

Inquiry on Competition in the Water and Waste Water Services Sector



wacoss

Western Australian
Council of Social Service Inc

*Ways to make
a difference*

***WA Council of Social Service Response
to the Economic Regulation Authority's
Draft Report***

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INTRODUCTION

The Western Australian Council of Social Service Incorporated (WACOSS) is the peak body of the community service sector across Western Australia. Since 1956, WACOSS has been developing and strengthening the non-government community services sector's capacity to assist all Western Australians. With around 250 members, WACOSS has strong relationships with the social services sector and seeks to represent their interests, and those of the disadvantaged individuals and families they assist at a service level. Given this relationship, WACOSS is in a unique position to comment on issues in our society that socially impact upon members of the community experiencing disadvantage.

WACOSS is respected within both government and non-government arenas as being an authoritative voice for consumers with regard to energy market reform in Western Australia. WACOSS has developed a strong network with utility policy workers across Australia, which provides us with information and expert opinion on these issues.

In January 2005, WACOSS commenced the Consumer Utilities Project. Building upon the utility policy work WACOSS had undertaken over the previous four years the Consumer Utilities Project works with consumers and representative organisations to achieve better outcomes in the provision of essential services.

WACOSS has direct access to the issues of disadvantaged consumers who are living on low incomes through our Consumer Reference Group, which includes representatives from the Emergency Relief sector, Unions, Financial Counsellors and Community Legal Centres. These agencies provide us with policy information and direction in relation to our work and look to us to represent the interests of their clients with regard to utility issues. We have taken on this role due to the level and severity of the utility issues being raised by community agencies and the absence of any other resourced body in Western Australia representing these issues.

WACOSS is pleased to provide a response to the Economic Regulation Authority's Draft Report: *Inquiry on Competition in the Water and Wastewater Services Sector*. The impacts on consumers of increased competition and changes to pricing structures in the water services industry are significant. Whilst the adoption of competition and market mechanisms within non-retail and non-distribution components of the market have the potential to benefit consumers through lower charges, some concerns remain regarding the impact that price signaling to potential bulk water suppliers may have on smaller consumers.

EXECUTIVE SUMMARY

Western Australia's water and wastewater services sector is currently undergoing a process of change that may result in the introduction of competitive elements and signalling into parts of the sector. It is important that this process of review be considered in the light of similar processes that have taken place to date in the electricity and gas market sectors.

Effective competition in any market requires that all participants have access to relevant and accurate information regarding cost. Many of the Authority's recommendations have this aim in mind given the concern that incorrect price signals to potential market entrants, on the supply side, may result in effective barriers to entry and accompanying investment. Certainly, this is a valid concern given that the ultimate aim of effective competition in essential service industries and to accrue benefits to consumers in the form of lower prices and better service.

When considering the ways in which the market may provide price signals to potential entrants it remains important that consumers, especially those facing financial and other types of vulnerability, are considered in any analysis. It is also important that economic aims be clearly defined relative to other, competing demands such as social equity and environmental sustainability.

It is hoped that the potential for private entrants into the market for the supply of bulk water sources will result in innovative and cost-effective solutions to a drying climate in the South-West of Western Australia and increasing residential and industrial demand. With private commercial entrance to this market, however, comes increased responsibility for government to effectively regulate for public safety and economically equitable results.

WACOSS has focused on aspects of the Authority's Draft Report, relating to issues that are most relevant to residential water consumers, particularly those living on lower incomes or facing other types of vulnerability. Absence of comment on any section of the Draft Report should not be taken as support for, or opposition to any proposal by the Authority in relation to competition in the water and wastewater industry.

For further information in regards to this submission, please contact Aden Barker, Senior Policy Officer on (08) 9420 7222.

WACOSS RECOMMENDATIONS

WACOSS RECOMMENDATION 1

That the ERA's finding that the Water Corporation's bulk water supply and distribution operations not be separated at this time be upheld by the Government.

WACOSS RECOMMENDATION 2

That any future analysis regarding the potential separation of the Water Corporation's existing bulk water supply and distribution functions be accompanied by extensive, independent analysis and a transparent, open process of consultation with all relevant stakeholders.

WACOSS RECOMMENDATION 3

That in the event of private market involvement in the provision of bulk water services to residential consumers, the Independent Procurement Entity (IPE) should be established to manage the procurement of such services as necessary.

