve

certainty about the regulatory framework within which they will be operating. The outcomes of the pricing review will significantly contribute to the successful implementation of measures in the MWP, and the ability of the Operating Licences to contribute to a sustainable water balance”¹.

Question: Is this an argument or the bureaucracy's resistance to change?

1.2.3 “Review of Price Structures to Reduce the Demand for Water in the Sydney Basin

DEC understands that IPART will be using the results of its Investigation into Price Structures to Reduce Demand for Water in the Sydney Basin to inform changes to the price structures and levels under the 2005 price review.

As part of the investigation, IPART considered a range of alternative options for the tariff structure, including an inclining-block usage charge (IBT) (with the Tier 2 usage charge applied at both 300kL/pa and 400kL/pa) and a higher usage charge offset by the removal of a fixed access charge. IPART also considered a step price that would apply to water extracted in any year above the estimated safe yield of the catchment.

The final IPART report concluded the following:

- *The most suitable retail price structure would be an IBT structure, which includes a two-tiered variable usage charge with a relatively lower fixed access charge;*
- *The introduction of a wholesale step price would not be the most appropriate way to remove the financial incentive on Sydney Water to sell more water, enforce a cap on water extractions or assist with the development of a secondary market in alternative water sources; and,*
- *The next step towards wholesale water price reform would be to review the balance between the fixed access charge and the variable usage charge and, if possible, set the usage charge with reference to the SCA's long run marginal cost. (The use of LRMC in price reform is further discussed in section 3.1)*

In its submission to the IPART investigation, DEC recommended that IPART consider a wholly variable retail charge, in conjunction with a wholesale step price (with the second tier applying for water sold above sustainable yield.) DEC's response to IPART's findings is discussed in section 6.1”¹.

Question: What will be the impact of this upon the less fortunate in our society?

Under the philosophy of the *EdwardsHanlon* approach provided massive sewage recycling and partnerships with the private sector where organised a sustainable yield could be met.

1.2.4 “Water Sharing Plans

A Water Sharing Plan, currently being developed by DIPNR, will set out the rules for water sharing between the environment and extractive users in the Sydney catchment, and for determining how much water will be available for extraction in the catchment. The Plan will provide a benchmark for the level of allowable extractions for (urban) use.

1.2.5 Bulk water pricing review

IPART is currently reviewing prices charged by State Water Corporation for the provision of bulk water services for extraction by farmers, industrial users and town water suppliers.

The review may lead to increases in DIPNR's water management costs for these river systems (e.g. developing and implementing plans, monitoring flows / cap etc), which will be imposed on SCA (as its bulk water customer.)

1.2.6 Summary

In summary, water prices have an important role in helping to deliver overarching objectives for sustainable water balance, and ensuring the provision of water services in Sydney over the long term. The pricing review needs to be seen in the context of Government agreed measures for supply augmentation and demand management as well as broader water management reform. Water storage, delivery and transport are inextricably linked to environmental management. Water prices must support the wider government framework protecting the environment and ensuring its capacity to provide water services over the long term”¹.

Question: Is the current record attributed to protecting our Environment still looking all that good?

2. “WATER PRICING AND THE ENVIRONMENT

A producer of a good or service would be expected to seek a price to cover the full costs of its supply and to earn a profit. However, because of the essential nature of water services to human welfare and environment health, other factors such as the affordability and the cost of resource management affect how water prices have been determined.

Traditionally water pricing policies have focused on the financial objectives of achieving returns on invested capital and driving efficiency in service delivery. However, water supply is characterised by significant economic costs in addition to the financial costs to water utilities. In order to efficiently allocate water resources, prices should reflect the economic value of water including full costs of extraction, delivery and disposal, as well as the scarcity value and opportunity costs associated with water provision. While it may be difficult to precisely estimate these economic (including environmental) costs, the primary focus on the delivery costs of water supply has meant that water has been underpriced, to the probable detriment of the environment.

DEC has traditionally had an interest in water pricing due to the environmental impact of the water and sewage system on water quality. Water quality issues arise from discharges from sewage treatment plants and planned overflow points in sewage collection systems as well as unplanned discharges which result from leakage and other system failures. It is now being recognized that the imbalance between supply and demand for water, particularly in the Sydney Basin, also has significant impacts on water quality and environmental health. This will be discussed further in sections 6 and 7.

While it may not be practical for IPART to pass through the full costs of water supply in this pricing determination, it should be the longer-term goal and guiding principle for IPART in this and future pricing determinations. This is consistent with the approach outlined in section 14 of the Independent Pricing and Regulatory Tribunal Act 1992”¹.

For the past ten (10) years what has the total sewage recycling figure yet been?

What of the statement in relation to the IPART legislation surely this is not an example of a bureaucracy now threatening a Tribunal, or is it?

“Externalities and the role of regulation”¹.

“Externalities have been defined as the ‘costs and values that are not revealed and, hence, not taken fully into account in the production process’³. ‘Externalities can be classified as tangible (where the value can be derived directly or indirectly from prices in the market), or intangible where no market exists’⁴. ‘Recovering these external impacts through pricing is one method of signalling the value of externalities to water users and providing them with incentives to change their behaviour.

Regulations can reduce externalities associated with water use but in general it is not economically efficient to eliminate them completely. However, regulations are essential in helping to define duty of care for the environment and establish minimum standards. Pricing may also be used to provide an incentive to deliver more than minimum standards and allows the market to guide the use of water in line with its value and the costs of its provision”¹.

Question: Is it not equally concerning that the EPA (DEC) had a “Duty of Care” not to inhibit sewage recycling?

Does the existing philosophy attributed to raising Government revenue via the Pollution licences inhibit sewage recycling?

If this is the case, then are not the EPA (DEC) now concerned that by their own actions and statements that they could have opened up a Pandora’s Box to massive litigation claims?

I wonder what the implications could be to such a scenario unfolding for the likes of Services Sydney who has for years been fighting a battle to gain access to the sewage market?

“Water supply externalities

Generally, water pollution (as opposed to water flows per se) creates the majority of water [supply] externalities. The externalities associated with the provision of urban water services can be understood based on the stage in the water provision process at which they occur. The current underpricing of water resources [or the shift to full cost pricing] should be addressed with regard for the full costs of water supply corresponding to the entire water delivery chain:

1. *Urban water supply – interaction with dams, streams, rivers and ecosystems. Examples of upstream supply externalities include both direct impacts at the storage site (particularly the construction of dams) and the corresponding effects that storage has on performance of river and groundwater systems. The irreversible effects of storage and delivery operations on the environment are considerable and therefore should be considered when assessing options for supply augmentation.*

Question: To desalinate or not to desalinate is that the question?

These externalities are defined in part by competing demands for water. For example, the diversion of water to an urban supply system means less water and different environmental flow regimes are available to support valuable environmental functions. The external cost generated would amount to the foregone value of the environmental functions that are no longer available because of a lack of water (for example, preventing algal blooms.) Conversely if agricultural water use reduced the amount of water available for environmental flows, the external cost would be the value

associated with the loss of ecological functions that this water would have provided.

- 2. Interaction with the built environment where water is consumed. The external impact of water use for residential or commercial purposes depends partly on the full economic costs of its treatment, storage and delivery, as well as the impact this water use has on the immediate environment. For example, reusing wastewater for activities that do not require potable water (e.g. toilet flushing) confers a positive externality (or reduces negative externalities) to the extent that it avoids drawing on additional scarce potable water supplies and permits enhanced environmental flows.*

Question: Doesn't this statement give support to the *EdwardsHanlon* strategy?

- 3. Impact of the return of contaminated wastewater to the environment. Wastewater return externalities depend on the extent of treatment and the way that water is disposed of. That is, the external impact of disposing of untreated wastewater into a drinking water catchment would be much greater than if the same water was disposed into a less sensitive catchment or marine environment"¹.*

Question: Does this statement really attempt to justify sewage ocean outfalls?

What about using the recycled sewage on our playing fields wouldn't this be better for the Environment?

"Valuation of water supply externalities

The determination of water prices needs to have regard for the competing use values of water. Competing uses for water include urban, agricultural and industrial needs, and water required to maintain river health"¹.

Question: So how much does this all cost?

"Valuation methods must separate the different water quality requirements for different water uses. This has been done by defining water supply externalities against water quality requirements set by contemporary Water Quality Objectives (WQO)"¹. WQOs generally include the following human uses"⁵.

- Potability: level of treatment required for water to meeting drinking water quality standards;
- Recreation: safe for immersion sports, non-immersion recreation or not suitable for recreation;
- Fishing: well stocked with fish safe enough to eat, well stocked but unsafe to eat, poorly stocked or cannot support fish.

Note: All these benefit under major sewage recycling.

"DEC participated in a Choice Modelling Survey in 2000 that aimed to estimate the environmental values for river regions throughout NSW, using the Georges River as representative of rivers in urban catchments"⁶. "Environmental attributes describing health were chosen, and survey respondents' WTP and choices between different combinations or options were ranked and valued"¹.

Question: Questionnaires is this the best the EPA (DEC) can do?

“Whilst this is a limited study it did show values in order of magnitude estimates (rather than definitive valuations) and gave an indication of the sum of the amounts people in households within the urban catchment say they would be prepared to pay to achieve the various environmental improvements offered to them in the survey”⁷.

Ok 38% of 6,000 residents that equals 2,280 people sounds reasonable doesn't it?

“Aggregating household willingness-to-pay values up to catchment level for the Hawkesbury-Nepean could be problematic. However, it can be observed that the NSW Government has committed to spend \$31m to ensure environmental releases that will lead to significant improvements in very similar attributes for the Upper Hawkesbury-Nepean”¹. “The Government considers that the environmental releases will lead to an increase in the number of native fish species present, and substantial increases in the lengths of river that are suitable for swimming and navigation”⁸. “The Government clearly considers that the value of these improvements justifies the proposed expenditure”¹.

Question: What level of release?

How many mega litres of water per week, month or year?

If Services Sydney was given access to the sewage market could they do better?

Perhaps it is significant to recall that the Governments WMP was somewhat delayed.

So would not massive sewage recycling reduce our need for more water from the Shoalhaven?

What of the need for the massive desalination plant now being mooted?

What about the impact large scale sewage recycling would have upon our environment?

Wouldn't the *EdwardsHanlon* approach be a step in the right direction to improve Government and bureaucracy Accountability?

3. “DEC’s preferred approach to setting water prices

3.1 The theoretical basis for price setting

IPART’s current price setting approach does not appear to take into account the nature of water as a scarce resource.

Water supply is characterised by large, irregular capital expenditures and increasing returns to size. Prices based on the cost of supplying an additional unit of water, or short run marginal cost (SRMC,) will not recover the economic costs of supplying water and will not be commercially viable. Full cost recovery requires water rates to reflect the long run marginal cost (the cost of supplying an additional unit of water including capital costs and the social cost of externalities)”¹.

Question: Does not the logic of the proposed levy found under the *EdwardsHanlon* approach reflect similar attributes?

3.1.1 “Role of water pricing

The economic role of water pricing requires water rates to capture the scarcity value and to equalize the opportunity costs (the value of water in its next best use) of the resource across uses. Water prices should be determined according to agency supply costs, the external costs of water supply and the scarcity value of water resources”¹.

Question: Should not we be moving more towards charging for sewage usage?

Perhaps a rethink needs to be made in relation to the long term price of water. Would not the introduction of sewage recycling also enhance the ability of the existing infrastructure to take on more water?

Would such a move not enhance the uptake of rainwater tanks and their potential for use with our toilets?

What kind of impact would this outcome have upon our catchments?

3.1.2 “IPART’s current approach to water pricing

Section 14 of the Independent Pricing and Regulatory Tribunal Act 1992 outlines the price determination methods available to IPART. Section 14 (2) 2 provides that the Tribunal may fix such a price by reference to:

- (a) a general price index (such as the Consumer Price Index), or
- (b) the government agency’s economic cost of production, or
- (c) a rate of return on the assets of the government agency.

However, IPART’s building block methodology is the main method used by economic regulators in Australia and abroad for determining prices for monopoly services and is uniformly applied by IPART across all commodities for which it has a price setting function. The costs of ‘building blocks’ of service provision have been outlined by the Council of Australian Governments and include the following categories: operations costs, maintenance and administration costs, provisions for the cost of asset consumption, provisions for the cost of capital, and externalities.

Section 14A(2) (g) also enables IPART to consider for the purpose of price determination:

The need to maintain ecologically sustainable development (within the meaning of section 6 of the Protection of the Environment Administration Act 1991) by appropriate pricing policies that take account of all the feasible options available to protect the environment.

DEC is concerned that the building block methodology does not take into account the nature of water as a scarce resource and overlooks consideration of ecologically sustainable development as provided in Section 14A of its Act”¹.

Question: I could be wrong, but wouldn’t Section 14A (2) also empower the IPART to consider the *EdwardsHanlon* approach?

3.1.3 “Long Run Marginal Cost”¹.

“IPART has recently suggested that long run marginal costs (LRMC) should guide price setting”⁹. “To date, IPART has not included LRMC in prices for Sydney Water or Sydney Catchment Authority, citing difficulty in its estimation and the potential for ‘inefficiency’ where revenue is collected based on ‘intangible’ environmental costs and costs that will be incurred in the future”¹⁰. “DEC supports IPART’s recent interest in using LRMC in price setting and DEC would be interested in participating in any further investigation of this issue. IPART’s concern that this revenue should not be retained as profit by water agencies is discussed in Section 4.

Economic theory suggests that LRMC should be used over SRMC where the supply system is close to full capacity and new capacity is imminent. LRMC prices have implicit in them a rationing device to ensure that consumers are fully aware of the long run costs of capacity augmentation. Price setting based on long run marginal cost (LRMC) includes both SRMC, environmental and social costs, and costs needed to increase capacity cost in the future.

Question: Are estimates the best way to go?

LRMC is more economically efficient than IPART's current pricing approach, because it:

- *provides for the inclusion of the capital costs associated with increasing supply or the cost of demand management programs designed to reduce current water consumption levels in the marginal water price;*
- *provides an appropriate price signal to consumers that capacity (and therefore water) is scarce;*
- *avoids large price fluctuations in the short term (given the capital intensive nature of water and sewage activities and lumpiness of investment); and*
- *automatically encourages supply augmentation through increased use of recycled water, reuse, stormwater harvesting.*

Question: Does not the last point support the *EdwardsHanlon* strategy?

There are several different definitions of LRMC in dealing with water supply. DEC's submission to IPART's price structure investigation noted that the LRMC needs to be identified for each agency so that it can be incorporated into prices. This will allow LRMC to be aligned with the objective of developing a least-cost strategy for balancing supply and demand across both agencies. DEC supports further work to be done to generate reliable estimates of the LRMC of water for each of the businesses.

The MWP estimates of LRMC are a starting point. The MWP estimated the LRMC of a long-term sustainable water plan using available long-term demand forecasts. It compared various strategies available according to least-cost criteria (qualitative and quantitative) and estimated LRMC as the present value (PV) of the expected extra costs of the optimal strategy divided by the PV of the additional supply schemes and/or saved through additional volumes of water supplied through economic evaluation for the MWP used a least-cost planning methodology, consistent with IPART's requirements under its Act, to determine the order of implementation of measures according to levelised cost and other relevant criteria.

In the future, IPART may have to consider that system constraints define the volume available in the system, therefore price may have to be determined within this (changing) supply constraint.

3.2 "Pricing Principals

The following issues should be incorporated in a consideration of efficient water prices:

- *Full cost recovery, including the incorporation of environmental costs and scarcity values.*

In 1994, the Council of Australian Governments (COAG) developed a water reform agenda recommending that all Australian states and territories begin a transition to full cost recovery from water use. COAG recommended the removal of cross subsidies and the separation of water rights from land title"¹. "Full cost recovery was defined to include environmental costs

and is generally assumed to equate with long run marginal cost”¹¹.

“While it is difficult to define the full cost of water supply, DEC considers that it should include the costs of delivery, storage and treatment, and incorporate environmental impacts of providing water and sewage services, and scarcity values. Inclusion of these costs will allow the community to make better choices between consumption of water and sewage services and alternatives.

Through discouraging the use of water for low-value purposes, full cost recovery creates more efficient water pricing. This would have automatic flow-on effects for water service providers and consumers. For example, efficient pricing will substantially increase the cost of water leakages to SWC, providing it with a strong incentive to invest in better infrastructure. Similarly, efficient water pricing and increased profitability of water recycling will substantially increase the value of SWC’s waste stream so that, rather than considering sewage as a waste, SWC will treat it as a resource.

- *Use of revenue to deliver committed environmental programs*

Question: Is this an example of the EPA’s (DEC’s) monopoly octopus arms stretching out into new frontiers?

IPART should ensure that water authorities have adequately budgeted for their environmental commitments over the price determination period. IPART also needs to be satisfied that utilities’ management processes are adequate to ensure delivery of these commitments.

Question: Would not taking large chunks of revenue away from the water Utility via the MWP strategy make this a difficult task?

SWC will be required to continue to improve the performance of its sewer system. However, as the details of regulatory requirements are not complete, there is necessarily a level of uncertainty regarding these requirements.

Question: Does this statement not support the urgent need for a rethink upon what strategy best serves our community and environment?

DEC encourages IPART to monitor expenditure on environmental programs to ensure priority environmental outcomes are met through agreed expenditure.

- *Water as a naturally-determined resource.*

Historically, the response to drought and population growth in Sydney has been to find a new source of water supply. The NSW Government has committed to not building the proposed Welcome Reef Dam because of its environmental impact and community resistance”¹. “The construction of a new dam would be extremely costly, environmentally damaging, and may not succeed in view of the effects of climate change”¹². “This means that there is a very real constraint on water supply in Sydney and consequently, the incremental costs of sustainably providing water services to a growing customer base will increase over time”¹.

Question: Does not this statement support the need for massive sewage recycling?

“While water is a renewable resource, the capacity of SWC and SCA to harvest and store water at any point in time is finite and is a function of existing infrastructure. Water supply is

determined by the volume of rainfall and inflows into catchments, which varies significantly according to climate. Water supply can only be increased above the volume supplied naturally through new storages or by using existing supply more intensively, such as through reuse, recycling or stormwater harvesting. Water supply is potentially exhaustible and capacity limitations represent a supply constraint expressed as the sustainable yield of the supply system”¹³.

“The effects of climate change in Sydney’s water catchment appear to be warmer conditions and less rainfall. This means that even when the current drought breaks, the long-term security of Sydney’s future water supply will still need to be managed carefully. DEC suggests that in the long-term, IPART will need to consider an approach that determines water prices based on an estimated supply constraint.

Question: Are the EPA (DEC) supportive of claims for reform but perhaps threatened by how it could be done and how new reforms could affect their existing power and control?

- *Encourage alternative sources of supply*

Pricing is probably the most significant incentive for encouraging alternative sources of supply. Alternative sources of supply conserve valuable drinking water resources and can reduce sewage and stormwater pollution through collection, treatment and onsite beneficial reuse of water.

It is extremely difficult to encourage use of alternative sources of supply where the cost of providing recycled water is substantially greater than the price of reticulated potable water.

Efficient water pricing will increase the profitability of water recycling, especially for large-scale users who generally do not require potable water. Pricing options for recycled water are discussed in section 7.