WACOSS RECOMMENDATION 4

Where possible, the IPE should utilise the existent resources of the Water Corporation to maximise the efficiency of the body and reduce costs associated with its operation.

WACOSS RECOMMENDATION 5

That Government should retain the role of determining the required level of water supply security and that this level should be identified through open and transparent processes.

WACOSS RECOMMENDATION 6

That rigorous assessment take place in cases where third-party access is sought, in order to determine the real value that will be accrued to the public as a result of private involvement in the market.

WACOSS RECOMMENDATION 7

That in addition to any future "retail-minus" approach to third-party access pricing, as discussed by the Authority, other costs accrued to the public also be considered in pricing determinations. Other costs may include those to the environment or lost opportunities for government investment.

WACOSS RECOMMENDATION 8

That, in support of the Authority's Finding 12 within the Draft Report, WACOSS recommends that the Water Corporation not be subject to horizontal disaggregation, given limited current scope for consumer benefit.

WACOSS RECOMMENDATION 9

That the Authority clarify its apparent support within Draft Recommendation and Finding 13 for retail contestability for small water consumers on a case-by-case basis within the body of its final report. This clarification should contain discussion regarding the costs associated with the development of a contestability scheme for small consumers that would protect their access to water as an essential service.

WACOSS RECOMMENDATION 10

That any future investigation regarding the possibility of scarcity-based water pricing for residential consumers include an in-depth analysis of associated social impacts, including issues of social equity for different household types. This should include an audit of the number and types of households currently consuming water in each tariff block. This demographic information is vital to understanding the real social impacts of tariff reform.

WACOSS RECOMMENDATION 11

That the Authority carry-out further investigation regarding the capacity of tariff regimes to deliver equitable outcomes and guarantee residential access to affordable, non-discretionary uses of water. Examples of this may be found in the concept of 'social tariffs'.

WACOSS RECOMMENDATION 12

That the Authority engage in research to analyse the real extent to which the Authority's proposed tariff structure will act as an effective price signal to consumers, capable of affecting their consumption.

ERA FINDING 1

In its Draft Report, the Authority found that the synergies between the Water Corporation's bulk water supply operations and distribution functions suggested that separation of these functions at this time might not be appropriate. WACOSS fully supports this view in the light of the commissioned ACIL Tasman reports and other international evidence suggesting that significant costs might accrue from any disaggregation of this sort.

WACOSS contends that this situation is unlikely to change in the foreseeable future, even with more significant involvement by the private sector in the area of bulk water supply over time. Any future decision regarding the possible disaggregation of these bodies should be accompanied by rigorous examination and analysis of the potential costs to the public through reduced levels of efficiency.

WACOSS RECOMMENDATION 1

That the ERA's finding that the Water Corporation's bulk water supply and distribution operations not be separated at this time be upheld by the Government.

WACOSS RECOMMENDATION 2

That any future analysis regarding the potential separation of the Water Corporation's existing bulk water supply and distribution functions be accompanied by extensive, independent analysis and a transparent, open process of consultation with all relevant stakeholders.

ERA FINDING 2

In the event of increased private involvement in the provision and ownership of bulk water sources, WACOSS supports the formation of an Independent Procurement Entity (IPE) as described in Finding 2 within the Draft Report. In addition to utilising the knowledge and expertise existent within the Water Corporation for this purpose, as set out in the Authority's Draft Report, WACOSS, too, recommends that Government retain its role regarding the level at which security of supply should be set.

The level at which security of supply is determined should be decided by government through a transparent process, including public consultation.

WACOSS RECOMMENDATION 3

That in the event of private market involvement in the provision of bulk water services to residential consumers, the Independent Procurement Entity (IPE) should be established to manage the procurement of such services as necessary.

WACOSS RECOMMENDATION 4

Where possible, the IPE should utilise the existent resources of the Water Corporation to maximise the efficiency of the body and reduce costs associated with its operation.

WACOSS RECOMMENDATION 5

That Government should retain the role of determining the required level of water supply security and that this level should be identified through open and transparent processes.