- *Compliance or consistency with broader Government reforms*

The ability of a range of Government water reform processes to achieve their objectives substantially depends on water pricing. Water prices should support the overarching framework provided by the MWP, recognising the MWP’s assessment of supply and demand-side measures across the water cycle, while encouraging SWC and private sector participants to pursue cost-effective management and supply augmentation measures over time.

Question: Is sewage recycling a major threat to the provisions of the MWP?

While pricing is only one component of reform, it can improve the effectiveness of other components. For example, efficient water pricing and increased profitability of water recycling will substantially increase the value of Sydney Water’s waste stream so that sewage is considered as a resource. For example, sewage discharges could be a valuable resource that could be reclaimed and sold. A similar argument applies to stormwater management, where efficient pricing could encourage Sydney Water and/or councils with stormwater assets to further investigate and implement stormwater harvesting, as is currently being trialled in Adelaide.

The Metropolitan Water Plan details the Government’s commitment to release environmental flows for the Upper Nepean river system initially from Avon Dam and then after 2010 progressively from Cataract, Cordeaux and Nepean Dams. A final decision on a flow regime for Warragamba Dam will be made after 2015, with increases in current interim flows from

2009 if there is sufficient water. In order to provide water for population growth and meet this commitment to increase the share of water allocated to the environment, a suite of action has been outlined for supply augmentation and demand management. Pricing reform is necessary to support these actions”¹.

If ever there was a flaw in the arguments being put forward then perhaps the inability to give a guaranteed flow of water in the future is one such flaw. Why go down the path of using water from the catchments for environmental flow when recycled water can be cleaned up for such purposes?

It would be interesting to view Services Sydney’s response to what has been presented.

Is it time now for a major rethink on how things are done?

Should we continue pursuing the same old strategies that have got us where we are now?

What about the improvements to Government Accountability?

Why are Government bureaucracies so resistant to being more accountable?

What if the EPA (DEC) strategy again fails, are the EPA (DEC) going to say “Whoops it’s not our fault but good old climate change or even perhaps blame it on future immigration”?

4. “IPART’S APPROACH TO PRICE SETTING

This section discusses IPART’s current approach to setting water prices. It outlines DEC’s position with respect to each of the cost components used to determine water prices, and discusses how this approach should be applied given IPART’s responsibility to consider environmental, commercial and equity issues.

Question: Isn’t this statement supportive of sewage recycling?

4.1 SWC’s revenue determination

The determination of the revenue required by the regulated businesses using a building block

revenue methodology is a critical element of the price setting process. The calculation is based on analysis of the efficient operating and capital costs a business should incur to provide appropriate levels of service during the price path period.

In short, this is an excellent statement and perhaps worth noting that it supports the need for Government Accountability.

With this in mind, should not the proposed increases in the cost of water be directly associated with future projected costs in Capital expenditure, plant & equipment, maintenance projects and other expenses that are tangible and not perhaps left to guess work?

SWC estimates its revenue requirements on an assumed level of demand it must satisfy over the price determination period. SWC's revenue requirement must incorporate the costs of complying with other regulatory instruments, such as its operating licence and discharge standards set by the DEC.

This statement demonstrates the urgent need to formulate the costs associated with the SWC Pollution Licences.

Doesn't this now demonstrate that the Pollution Licence Costs for SWC need to be addressed prior to the Metropolitan Water Price determination?

Should not the EPA (DEC) make this a priority and put forward their proposed price increase for the SWC Pollution Licences?

Is this not concerning that by not supplying this information the EPA (DEC) maybe jeopardising SWC future financial position?

Hence, should not the process attributed to the determination of Pollution Licences Fees above that of the consumer price index (CPI) now be considered the jurisdiction of the IPART?

Should not the NSW Parliament now debate this point prior to any current determination being made in relation to the Metropolitan Water Pricing?

Historically the Tribunal has relied on forecasts of water sales provided by the businesses"¹. "This has given SWC significant influence over IPART's price determination through their demand forecasts"¹⁴. "Problems arise if demand is underestimated.

Is it not time to consider a new concept in justifying forward projected income requirements?

Should not the opinion of the NSW Auditor-General be canvassed in relation to the various concepts being proposed?

"In preparation of this price review, IPART has been considering how to address forecast risk and revenue volatility of the water businesses. This issue is increasingly important given that price structure reform supported in IPART's final report into its recent price structure investigation (i.e. the introduction of a retail IBT) may increase forecast uncertainty. The greater the discrepancy between forecast demand and actual consumption, the greater the difference between agreed revenue requirements and actual revenue.

Isn't this a wonderful argument for a new methodology to now be seriously considered?

In addition, if there are major concerns in relation to how much future rain water will fall upon our inland dams, is the EPA (DEC) solution the way forward?

Could the proposals being mooted by the organisation Services Sydney be fully implemented

in the near future?

So how many mega litres of sewage wastewater could the private sector help process?

Could not the sewage water processed be utilised upon our playing fields?

So if massive sewage processing was a better way to go, just how much potential water could be saved from being accessed from our dams?

Is the EPA (DEC) now concerned that massive sewage recycling could result in less water being obtained from Sydney Catchment Authority?

If this is now an issue, then perhaps Sydney Catchment Authority could seek new markets west of the Blue Mountains. Surely this would aid our farming communities in the Bathurst/Lithgow areas and beyond.

DEC considers it important that demand forecasts are subject to regular independent review. These reviews should assess actual consumption against consumption forecasts and inform whether the forecasting method is appropriate and robust. Consumption forecasting should incorporate climate change impacts and the effect of measures implemented as part of the MWP”¹.

How appropriate is this statement?

Does this strategy enhance Government accountability or mask it?

Is this an example of how bureaucracies mismanage funding?

Is it time to focus the attention upon other mechanisms to justify future pricing arguments?

Are presumed consumption forecasting strategies the most logical way to justify water pricing?

Should not the EPA (DEC) disclose the full impact and costing attributed to the MWP on SWC?

4.1.1 Sydney Water’s proposal revenue adjustment mechanism

“SWC’s submission to the price review has proposed an annual revenue adjustment mechanism, for a component of any excess/shortfall revenue arising due to differences between forecast and actual consumption”¹⁵. “The proposed annual consumption variations would be subject to a tolerance band (of under 10%) before any adjustment mechanism is triggered. Where the recovery for distribution at the end of the regulatory period.

DEC understands that IPART is currently considering how to address the potential differences between forecast and actual demand. DEC’s primary concern is that price adjustments in subsequent years (where revenue exceeds forecast) do not erode price signals. Under SWC’s proposal, if sales go outside the band, the fixed charge is reduced in the subsequent year (increasing the strength of the ‘usage’ signal).

Where actual revenue is less than forecast revenue (for example, due to water restrictions or effective demand management), actual revenue may fall below the level required for SWC to both cover costs and obtain an adequate return on assets. In these circumstances, IPART should consider mechanisms to compensate SWC for revenues foregone (for example, through rolling demand management investments into the asset base or compensating for demonstrated sales foregone)”¹. “DEC’s submission to the price structure investigation included a recommendation to include in the retail tariff a risk premium to protect SWC from

financial instability"¹⁶.

Question: Is not the proposal to place \$25 million or \$30 million dollars of SWC funding into the MWP managed fund a risk to the future financial stability of SWC?

So what about the additional threat to the financial stability of the SWC?
This being the uncertainty in relation to their "Pollution Licence Fees"

There is a strange irony to the EPA (DEC) argument, on the one hand they are attempting to squeeze the life blood out of the SWC, yet on the other they seem to be attempting to through SWC a lifeline.

Perhaps the EPA (DEC) should look more inward at their own operations and efficiencies prior to attacking other bureaucracies.

Is this not just a strategic decoy to avoid focusing attention upon the EPA (DEC)?

Do these statements only add additional weight to the need for a major rethink in strategy, policy and Government Accountability?

So would major sewage recycling lessen the need for water restrictions?

This is yet another question that perhaps Services Sydney or Wyong Council could now address.

So do we need a risk premium tariff or an infrastructure levy?

And is this not the same Government agency that now claim Welcome Reef dam proposal dead?

So is the EPA (DEC) working against SWC or attempting to undermine Minister Sartor?

4.1.2 "Sydney Water's proposed trigger events allowance for cost impacts outside the price path determination.

SWC's submission has proposed a 'trigger events allowance' approach to managing the cost impacts of events that occur during the term of the price path but which were not foreseeable during the price path determination. Its submission has outlined the principles that should determine the scope of allowable price adjustments and the process for their application and identified specific trigger events.

Question: Is the Pollution Licence fee such a trigger?

"DEC supports the principle that IPART should consider a mechanism for SWC to pass through to prices those costs incurred in response to issues that were unforeseeable during the price path determination. However, DEC does not support automatic pass-through of costs but considers that SWC should have to demonstrate a strong case for pass-through. In particular, the potential for pass through should not allow poor planning in the first instance.

Question: How can the EPA (DEC) attempt to place such demands upon the SWC when they themselves state that one of the major costs to SWC is the Pollution Licence Fees?

So when will the EPA (DEC) be able to negotiate a price on their Licence fees?

Is this not an example of one incompetent bureaucracy attempting to deflect attention away from its inability to meet such an important deadline as the future costs attributed to the

Pollution Licence fees?

Therefore does this not further demonstrate the urgent need for reform in relation to having all determinations in relation to future Pollution Fees placed under the jurisdiction of the IPART?

Would such a process not prove beneficial to the Environmental movement who would then have a mechanism available to assess the accountability of the EPA (DEC) and from an Industry perspective the ability to have a say in justification of constant increases in their Pollution Licence Fees etc?

So will our Parliamentarians now seriously forget their factional brawls and Party line dealings and seriously come to the aid of our IPART and sort out this mess?