THIRD-PARTY ACCESS

Given the assumption of private involvement (including ownership) in the provision of bulk water services, WACOSS is generally supportive of a third-party access regime as discussed in the Authority's findings. WACOSS strongly asserts, however, that additional research needs to be conducted regarding the pricing of such access to ensure that private bulk water services represent real and significant savings for the incumbent provider and by extension, the general public who they serve. Such analysis would require the consideration of the system integration costs that would be involved in the third-party access regime

In addition to the 'retail-minus' approach discussed by the Authority, third-party access prices should be considered within the context of the whole water and wastewater services system. In addition to the calculation of cost avoided through the provision of services by a private party, consideration should also be granted to any additional costs that market participants may contribute to the system. Examples of this might include additional environmental costs that would otherwise be borne by the public as well as the potential for opportunity costs to the public in cases where private market development in this area reduces public choice. This may occur in cases where large amounts of publicly-owned land is required in order for a private bulk water proposal to be viable.

WACOSS RECOMMENDATION 6

That rigorous assessment take place in cases where third-party access is sought, in order to determine the real value that will be accrued to the public as a result of private involvement in the market.

WACOSS RECOMMENDATION 7

That in addition to any future “retail-minus” approach to third-party access pricing, as discussed by the Authority, other costs accrued to the public also be considered in pricing determinations. Other costs may include those to the environment or lost opportunities for government investment.

ERA FINDING 12

WACOSS supports the Authority’s finding that there are likely to be minimal gains from any horizontal disaggregation of the Water Corporation’s Perth metropolitan operations at this time. It is also suggested that such a development, if implemented in future, would further complicate the operation of a the IPE as proposed by the Authority, the Water Corporation’s advice to it, third-party access pricing and a range of other matters.

WACOSS RECOMMENDATION 8

That, in support of the Authority’s Finding 12 within the Draft Report, WACOSS recommends that the Water Corporation not be subject to horizontal disaggregation, given limited current scope for consumer benefit.

ERA DRAFT RECOMMENDATION & FINDING 13

WACOSS strongly supports the Authority’s finding that the retail water sector for small consumers is not currently appropriate for Full Retail Contestability (FRC) at this time. Some concerns remain, however, regarding the Authority’s recommendation that given the nature of third-party access and water recycling, greater contestability should be considered on a “case by case” basis for small consumers.

WACOSS suggests that this latter recommendation may potentially cause confusion, given the finding that precedes it. It is suggested that the Authority clarify this statement in its Final Report. WACOSS believes that the reasoning that underpins this recommendation should also be further explored given the complex regulatory mechanisms that will be required, even in cases of limited retail contestability for small users.

It is certain that the implementation of any scheme supporting a system of retail contestability would be accompanied by associated costs which are typically

ultimately borne either by the user, or alternatively, the public. While the Authority has recommended the introduction of contestability (and therefore associated market regulation) for larger consumers, WACOSS suggests that any retail contestability for smaller consumers will demand a separate approach which may prevent a contestability regime used for larger consumers (such as industry) being utilised in the case of smaller consumers.

The different needs of small essential service users have been recognised in the case of both the electricity and gas markets where, as a result of the essentiality of the service, contestability in small-use markets is governed by different market rules and consumer protections than those operating for larger consumers. Water shares its status as an essential service with energy, something recognised by the Authority in its Draft Report.

WACOSS RECOMMENDATION 9

That the Authority clarify its apparent support within Draft Recommendation and Finding 13 for retail contestability for small water consumers on a case-by-case basis within the body of its final report. This clarification should contain discussion regarding the costs associated with the development of a contestability scheme for small consumers that would protect their access to water as an essential service.

ERA DRAFT RECOMMENDATION AND FINDING 15

In its Draft Report, the Authority has recommended further exploration of 'scarcity-based' pricing mechanisms to improve price signals for consumers regarding consumption. Additionally, the Authority suggests such a system of pricing is will provide better price signalling to potential private participants and investors in the bulk water market.

WACOSS acknowledges that there is the potential for a system of scarcity-based water pricing to provide information to potential investors in future bulk water sources. There remains significant concerns, however, regarding the potential equity issues arising from such pricing arrangements for some residential consumers. Additionally, WACOSS also suggests that scarcity based pricing, if incorporated into current models of billing, would likely have limited effect in delivering price signals to consumers and subsequent reductions in demand during times of scarcity.