SWC has identified "amendments to environmental standards or legislative or regulatory obligations" as a possible trigger event. DEC would only support the inclusion of an environmental standards 'trigger' if SWC were required to demonstrate that either the relevant environmental standards were unforeseeable, or there were acute impacts that were unforeseeable, which warrant immediate correction and which cannot be dealt with through its existing price structure. DEC submits that SWC should be required to demonstrate clearly the effect of the unforeseen costs on its financial position and why an immediate pass-through to prices is necessary rather than alternatives such as internal productivity improvements or consideration through the subsequent price determination.

What can I say but this is statement speaks volumes.

So again is the EPA (DEC) attempting to undermine the Minister for Utilities the Hon. Frank Sartor MP or are they targeting the Director-General of the Department of Energy, Utilities and Sustainability, David Nemptzow?

Although I myself have had battles with Mr Nemptzow in the past over policy reform strategies, I would certainly through my entire weight behind this man. Who in their right mind would want to place such pressure upon a Utilities Director?

Have we not learnt from the Queensland example?

For Gods sake Premier don't let such a situation happen in our State!

4.1.3 Excess revenue concerns

IPART has expressed concern that given the low price elasticity of demand, any price increase will flow directly through to revenue (all other things being equal). DEC considers that any increase in revenue due to price rises is not cause for concern per se, and should be considered by IPART as a potential funding stream for the demand management fund (under the MWP).

Question: Does this statement contain evidence in relation to a major conflict of interest associated with the claims for infrastructure expenditure needs by SWC and the demand that the funding achieved be diverted to the MWP managed fund as per the EPA (DEC)?

So just how equal are things?

Why would not this funding be used by the Water Utility to either address debt or our infrastructure needs?

Does not the SWC buy their water from the Sydney Catchment Authority?

So at what point does SWC take ownership of the commodity it has purchased?

Doesn't SWC already have to pay a premium to the Government in relation to profits?

Although the EPA (DEC) pride themselves as being innovative, perhaps on this issue they need to go back to the drawing board and focus their attention upon improving their own efficiencies.

4.2 Capital expenditure and Demand Management

The asset depreciation framework applied as part of the building block methodology should provide an incentive for SWC (as well as potential private sector participants) to undertake cost competitive demand side projects. IPART includes capital expenditure in the Regulatory Asset Base (RAB) if it is assessed to be prudent (for past expenditure) and efficient (for future expenditure). SWC must earn a commercial return (or return on assets 'ROA') on the RAB, which affects the relative attractiveness of different investment options.

The Private Sector would certainly welcome the possibility that they may now be allowed to get access to the sewage recycling market. I wonder what Services Sydney's response would be to this news if true?

*To ensure that the commercial framework supports demand management where it is economically attractive, IPART should allow demand management investments to be depreciated over a time frame that reflects the physical life of the investment. Otherwise SWC will be unable to recover its costs within the life of the asset. **(It should be noted, however, that many demand management initiatives are behaviour-based.)***

The above statement is so true that I have bolded it just for you!

The proposed approach to the treatment of demand management by Electricity Network Service Providers could be used to ensure that SWC is able to appropriately recoup the cost of demand management options"¹. "IPART's recent final report on electricity distribution pricing supports equitable treatment of demand management assets by giving special consideration to Distributed Network Service Providers (DNSPs)"¹⁷. "There may be potential lessons from this experience relevant to water demand management"¹. "Further, IPART could consider alternative approaches outlined by Sinclair Knight Mertz as part of its analysis on reducing the regulatory barriers to demand management"¹⁸.

4.3 "Incentive Regulation and efficiency gains

It is generally considered that the strength of the building block approach is its ability to provide an incentive to the business to pursue efficiencies. This is because the business retains the benefits in full (through higher profits) of any efficiency gains during the regulatory period.

Question: So does this apply to SWC?

4.3.1 IPART's definition of efficiency"¹.

"DEC has previously expressed concerns about the limitations of requiring efficiency to be demonstrably linked to consumer willingness to pay"¹⁹. "Consistent with this approach, IPART

*only allows SWC to recover the costs of environmental projects that SWC can demonstrate are driven by the need to meet minimum regulatory requirements. **As SWC notes in its submission, SWC may commit resources to a project not directly driven by a specific regulatory standard because it believes it is consistent with community's expectations, or because delivering additional standards may be the by-product of undertaking a project assessed as economically beneficial.***

The above has been bolded to highlight the significance attributed to this statement.

If IPART's excess revenue concerns could be managed, IPART may have more flexibility to allow costs above minimum standards (in the short to medium term) to be passed through to prices. Expenditure that caused standards to be exceeded in the short to medium term could be weighted and recovered through prices based on the contribution of this expenditure to ensuring compliance with longer-term standards.

Question: Is this statement not attributed to future price hikes with water?

4.4 SCA's revenue requirement

The Primary function of the Sydney Catchment Authority is to protect the quality of water within the catchment areas in order to provide safe drinking water to people in the Greater Sydney region. Regardless of changes to the tariff structure, SCA's costs are likely to increase during the next price path (and beyond) for the following reasons:

- *Bulk water prices are likely to increase as a result of rising costs of managing extraction (aside from any improvement in reflecting resource costs in bulk water prices);*
- *Implementing environmental flow regimes will involve significant capital and operating expenditures by SCA to allow the releases of water from and more efficient use of the dams, and to undertake supply-side measures to accommodate flow volumes;*
- *The infrastructure base is aging. Some assets will need to be upgraded or replaced in the near to mid term.*

This means that, according to IPART's pricing methodology, the revenue requirement for SCA and the wholesale water price will increase.

The above arguments all support the same arguments that have been put forward under our proposal for major water reform and infrastructure needs to now be addressed.

So should increases in the future revenue base for SCA be diverted to infrastructure projects? If large scale sewage recycling was to be implemented would not the sale of bulk water from SCA be reduced?

Therefore is this yet another hidden strategy to put forward an argument against sewage recycling?

Perhaps the answer to this question is for the EPA (DEC) to become more efficient, thereby creating a situation that savings obtained from its budget could be diverted to the SCA Infrastructure Projects.

As major sewage recycling should impact upon the sale of bulk water from SCA to SWC, perhaps this will provide the incentive for the SCA to look towards future markets found beyond the Blue Mountains where the water is urgently needed.

Would not such an outcome prove beneficial to not only our Country Communities but that of the Western Environment?

5 DEC CONCERNS – COSTS OF WATER SUPPLY

This section discusses pricing review issues in relation to SWC's environmental commitments under the Protection of the Environment Operations Act 1997 and the role of water pricing to ensure compliance with these commitments over time. It also responds to specific issues raised in IPART's issues paper and SWC's submission to the pricing review.

5.1 Service quality standards, performance indicators and asset management

IPART allows SWC to recover capital and operating expenditure required to meet its Operating Licence and other regulatory requirements, which includes capital expenditure required to comply with EPA licences. DEC regulates the environmental performance of Sydney Water's 27 Sewage Treatment Systems in the Sydney, Blue Mountains and Illawarra regions using Environment Protection Licences issued under the Protection of the Environment Operations Act (POEO Act). DEC sets on-going performance standards and environmental improvement programs for the sewage treatment plant and the sewage reticulation system in these licences.

Question: Would not major sewage recycling enhance the role of the EPA (DEC) in protecting our Environment?

DEC's role as a regulator is to set performance based outcomes in its regulatory frameworks, rather than mandating prescriptive works to achieve these outcomes. That is, DEC sets environmental outcomes or benchmarks where possible, and SWC designs and costs the options for meeting those outcomes. DEC is cognisant of overall costs and where the options could be argued to involve unreasonable investment, DEC is willing to negotiate benchmarks and/or timing for achieving benchmarks to some extent (eg the sewer overflow licensing discussions about the wet weather abatement for sewage treatment systems discussed below).

The above statements have been highlighted to enhance their message.

Question: Is it not time for our toothless tiger to now grow some teeth?

Is it not also disgraceful that here we are in the year 2005 and still the sewage leakage issue persists?

This surely supports not only the need to now involve the private sector in sewage recycling but also the major need to address our Infrastructure needs now!

5.1.1 Licensing and sewer overflow requirements (in Sewage Treatment System Licences)

SWC applied for licences in 1994 to legally enable overflows from its sewer reticulation system. DEC subsequently required SWC to prepare EISs to support the licence applications. SWC submitted EISs for each of its 27 systems in 1998. The EISs outlined the system performance levels at 1994, and proposed a 20-year, \$2 billion Sewerfix program to improve the systems to meet targets set in the EISs. DEC was the determining authority for the EISs under the EP&A Act, and issued licences under the POEO Act in 2000, including:

requirements for no deterioration and continuous improvement of the systems from existing performance levels, using the 1994 EIS data as a benchmark;

requirements for no water pollution from dry weather overflows, except from specified

pumping stations;

permission for wet weather overflows from specified points;

requirements for prompt clean-up of overflows;

pollution reduction programs (PRPs) to:

- *Improve system and water quality modelling and monitoring;*
- *Develop operation and maintenance plans for all systems; and*
- *Implement an interim program of works and activities over 5 years, namely dry weather upgrades in most systems by June 2004, and wet weather upgrades in the Blue Mountains by June 2005.*

Question: Although these statements are certainly interesting, does it not also provide evidence in relation to a conflict of interest and hence supply additional reason for having the Pollution Licence Fee determinations placed under the jurisdiction of the IPART?

DEC is currently negotiating with Sydney Water on the requirements for sewer overflow abatement from 2005 to 2010. DEC's approach is to set outcomes for 2010 that are linear progress toward 2021 EIS targets where possible, so that Sydney Water has more flexibility to select cost effective options to meet the benchmarks. DEC is negotiating requirements for:

- 1) *dry weather abatement, which focuses on overflows reaching waterways; and,*
- 2) *a wet weather program that requires works in those systems that are currently not achieving linear progress toward the 2021 EIS targets, and further investigation into the options for large engineering and capital intensive works to meet the 2021 EIS targets for larger systems.*

Do the previous and following statements demonstrate the existing strategic mindset?