Equity Concerns

Research indicates that households with lower incomes have a lower extent of 'discretionary' water use – that is, water used for recreational and aesthetic purposes such as pools and gardens – relative to households living on higher

incomes¹. Additionally, it may also be suggested that non-discretionary uses of water, such as clothes washing and water used for personal hygiene, are proportionally greater in households living on lower incomes because of reduced access to water-efficient appliances due to high up-front costs at the time of appliance purchase². It is important to note that even some proponents of scarcity pricing also advocate for a differentially-priced allowance for non-discretionary uses of water³, recognising the potential impacts of scarcity pricing on social equity.

Given that households living on lower incomes have a relatively lower rate of discretionary water consumption and therefore a relatively reduced capacity to further conserve water, scarcity-based pricing is likely to create additional costs for the households that can least afford them. Additionally, potentially higher rates of non-discretionary use amongst such households would mean that poorer households may be even more vulnerable to increases in price than other households.

Utility bills, such as those for electricity, gas and water are sometimes described as being 'lumpy', that is, consumers are usually billed relatively infrequently for these services and for relatively large amounts. This creates difficulties for some households in regards to budgeting, given the relatively infrequent and sometimes unpredictable nature of such costs. The inverse of the situation in electricity and gas retail costs, scarcity pricing for water would most likely bring about increases to water costs at a time when many households are already experiencing high living costs due to school holidays, the Christmas period and costs associated with children resuming school for the year.

Concerns Regarding Efficacy

Under the current retail billing model, the Water Corporation invoices water consumers in metropolitan areas with bills for volumetric consumption twice yearly. In rural and regional areas served by the Corporation, this may be more frequent at once every four months. WACOSS suggests that the relative infrequency of volumetric water billing significantly reduces the effectiveness of scarcity pricing to signal the consumer. This is because the consumer may not get billed for several months following the period of scarcity, reducing the association made by consumers between scarcity and price⁴.

¹ Brennan, D., 'The Efficiency and Equity Implications of Perth's Inclining Block Water Tariffs', Paper Presented at the 50th Annual Conference of the Australian Agricultural and Resource Economics Society, February 2006, p. 13

² Stewart, A., 'Do the Poor Pay More? – A Research Report', Consumer Law Centre Victoria, January 2005, p. 62

³ Duke, J. M. & Ehemann, R., 'The Conservation of Residential Water: Scarcity Pricing of Water in Northern Newcastle County', University of Delaware, January 2002, p. 4

⁴ St. Vincent de Paul Society, 'Economic Regulation of the Water Industry: Submission to Essential Service Commission', February 2004, p. 4

In addition to the ‘time-delay’ factor caused by billing cycles, that may reduce the effect of scarcity pricing in signalling consumers to conserve, WACOSS has additional concerns regarding the efficacy of scarcity pricing given that significant ‘draw-down’ on water resources is likely to take place at times when resources are still relatively plentiful⁵. An example of this may be seen in the Water Corporation’s own data regarding dam storage levels whereby depletion may only begin to take place in November and does not reach its lowest point until May⁶, when many people have already ceased watering as frequently. Invariably, such an arrangement would be likely to send incorrect signals to consumers to conserve at times when there is no dam inflow, but high storage levels (lower prices) and higher prices at times when water use is likely to be reduced anyway.

Where water use is taken to be non-discretionary, the value of this sort of price information to potential market entrants is debatable. This is because consumers invariably are required to pay for essential, or non-discretionary services, even if their nominal price is significantly inflated when compared to the real value of the resource⁷, simply because the service is essential. Regardless of any discussion regarding water as a social, rather than economic good, it is well known that on the whole, residential water use is relatively inelastic to changes in price⁸.

Given that both regarding the efficacy of scarcity-based pricing in conveying useful information both to the market and to the consumer as well as significant concerns regarding social equity, WACOSS cannot support the adoption of scarcity-based pricing.

WACOSS RECOMMENDATION 10

That any future investigation regarding the possibility of scarcity-based water pricing for residential consumers include an in-depth analysis of associated social impacts, including issues of social equity for different household types. This should include an audit of the number and types of households currently consuming water in each tariff block. This demographic information is vital to understanding the real social impacts of tariff reform.

⁵Ibid, p. 4

⁶ Water Corporation Website, http://www.watercorporation.com.au/generated/ds_storage_large.jpg, Accessed 30.01.2008

⁷ Van Bueren, M. & MacDonald, D. H., ‘Addressing Water-Related Externalities: Issues for Consideration’, Paper Presented at the Water Policy Workshop convened by the Australian Agricultural and Resource Economics Society, Melbourne, 10th February, 2004, p. 11

⁸ Oliver, A., ‘Water Tariff Increases in Manus (Brazil): An Evaluation of the Impact on Households’, Institut de Recherche pour le Developpement, October 2006, p. 10

OTHER RESIDENTIAL WATER PRICING ISSUES

In addition to its recommendations regarding scarcity-based pricing, the Authority also makes limited comment on the potential for other pricing systems and tariff regimes to send appropriate signals to consumers regarding water use, as well as potential market participants. In the absence of a major review of Water Corporation tariffs and water pricing in general, WACOSS feels it is appropriate to comment on these matters within the context of the current investigation into the potential for increased competition in the WA water and wastewater services sector.

Pricing Structures

Further to the limited discussion within the Authority's Draft Report regarding potential pricing plans, WACOSS is supportive of the concept of a discounted 'social use' tariff, which would cover non-discretionary uses of water. It is of note, however, that such a pricing scheme would apparently be at odds with the Authority's stated aim of limiting the extent of cross-subsidisation between customers within the volumetric tariff structure. It is also important to note that in any system in which there is both fixed and volumetric charges, some level of cross-subsidisation amongst users will be unavoidable⁹.

WACOSS strongly believes that cross subsidization of smaller users by larger ones – including commercial users of water – is appropriate in the interest of social equity. It is also believed that this cross subsidisation should not underpin all residential uses of water, but should allow for the affordable access to non-discretionary water use by all households. Water, as agreed in the Authority's Draft Paper, is an essential service for residential users, non-discretionary uses of water providing innumerable benefits to society and the economy as a whole¹⁰. It is therefore important to recognise the tension that may exist between economic efficiency and the broader goals of society, which may be said to include the affordable provision of essential services¹¹. Ultimately, economic efficiency is only of value if it contributes to the general welfare of society and consumers.

Tariff Blocks

WACOSS supports the effective differentiation between very high residential water users and lower water users, as currently promoted by the Authority's

⁹ Brennan, *op. cit.*, p. 6

¹⁰ OECD, 'Social Issues in the Provision and Pricing of Water Services', 2003, p. 198

¹¹ Oliver, *op. cit.*, p. 5

recommendations regarding Inclining Block Tariffs (IBTs)¹². WACOSS generally supports the approach that there should be a tariff block, within any pricing regime, that should accommodate non-discretionary water usage at an affordable rate. A significant question remains, however, regarding the appropriate point at which such a tariff should be set. The 550kL p/annum tariff block, as proposed by the Authority, would incorporate the vast majority of household's total yearly usage and be as much as ten-times the non-discretionary rate of use for one person, as assumed in one study¹³.

IBTs that have the intention of promoting demand reduction are fraught with problems. IBTs have the potential to be extremely inequitable in their application as they penalise households with more occupants. Perversely, these high-occupancy households may actually be less costly for the retailer to serve on a per capita basis because of the relative reduction in infrastructure (meters) and services (billing) required per person. It is of note that the effective two-block tariff as proposed by the Authority will actually provide a disincentive for smaller water users (those using 0-150kL p/annum) to conserve as the amount they pay per kL will effectively double.

A 'Social' Tariff

WACOSS recommends that the Authority undertake further study regarding the appropriate location of a tariff designed to ensure universal access to affordable water for non-discretionary uses. Often, this is described as a 'social tariff'. The benefits of locating such a tariff block appropriately are clear, as it would reduce the degree of cross-subsidisation required to ensure the affordability of social, non-discretionary water use.

It is acknowledged that the appropriate setting of the level of a tariff for non-discretionary usage of water poses certain difficulties. Possibly the most obvious of these difficulties is the extent to which non-discretionary household varies due to levels of occupancy and the appliances used. Because of this difficulty, WACOSS believes that in addition to seeking equitable outcomes through the design of tariffs, additional instruments, such as rebates and concessions will continue to be required to promote substantive equity amongst consumers.

Possible Solutions

The difficulty in providing equity across households of different occupancy has been addressed successfully to a considerable extent in at least one international jurisdiction. In the Flanders region of Belgium, households are allocated 15 cubic

¹² Economic Regulation Authority, 'Inquiry on Water Corporation's Tariffs', 24 December 2007, p. 15

¹³ Brennan, D., op. cit., p. 7

meters of water per household occupant, per year¹⁴. While WACOSS does not suggest that this is the appropriate level at which to set non-discretionary water use (indeed, 15kL appears to be significantly below what would be required), the model employed suggests an example of equitable tariff application¹⁵.