DEC is attempting to finalise this regulatory framework as a matter of urgency, to coincide with IPART price determination processes. While DEC is attempting to provide Sydney Water with a regulatory framework that allows it to take cost effective decisions for sewer overflow abatement, DEC is cognisant of previous Government and Sydney Water commitments to a Sewerfix program in the order of \$2 billion over 20 years, or approximately \$100 million per annum, DEC will therefore limit its requirements to an upper threshold of \$100 million per annum. This is consistent with previous allocations by IPART to Sewerfix.

Response to Sydney Water submission

The section below responds to areas in Sydney Water's submission to the pricing review that are relevant to either DEC's submission or DEC's role in regulating SWC.

Drivers for Capital Expenditure

The SWC submission refers to "New Mandatory Standards" requiring additional capital expenditure. DEC does not consider that sewer overflow abatement and the Illawarra Waste Water Strategy (IWWS) are new mandatory standards as sewer overflow abatement is a continuation of existing requirements.

Specifically for the IWWS, the Pollution Reduction Program (PRP) has been in place for nearly a decade, and so is a continuation of existing requirements, and much of the remaining cost is

not specifically driven by the PRP.

Question: Would not major sewage recycling greatly enhance such programs?

Perhaps this is an issue that Services Sydney or Wyong Council could consider addressing.

Sewer Overflow Abatement

SWC has raised concerns about uncertainties in Appendix C of its submission. DEC disagrees with a number of the uncertainties about sewer overflows as listed below:

Uncertainty about costs during the price path for four STSs (Bondi, Cronulla, Malabar and North Head)

DEC has stated in previous correspondence to SWC during 2003/4 that the overflow benchmark would be commensurate with what can be achieved from catchment rehabilitation only.

Uncertainty about long term goals for sewer overflow abatement.

These goals were set out clearly in the EISs for STSs as 2021 expectations.

Appropriateness of setting 2010 targets for the Illawarra system at this stage, where significant capital programs are underway and the outcomes are not yet verifiable.

The DEC/SWC Strategic Liaison Group has agreed that the 2021 EIS goals will be achieved for Bellambi, Port Kembla and Wollongong systems by 2012.

Uncertainty about the practical application of the licence requirement that there be no deterioration in system performance.

The requirement for "no deterioration" has been clearly set out in licences, and was further clarified in a letter dated 2 August 2004.

Uncertainty about DEC's intention to set sewer choke frequency targets and limits from 2010.

DEC's intention to set dry weather overflow limits from 2010 has no inherent uncertainty for the price path to 2009.

Sydney Water's acceptance of the regulatory risk associated with a requirement for zero dry weather overflows from sewage pumping stations.

A requirement for zero dry weather discharges from pumping stations is to be set by DEC on the basis of advice from SWC about what is achievable; and that this can be achieved for sewage pumping stations that have not been upgraded between 2000-2005 using low cost methods such as improving its monitoring and response to these STSs.

The need to address the existing Diamond Bay/Vaucluse outfalls ahead of addressing the longer-term wet weather overflow issues in the Bondi system.

*The issues of Diamond Bay/Vaucluse should not be confused with the objectives of the Sewer Overflow Abatement Program. DEC has clarified the position on Diamond Bay/Vaucluse in a letter to SWC Managing Director on 3 December 2004. DEC ultimately expects the elimination of raw sewage discharges at Diamond Bay and Vaucluse. **DEC understands that SWC is intending to undertake catchment rehabilitation in the Bondi system from 2005 to 2010 as part of the Sewerfix program, and that this would allow SWC to design and***

efficiently size further rehabilitation or transfer works to eliminate raw sewage discharges at Diamond Bay and Vacluse after 2010. DEC considers this to be a reasonable approach that ensures progressive environmental improvement to 2010 and permits a cost-effective solution to be developed for the elimination of raw sewage discharge at Diamond Bay and Vacluse.

The above statement has been highlighted to demonstrate its importance to the overall argument attributed to sewage recycling and the involvement of the private sector.

Question: Does Ms Clover Moore MP and now Mayor of Sydney agree with this strategy or is Ms Moore a supporter of the introduction of major sewage recycling and the involvement of Private Sector organisations in sewage processing?

From a brief discussion held with the Director of Services Sydney, it would seem that a target of 80% sewage recycling maybe possible. Hopefully Services Sydney will now give a presentation to the public and bureaucracy on exactly how this could be achieved. Notably only one Water Utility in NSW has reportedly reached such an outcome. This being the Shoalhaven which creates a major irony considering the existing strategies attributed to the MWP.

Do not the above statements from the EPA (DEC) only further serve to supply additional evidence attributed to the perceived threat major sewage recycling can have against their consolidated revenue strategy?

If this is the case, then surely our Premier needs to urgently reconsider his stand against Services Sydney not being permitting total access to the sewage market. If the Premier was now to continue his resistance to allowing such an outcome to eventuate then surely this could give rise to questions regarding compensation. So should our Premier now urgently consider the positive aspects attributed to sewage recycling and the multitude of benefits to our communities, environment and our children's future?

5.1.2 Accountability to committed projects

DEC is concerned that the link between expenditure and efficiency gains is not transparent as it is not clear when SWC has made expenditure on Sewerfix items or other general asset management.

SWC has to detail its expenditure on infrastructure as part of the price review. However, there is no requirement for it to demonstrate or report on the progress of capital projects to which SWC has committed as a condition of price adjustments granted during the IPART Pricing Review. As a result, there is no system to demonstrate that approved capital allocations have been applied for the purpose intended by the Price Path.

Terrific the previous EPA (DEC) statements certainly support the arguments all raised within our strategy. What more can I say.

To increase transparency, DEC has recommended that the Operating Licence require SWC to demonstrate annually how capital and operational expenditure relates to the price path allocation for asset management, and whether funds were not expended as intended, or if additional funds have been used in any reporting year (and if so, reporting the source of these funds).

Unfortunately, I disagree with this proposal as this would seem more appropriate to be included under the jurisdiction and process attributed to the IPART.

In this regard the EPA (DEC) would certainly be welcome to pursue the role of following up on this process but the actual role attributed to auditing the Capital expenditure should remain

that of the NSW Auditor-General's Department.

Hence, does this paragraph serve to further demonstrate the makings of a new bureaucratic monopoly?

Is this really what we need larger bureaucracies with long tentacles?

6. DEC'S CONCERNS – WATER CONSERVATION

While the review of water prices must consider a wide range of issues, demand/supply balance has recently become an increasingly significant issue for Sydney”¹. “Sydney’s main water storages can supply 600 Gigalitres (GL) each year over the long term”²⁰. “Over the last several years, water consumption has exceeded the safe yield partly due to dry conditions, the increase in population and increases in per capita consumption. The rising demand for water is expected to continue into the future given population growth and climate change. At the same time, there is a need to make water increasingly available for environmental flows to address declining river health and avoid significant ecological impairment. Over time, climate change is expected to result in increasingly frequent prolonged dry periods and higher temperatures and evaporation rates, thus placing further pressure on water supplies. Extraction in excess of safe yield is possible in the short-run. However, extraction in excess of safe yield is simply borrowing water from increasingly uncertain future water availability.

This entire paragraph has been highlighted as it certainly demonstrates the urgent need for “WATER REFORM ON A MASSIVE SCALE”.

Question: Is it not imperative that a new strategy be considered?

While the Government’s recently developed Metropolitan Water Plan aims to ensure sustainable water supplies over the long-term, the IPART pricing determination has an important role in supporting the implementation of measures under the Plan, and ensuring the shift towards sustainable water balance over time. If water supplied is to remain within the sustainable yield, there is a clear need for pricing to help drive demand management.

Question: Are we now at a cross road needing to make a major decision in relation to which way we next go?

This section discusses the role of water pricing as an economic instrument for influencing consumers’ demand for water, and how demand management requirements for SWC should be treated in the pricing determination.

6.1 Response to IPART’s Price Structure Investigation

The effectiveness of price as a demand management tool is linked to the structure of water tariffs. IPART’s investigation assessed a range of tariff structures in terms of their ability to reduce the demand for water in the Sydney Basin. The final IPART report concluded:

- *the most suitable retail price structure would be an IBT structure, which includes a two-tiered variable usage charge with a relatively lower fixed access charge;*
- *the introduction of a wholesale step price would not be the most appropriate way to remove the financial incentive on Sydney Water to sell more water, enforce a cap on water extractions or assist with the development of a secondary market in alternative water sources; and,*

- *the next step towards wholesale water price reform would be to review the balance between the fixed access charge and the variable usage charge and, if possible, set the usage charge with reference to the SCA's long run marginal cost.*

So perhaps now the IPART have an alternative strategy to now consider.

6.1.1. DEC's submission to the price structure investigation

*DEC's submission to the investigation recommended that water pricing be supported by an overarching framework based on a*¹:

- *"clear definition of the supply constraint"*²¹;
- *"pricing framework to support sustainable water management; and*
- *sustainable Water Plan (SWP)*

The Government's Metropolitan Water Plan provides actions for a Sustainable Water Plan as it has;

- *been developed across agencies;*
- *identified and evaluated measures to facilitate the shift to sustainable water use. Individual measures have been ranked according to cost-effectiveness, including quantifiable environmental and social costs"*¹;
- *"identified the type of measures for achieving a sustainable water balance that should be attributed to SCA and SWC"*²²; *"and,*
- *included an implementation program (including and investment path) to ensure that Sydney's demand for water is below the sustainable rate of use.*

Question: Is the EPA (DEC) submission based upon the Metropolitan Water Pricing process or perhaps a last ditch effort to uphold and protect the current thinking in relation to the MWP and the methodology used in calculating the Pollution Licence consolidated revenue?

Should not the Minister for the Environment the Hon. Robert Debus MP now answer this question?

Second-tier wholesale price

DEC's submission to the price structure investigation recommended the conversion of the wholesale water price to an inclining block tariff, with:

- *The first-tier volume set at sustainable yield with the price of the first-tier (including any fixed component) set to recover the SCA's revenue requirement"*¹.
- *"The second-tier price (paid for extractions above sustainable yield) set at a level based on LRMC"*²³. *"If SCA could recover its costs via the first-tier price, the second-tier price would act as an effective incentive for SWC to implement demand management. Revenue from the second-tier price would not be retained by SCA but rather be used for investment in additional measures to reduce demand on potable water supplies.*

As part of the price structure investigation, IPART commissioned the Centre for International Economics to report on water price restructuring and the role of Sydney's wholesale water price. CIE's final report recommended against the introduction of a second-tier wholesale price. DEC's response to CIE's report is outlined in Appendix 1.

Perhaps it maybe of interest to note that the *EdwardsHanlon* approach to the wholesale price of water was to encourage each of our Water Utilities to aid adjoining communities in times of need.

Is this not an honourable trait attributed to our fellow Australians?

6.1.2 DEC's submission updated

Under IPART's current pricing approach, SWC can pass on to consumers all costs of purchasing water from SCA. DEC has previously recommended that the cost to SWC of purchasing water above the cap should not be recovered through retail prices. The integrated approach proposed here is designed so that only costs that promote sustainable water delivery can be recovered from SCA and SWC. To give effect to this, SWC's revenue requirement should be constrained by the volumetric cap. Only water purchases up to this level should be passed directly into retail prices.

Question: Is this yet another example of the EPA (DEC) applying unreasonable pressure upon the Water Utility and its day to day operations?

For the purpose of this pricing determination, the framework outlined in DEC's submission to the price structure investigation continues to be DEC's preferred approach to water price structure reform. DEC submits that IPART should consider a price structure that recognizes that water supply is limited and harnesses prices to move water consumption and water supply investment towards a more socially efficient level.

Question: Is this an EPA (DEC) plea not to affect its consolidated revenue base?

Wholesale price: fixed and variable components

The high fixed component of current water prices means that consumers who use water sparingly are not adequately rewarded fro their efforts. By giving water users greater control over their bills, price structures with a greater focus on water usage may be fairer and more cost reflective.

For example, reducing or removing the fixed charge component and increasing the usage charge rewards users for improving water use efficiency and creates an ongoing incentive to reduce water use where cost effective. While high variable charges may be perceived to put revenue stability at risk, DEC has not seen evidence that this is incontrovertibly the case.

DEC therefore supports increasing the variable component of the wholesale price.

This statement has been bolded to highlight its significance.

Retail Prices: Inclining Block Tariff

Where a retail inkling block tariff is used to reduce demand, the degree to which the second-tier price affects consumption (and how to set the second tier at the appropriate level) is uncertain.

Question: What about thinking upon a survival clause for those on low incomes or who have large families?

There is much debate on the measurement and magnitude of price elasticity of residential demand for water”¹. “There is general support for the proposition that demand for water is relatively insensitive to price, however there is large variation in estimates of elasticity in the literature”²⁴. IPART’s discussion paper suggests that in Sydney it is in the order of -0.13, which means that for a price increase of 10%, water demand would fall by 1.3%. It is generally agreed that the variables that affect water demand and thus the determination of price elasticity include climate, water prices, income, household size, lot size, non-price demand management strategies and consumers understanding of price structures.

Based upon the EPA’s (DEC) own statement under the *EdwardsHanlon* approach the water price water would initially increase from \$1.01 to \$1.43 (provided the same figures were used as per our example). Under the EPA’s (DEC’s) own calculation, our proposed path would entail an initial increase in the cost of water attributed to 41%, so based upon their example this should also equate to a reduction in the use of water by 5.39%.

To understand the impacts of price reform on demand, it is important to have data that is as detailed, consistent and disaggregated as possible in order to most accurately determine the effect of demand management strategies on water consumption. Greater certainty regarding the price elasticity of demand for water would allow and inclining block tariff structure where it would have the greatest effect on demand. [DEC also notes this analysis of the individual components of water demand (indoor vs outdoor residential, industrial, commerce and agricultural) may not be complete within the timeframe of this price review but encourages IPART to further consider this issue in the longer term]”¹.

“IPART’s recent household survey, which sought to further understand the determinants of water demand in Sydney, found that the distribution of water use within income groups is highly variable and not all high water-using households have high incomes”²⁵. “DEC notes that, to the extent that consumers did not change their consumption in response to the second-tier price, excess revenue would be created and further water conservation strategies would still need to be pursued. IPART would have to consider the uncertainty about whether consumers responded to average or marginal cost.

The above statement has been highlighted as it certainly supports the case being put forward by the Pricing Ombudsman, Local Shires Association and the Public Interest Advocacy Centre.

Hopefully Minister Sartor will take note of this important point.

DEC supported the use of an inclining block tariff at the wholesale level in its submission to the demand management inquiry. As this appears unlikely to be adopted, DEC supports the use of a retail inclining block tariff provided that IPART gives a clear message about the purpose of the inclining block tariff and the rationale for the location of the step price (eg by relating the step price to a benchmark sustainable yield from the catchments).

6.1.3 Integrated Water Pricing Model

SWC’s submission to the price structure investigation discussed replacing the current variable and fixed water charges and the current fixed sewerage charge with:

- *one variable usage charge for both water and sewerage; and,*
- *one fixed charge for both water and sewerage*

Perhaps the way of the future is to concentrate upon the sewage charge.

SWC noted that this would help manage revenue volatility. Because the current sewerage charge is quite high, introducing combined water and sewerage charges would provide much more scope to increase the level of the variable component than other options while still being revenue neutral. SWC argues that this would offer a significant potential to reduce demand, would be easy to implement and administer.

However, this option has considerable limitations. Because of the practical limitations in measuring wastewater discharge to the sewer, SWC would need to base a combined water/sewerage usage charge on metered water usage. Customers who do not discharge to the sewerage system but who consume water would subsidise the cost of treating and transporting other consumers' waste.

Question: Is this not a call for talented individuals to now look into way of metering our sewage discharge?

If massive sewage recycling was introduced and the water used on playing fields and other recycling projects (including environmental flow), wouldn't our existing sewage system have the potential to take on more water processing, such as rainwater tanks and perhaps stormwater drains?

A significant proportion of wastewater costs would be removed through a charge based on the volume of water used. An assumption would need to be made about the proportion of water usage discharged as wastewater by a typical customer. Where this assumption is incorrect, signals will be distorted. This approach is inconsistent with COAG's pricing principles of full cost recovery and elimination of cross subsidies.

DEC therefore does not support these approaches to pricing.

This statement has been highlighted to demonstrate its significance.

6.1.4 Response to Sydney Water's submission

SWC's submission to the pricing review includes the following recommendations:

- *increasing the proportion of monies raised through usage based charges (through an IBT or raising usage component) as long as revenue uncertainty considerations are managed.*
- *increasing the price per kilolitre from \$1.00 to \$1.40 over the next four years. This would be achieved through a price increase of 7 per cent in real terms in 2005/06 and 3.8 per cent for each of the following three years.*
- *if an IBT is implemented, the first tier price should be set above current usage prices, particularly in the period before measures intended to restore the supply/demand balance have taken effect.*

DEC notes in response to Sydney Water Corporation's submission:

- *While the MWP represents a good start on the road to efficient water prices, further work is required.*
- *Efficient prices are required to increase the profitability of water recycling, increase the value of Sydney Water's waste stream (i.e. provide a financial incentive to minimise sewer overflows), increase the cost of water leakages to Sydney Water, increase the*

capacity of the Hawkesbury-Nepean and Shoalhaven systems to provide environmental flows and help meet the Government's objective of deferring – and perhaps even eliminating – the need for another large scale water storage system for Sydney.

- SWC's suggested price increase to \$1.40 per kilolitre seems to relate only to the base price of the first step in an inclining block tariff (IBT). Further investigation is needed as to the appropriate level of the second step of an IBT.

Surprisingly the above statements would seem to support the *EdwardsHanlon* strategy.

6.2 Demand Management Targets”¹.

“The inclusion of a water conservation target in Sydney Water's operating licence since 1995 has led to significant benefits to the community through improved environments **and to water consumers through avoided investment in supply augmentation**”²⁶. “However, while the inclusion of targets has led to per capita reductions, the targets themselves have not been met, and the reductions that have been achieved have not been able to keep pace with the rising demand and population growth.

Question: Isn't it time for a rethink and consideration of other ideas?

6.2.1 SWC's Operating Licence

The operating licences include requirements for SWC to manage the effect of its operations on the environment. The review of wholesale and retail water prices must provide SWC with adequate funding to meet these requirements while also giving it the flexibility to achieve these outcomes efficiently over time. The operating licence framework should also ensure the public availability of information concerning the parameters of the water market (such as the costs of water supply, consumption patterns, and asset management strategies.). **The availability of accurate and detailed data based on transparent and rigorous public reporting requirements and accountability supports the efficient determination of water prices**”¹.

This statement has been highlighted as I could not have put it better.

Does this statement not also provide additional reason and logic for increasing the powers of the IPART to now consider Pollution Licence Fee adjustments beyond the CPI figure?

“DEC has recommended that per capita demand management targets in SWC's next operating licence be converted to program-specific targets, based on analysis undertaken as part of the MWP”²⁷. “SWC should have demand management performance targets in areas where it can influence consumption levels. These areas include leakage, ‘Every Drop Counts’ (business and residential), and reuse and recycling. These targets should then be aggregated to give a range representing the total amount of demand reductions SWC should be required to achieve over the term of the Operating Licence. **This approach to demand management targets provides a rationale for IPART to pass through to prices the efficient costs SWC incurs to comply with demand management requirements outlined in its operating licence.**

This statement has been highlighted to demonstrate its significance.

Question: Is this not further reason to have the EPA (DEC) hasten their efforts on arriving at the Pollution Licence fee amount for SWC?

As part of the Operating Licence review, IPART will decide on appropriate demand

management reporting requirements to be included in SWC's operating licence. DEC has recommended that the Operating Licence require Sydney Water to demonstrate that, within each program target, it has comprehensively evaluated different investment options and invested in the least cost option where possible. This will facilitate efficient investment decisions and minimize costs (including economic, social and environmental) impacts on the community.

Question: Is this the most appropriate way forward?

If SWC's Operating Licence links program-specific demand management targets with approved demand management expenditure under the price path review, this will assist IPART to assess (for the purpose of the Pricing Review) whether SWC's investment decisions produce efficient outcomes in line with broader Government directives.

Question: Why are the EPA (DEC) so dogmatic about addressing a consumer demand strategy which will only result in a spiralling effect upon water prices, and totally not addressing our urgent infrastructure needs?

6.2.2 Metering

DEC supports metering and directly billing all households. *Due to the need to manage the rising demand for water and evidence of the effect of direct billing on residential consumption, direct billing has significant demand management potential"¹.*

This issue has been highlighted as it supports some of the other submission concerns put before the IPART by some very fantastic individuals. This support from the EPA (DEC) is welcome news and aids the way to a fairer system.

"The IPART (2004) survey of Residential Water use found that not paying for water usage is strongly correlated with higher consumption"²⁵. "IPART estimated that households not paying separate water usage charges (mostly apartments and Department of Housing properties) use nearly 20% more water than households that do, all other things being equal. IPART's report suggests that, if these households reduced their average water consumption to the average for the rest of the community (all other things being equal), up to 18 GL of water could be saved per annum.

Question: How can all other things be equal when there hidden subsidies in play?

Does not Business and Government subsidise the use of their toilets etc?

While IPART notes that the reasons behind this difference are not clear, the higher-than-average water use in households that do not receive a water usage bill does indicate opportunities for demand management. Demand reductions could be achieved by installing individual meters in units and passing on water usage charges to tenants, or by installing water efficient devices in tenanted properties. Expanding the degree of water usage charges passed on in rented properties should also be considered.

Again this is welcome news as this statement supports yet other submissions before the IPART that have raised the same issues.

*Given Sydney Water's status as a monopoly water retailer, Sydney Water's billing system is an appropriate way to target (discretionary) residential water use. However, given the obvious costs associated with implementing direct billing across SWC's whole customer base, it may only be cost-effective to introduce direct billing for all new connections. In the case of liability for water usage charges between landlords and tenants, the advantages of directing charges at actual users needs to be weighted against the provision of incentives to landlords to install water efficient appliances. **There are also equity questions that must be considered in***

regard to liability for water charges by tenants.

The above statement has been highlighted to enhance its importance.

Is it time to consider a survival clause?

Does our new Minister for Housing the Hon. Joseph Guerino Tripodi MP support the concept of a water survival clause and implementation of water retrofitting devices for Public Housing tenants?

Or does the Minister not support the concept of a survival clause and supports the need to simply increase water prices for all Public Housing tenants?

DEC supports further work to ascertain whether the higher water use in non-billed households is solely due to the lack of a price signal, or whether other factors contribute (such as income, size, number of people.)

The above statement has been highlighted to enhance its importance.

What more can I say but at long last I can finally say thank you for including such a statement. Perhaps there is hope for us all yet.

6.3 Equity

Given increasing cost pressures facing water utilities, DEC recommends that IPART consider a variety of ways to mitigate the impact of pricing reform on low-income earners, such as complementary programs to retrofit homes. An overly cautious approach to managing affordability impacts (eg relying on the pricing structure alone rather than pursuing an integrated approach whereby complementary retrofit programs address affordability issues) may compromise the objective of promoting least cost planning, demand management and ecologically sustainable development.

Tariff structures that place primary emphasis on affordability and equity impacts may preclude opportunities to encourage much needed behaviour change (eg increased water efficiency.) Over the last decade, the real value of water bills has generally been in decline.

Equity considerations can be accommodated through the price structure. For example, an IBT could include a first-tier price set to ensure essential water needs were provided at an affordable rate to all residential users.

The above statement has been highlighted to enhance its importance.

Furthermore, the concern to address short-term price impacts needs to be weighed against the longer-term objective of encouraging optimal investment in supply and demand side options. If pricing reform does not support optimal outcomes, then economic costs and therefore prices will be higher than necessary for all users, including low-income households.

Please note that even I have amended my original ideas on attempting to address this important issue. In this regard, the response to these issues should come from those important welfare groups who have gone to such effort to heighten the plight of this group of people. I only hope that the suggestion put forward under our proposal aids their cause.

6.4 Demand management in industry, commerce and agriculture

DEC considers, on both equity and efficiency grounds, pricing mechanisms or other complementary mechanisms such as cap and trade schemes for water will be needed to reduce water demand and improve water efficiency amongst all user groups (residential,

industrial, commercial, agricultural, government and recreational) and support the proposed water management plans under the MWP (eg Waterwise on the Farm).

7. DEC CONCERNS – REUSE AND RECYCLING

Pricing is probably the most significant incentive for increasing the use of recycled water. The role of pricing reform in reducing the demand for water has already been discussed in this submission. The aim of recycled water pricing should be consistent with potable pricing reform by aiming to replace, wherever economically feasible, reticulated potable water with water that is 'fit for use' and thus reduce pressures on additional water supplies.

The potential impact of restructured prices for potable and recycled on reducing potable water use is difficult to quantify. However, the relative prices of different grades of water should not be determined so that efficient non-potable alternatives are financially unviable and therefore remain undeveloped.

While the cost of providing recycled water services is determined by the type of storage, transport and/or level of treatment required, the supply of potable water below the efficient price means that providing recycled water services is invariably financially unviable for a proponent. Recycled water projects are therefore not being pursued or, where they are pursued, must be subsidized by the community (e.g. Rouse Hill).

DEC notes there are several options for recycled water prices available for IPART's consideration.

- 1. Set potable price at the efficient price (to achieve balance between supply and demand) and let recycled prices be determined by default*

IPART could allow recycled water prices to be set 'by default' in response to appropriately priced potable water. If prices for potable water are set sufficiently high, there will be a greater incentive in the market to develop water recycling schemes and customers will use recycled water, supporting water conservation or environmental outcomes.

- 2. Subsidise recycled water schemes by the potable water price*

IPART could consider setting recycled water prices on a scheme-by-scheme basis so that the use of recycled water would return a net financial return to the operator. Recycled water prices could be set below financial costs by cross-subsidising across the total customer base where:

- 1. The alternatives to potable water use would be less costly than potable water supply in terms of total resource use but are currently under-utilised due to non-financial considerations (e.g. lack of information, underdeveloped market, etc.)*
- 2. There are significant external benefits from encouraging recycling to achieve a socially optimal economic outcome; and/or*
- 3. The future costs of water supply are expected to be higher than the current cost, and it is economically efficient to encourage recycling alternatives that might be more costly than present potable water costs, but are expected to be cheaper than anticipated future costs of potable water.*

This approach could be used to: ensure new housing areas were designed based on

integrated water management principles; support retrofitting existing residential areas on a large scale where cost-effective; and facilitate cost-effective sewer mining for large scale users.

3. Use regulation to set an implied water price.

Recycled water prices can be set by relying on regulation to specify the nature of water services for provision. For example, under the current Building and Sustainability Index Scheme (BASIX), new developments must achieve 40% water efficiency improvements by particular years depending on development type. Recycled water will be provided where developers assess it to be the most cost-effective means of complying with the BASIX requirements. Other regulatory schemes to encourage water recycling may also result in socially efficient economic outcomes.

DEC does not oppose the use of any of these options.

On pure economic efficiency grounds, the potable water price would be set at its efficient level (to achieve balance between supply and demand) and recycled water prices would automatically be set by the market (ie Option 1).

Option 1 is the first best approach to setting the recycled water price over the long-term. However, in practical terms, this is unlikely to occur in the short-term and DEC therefore supports the use of Options 2 and 3, to achieve levels of water reuse and recycling that are appropriate in terms of their social and economic efficiency.

Private sector involvement in the recycled water market: considerations

Recycled water prices should encourage private sector participation where it can provide cost-effective and appropriate delivery of recycling services. The MWP has provided an added impetus for considering third party access to support actions under the Plan. For example, under the proposed Demand Management Fund, funds will be available to enterprises for projects that improve water efficiency. This would effectively act as a subsidy for projects that would otherwise not be commercially viable e.g. effluent reuse schemes. DEC notes that if significant private sector involvement in recycling is to occur, as well as appropriate pricing, streamlined regulatory arrangements and clear standards (eg for third-party access) will be necessary.

STPs, effluent reuse and the potable water price

The rising demand for urban water is placing additional pressures on catchments in the Greater Metropolitan Region. Water use and demand management are important and related components of meeting the environmental obligations of water authorities. As discussed in section 2, water pricing based on integrated water management principles takes into account the interrelationships along the water supply chain, including storage, delivery, treatment, capacity for reuse, and environmental effects of (treated) wastewater discharge.

A scheme-based determination of recycled water prices should consider the potential advantages of using treated effluent for uses not requiring potable water quality, including improving environmental flows and river health.

While the main objective of DEC's regulation of STS licences is to reduce pollution, the current underpricing of water discourages recycling/reuse and contributes towards the costly augmentation of STPs. If SWC could treat and provide recycled water and thereby reduce STP loads and pressures on surrounding catchments, IPART should consider allowing these

costs to be recovered (that is, subsidized) through the potable water price.

A reuse/recycling target

DEC has recommended that IPART include a condition in SWC's operating licence requiring SWC to meet a target for reuse and recycling. DEC's submission to the end of term review for SWC's operating licence ('demand/supply balance') notes that the reuse target would need to take into account the scale of potential reuse projects that would have a net economic benefit. This should be informed by an independent assessment of large-scale potential users to treated effluent (which tend to be more cost-effective) as well as the potential benefits of reducing nearby STP loads or providing other environmental benefits.

Although throughout this response I have been extremely critical and at time sceptical upon the EPA (DEC) statements, the same does not apply to this section. The Officers concerned have put forward good arguments and although it is clear that I am no supporter of the existing MWP mindset, to their credit this is a very interesting read. So too those individuals who put together this section, I Rodney Edwards applaud your efforts in this regard.

As the appendix 1 found under the DEC submission is a response to the International Economics report no comments from me have been made.

Appendix 1 DEC response to Centre for International Economics report

As part of IPART's investigation into price structures to reduce the demand for water in the Sydney basin, IPART commissioned the Centre for International Economics (CIE) to report on the role of Sydney's wholesale water price. CIE concluded that proposals to charge the structure of the wholesale price of water sold by SCA – by introducing a step price – would not be the most efficient way to ensure a sustainable water balance in Sydney in the long run. The report cited DEC's submission to the price structure investigation.

In response to CIE's report, DEC notes that

- *DEC's submission proposed that the second tier wholesale price be based on LRMSC, not that the retail price be set at LRMSC (as CIE report suggests). The costs of consumer-funded programs could be excluded from SWC's LRMSC.*

The CIE report notes the risk that if wholesale prices are based on some calculation of LRMC, excess revenue may be raised because the costs are not incurred in the term of the price path.

- *LRMC can be averaged out over an agreed time frame. Current consumers should not be paying for future water services but this also needs to be balanced against the risk that avoiding passing through current true costs now may mean future users must compensate for foregone investment opportunities.*
- *The concern that a 'high' wholesale price may be interpreted as the price at which water can be sold to SWC (resulting in premature and costly supply augmentation by third party providers) is unwarranted.*
 - *The market for third party providers is immature*
 - *It would be a business risk decision on the part of third party providers*
 - *Other measures available to SWC to reduce demand/source alternative supply at lower cost than the LRMC would be accessed before high-cost products from third parties.*
 - *Third party water provision will sell to or service customers – not necessarily SWC.*
 - *Regardless, private sector investment (for example, under the proposed DM fund) will be subject to transparent processes requiring it to meet criteria other than marginal cost within the broader water strategy for Sydney.*

CIE argued that setting a second tier wholesale price at LRMSC might overstimulate demand management expenditure by SWC.

If the second tier wholesale price is set at the average incremental social cost (of all measures needed to ensure a demand-supply balance), then it is likely to be lower than the LRMC of the next supply augmentation (e.g. desalination) and thus overinvestment is unlikely.

Other comments in response to the CIE report:

- *The wholesale water price should be set so that SCA can recover its LRMC (including costs of meeting environmental flows) from sales up to the sustainable yield (cap.)*
- *The retail water price should reflect the LRMC of SCA (via water purchases) plus the LRMC of implementing SWC's contribution to a supply-demand balance.*
- *A second-tier wholesale price should be used to remove the incentive for SWC to sell water in excess of the cap and provide an incentive for SWC to implement water saving measures.*
- *Otherwise the composition of fixed and usage should be adjusted to signal SWC to invest in demand management/alternative supply projects that are cheaper per kilolitre than the wholesale usage charge; the strength of the signal would depend on the increase in total wholesale water price from implementing environmental flows and how much of the fixed charge was shifted into the usage charge.*

If there is no consequence for water sales above the cap, then there is a risk that rising demand for water will continue into the future, imposing higher costs on Sydney in the long term.

The CIE report suggests a 'sales review – price adjustment approach' as an alternative to using a wholesale step price to implement a cap on extractions. Wholesale prices would be set using the current methodology but include SCA's future investment requirements. The fixed component of the retail price would then be adjusted (downwards) to neutralise profits from above cap sales in the current period.

DEC acknowledges the merit of such an approach, however has identified the following potential difficulties with it:

- There is no incentive for SWC to sell above the cap, however there is also no incentive to reduce demand if sales are above the cap, because only the profit from this volume is removed in the subsequent regulatory period and is not spent on DM as per the DEC submission.*
- If there are consistent above-cap sales, retail fixed charges could be eroded considerably.*
- Reducing retail fixed charges could send a perverse incentive for consumers because bills would be lower at the same level of consumption. Some research indicates that consumers respond to average rather than marginal water price and total bill is also thought to have an impact. Lower retail water prices where there is above-cap demand, is inconsistent with the objectives of pricing for demand management.*
- The reduction in the fixed charge may not ultimately impact on SWC's revenue if price increases are needed in the subsequent period to cover costs associated with maintaining its asset base or there are regulatory or management changes"¹.*

References:

1. Booth J. (2005) *DEC SUBMISSION TO IPART'S REVIEW OF METROPOLITAN WATER AGENCY PRICES*, Department of Environment and Conservation (NSW).

Additional referencing,

2. The Metropolitan Water Plan, Meeting the challenges; Securing Sydney's water future, is available on the NSW Department of Infrastructure and Natural Resources website at <http://www.dipnr.nsw.gov.au/waterplan/index.shtml>
3. CSIRO (2000) *Managing Externalities; Opportunities to Improve Urban Water Use*.
4. CSIRO (1999) *Valuing Externalities; A Methodology for Urban Water*
5. WQO can also be classified and valued according to the number of species of biota they support, or by pollution level targets or chemical and biochemical composition. These are the standard measures of sewage pollution and encompass other chemicals that are important to environmental health (refer to page 8 DEC submission).

6. Environmental and Resources Economics (2001) Valuing the environmental attributes of NSW Rivers: Draft Report prepared for the NSW Environment Protection Authority.
7. To estimate the environmental values for river regions throughout NSW, surveys were distributed to households within and outside the catchment area. These surveys provided an understanding of the values held by the immediate catchment community as well as the wider community. The Georges River was chosen, in consultation with river science and policy experts, to represent rivers in urban catchments. Around 6,000 households were sent surveys and around 38% returned usable responses. This response rate compares favourably with other mail surveys of this type indicating strong interest in the community. The sample and response size was sufficient to establish statistically valid results (refer to page 9 DEC submission).
8. NSW Government, 2004. *Meeting the Challenges; securing Sydney's water future. The Metropolitan Water Plan 2004*; a NSW Government initiative. NSW Government, Sydney.
9. IPART (2004) *Investigation into Price Structures to Reduce the Demand for Water in the Sydney Basin: Final Report*.
10. IPART (2004) *Investigation into Price Structures to Reduce the Demand for Water in the Sydney Basin: Final Report*. Pp8
11. The Council of Australian Governments Water Reform Framework (COAG) (1995) 'Guidelines for the Application of Section 3 of the COAG Water Reform Agreement'
12. Final Report to the Expert Water Panel 2004
13. Warner R. (1996) *Water Pricing and the Marginal Cost of Water*. p 14.
14. In the 2003 determination the Tribunal decided to use revised forecasts based on long term historical trends with adjustments for other factors likely to affect underlying demand. For the 2005 determination, the Tribunal's preferred approach is to seek detailed forecasts from the businesses. This is likely to imply that each agency will provide a range of forecast outcomes reflecting different assumptions about the duration of water restrictions. The Tribunal will then employ an independent consultant to review each agency's modelling and forecast assumptions (refer to page 14 DEC submission).
15. Sydney Water (2004) Submission to IPART's Review of Metropolitan Water Agency Prices.
16. DEC (2004) Submission to IPART's *Investigation into Price Structures to Reduce the Demand for Water in the Sydney Basin*. A risk premium would also mitigate any risk associated with underestimating the cost of implementing the Sustainable Water Plan.
17. IPART (2004) *NSW Electricity Distribution Pricing 2004/05 to 2008/09*. Final Report
18. Sinclair Knight Metz (2004) *Reducing Regulatory Barriers to Demand Management: Avoided Distribution Costs and Congestion Pricing for Distribution Networks in NSW*. Prepared for IPART.
19. DEC (2004) *Submission to IPART's End of Term Review of Sydney Water and Sydney Catchment Authority Operating Licences*. Pp10
20. IPART (2004) *End of Term Review of the Operating Licences for Sydney Water Corporation and the Sydney Catchment Authority: Water Demand and Supply Balance: Issues Paper*. p.13. This figure is based on modelling information provided by the Expert Panel on Environmental Flows at the time of the mid-term review. It is expected to be revised downwards following implementation of the Government's regime to restore environmental flows and other climate factors.
21. The supply constraint will be defined following the outcomes of the Metropolitan Water Plan and included in Water Sharing Plans developed by DIPNR (refer to page 21 DEC submission).
22. As the supply function (SCA) was separated from the delivery function in Sydney (SWC,) the LRMC needs to be identified for each agency so it could be incorporated into prices (refer to page 22 DEC submission).

23. Setting the retail price based on LRMC is consistent with economic theory. For markets where there is no constraint on natural resource availability, marginal cost water prices may result in revenues that are higher than those required to cover short-term costs, however, there are several policy options that can be implemented to overcome this issue (refer to page 22 DEC submission).
24. Hewitt and Hanemann (1995) showed that, for a particular data set, a correct theoretical specification of residential demand could change estimates from inelastic to elastic.
25. IPART (2004) *Residential water use in Sydney, the Blue Mountains and Illawarra: Results from the 2003 household survey. Pp18*
26. Montgomery Watson Harza (2002) *Mid-Term Review of Sydney Water's Demand Management Strategy. Final Report to IPART.*
27. DEC (2005) *Submission to the End of Term Review of Sydney Water and Sydney Catchment Authority Operating Licences: Demand and Supply Balance.*