While the model in use in Flanders utilises household occupancy data already being gathered by the Belgium Government, an identical scheme in Western Australia would conceivably impose considerable financial costs on water retailers and subsequently, all water users. Given the possibilities that are presented by such a model, WACOSS strongly supports the further investigation of possible solutions to the problem of equity through tariff arrangements by the Authority.

WACOSS RECOMMENDATION 11

That the Authority carry-out further investigation regarding the capacity of tariff regimes to deliver equitable outcomes and guarantee residential access to affordable, non-discretionary uses of water. Examples of this may be found in the concept of 'social tariffs'.

WACOSS RECOMMENDATION 12

That the Authority engage in research to analyse the real extent to which the Authority's proposed tariff structure will act as an effective price signal to consumers, capable of affecting their consumption.

CONCLUSION

WACOSS broadly supports many of the positions put forward by the Authority in its Draft Report regarding the potential for increased competition in the WA water and wastewater services sector. It is believed that private access to development and ownership of future bulk water resources, accompanied by a third-party access regime may result in innovative solutions to growing demand for water services and a drying climate. Significant concerns remain, however, regarding the way in which price signalling will be carried-out by the market for potential market participants.

WACOSS has asserted that the right to water for non-discretionary use - such as for hygiene and nutrition – is fundamental. Given the special status of this resource, WACOSS also contends that it should remain the responsibility of the State to ensure that people continue to be able to access water for non-

¹⁴ National Consumer Council, 'Towards a Sustainable Water Charging Policy', Discussion Paper 105/02, November 2002, p. 23

¹⁵ Herrington, P., 'Distribution of Costs and Environmental Impacts of Water Services in OECD States: Affordability Measurement and Policies', OECD, May 2003, pp. 15-17

discretionary uses in an affordable manner, regardless of issues of contestability, tariff or market design.

When considering issues of tariff design and pricing, it is clear that further analysis needs to take place regarding the impact of various regimes on consumers. While it is important that the pricing of resources allows markets to operate in a transparent and efficient manner, it is even more important that services fundamental to the maintenance of life itself remain accessible, especially to the most vulnerable in our society.

REFERENCES

Brennan, D., 'The Efficiency and Equity Implications of Perth's Inclining Block Water Tariffs', Paper Presented at the 50th Annual Conference of the Australian Agricultural and Resource Economics Society, February 2006

Consumer Action Law Centre, 'Water Tariff Structures Review: Issues Paper', 8 November, 2007

Duke, J. M. & Ehemann, R., 'The Conservation of Residential Water: Scarcity Pricing of Water in Northern Newcastle County', University of Delaware, January 2002

Economic Regulation Authority, 'Inquiry on Water Corporation's Tariffs', 24 December 2007

Hansson, L., 'Water as an Economic and Social Good: Some Socio-economic Principles for Indian Water Management', International Institute for Industrial Environmental Economics, EU Sustain Water Project, 2000

Herrington, P., 'Distribution of Costs and Environmental Impacts of Water Services in OECD States: Affordability Measurement and Policies', OECD, May 2003

National Consumer Council, 'Towards a Sustainable Water Charging Policy', Discussion Paper 105/02, November 2002

Oliver, A., 'Water Tariff Increases in Manus (Brazil): An Evaluation of the Impact on Households', Institut de Recherche pour le Developpement, October 2006

Organisation for Economic Cooperation and Development (OECD), 'Social Issues in the Provision and Pricing of Water Services', 2003

OECD, 'Distribution Costs and Environmental Impacts of Water Services in OECD States: Affordability Measurement and Policies', March 2003

Public Interest Advocacy Centre, 'Water Pricing and Vulnerable Customers: Profiling Low Incomes Households', Utility Consumers Advocacy Program, Occasional Policy Paper No. 7, November 2004

St. Vincent de Paul Society, 'Economic Regulation of the Water Industry: Submission to Essential Service Commission', February 2004

Stewart, A., 'Do the Poor Pay More? – A Research Report', Consumer Law Centre Victoria, January 2005

Van Bueren, M. & MacDonald, D. H., 'Addressing Water-Related Externalities: Issues for Consideration', Paper Presented at the Water Policy Workshop convened by the Australian Agricultural and Resource Economics Society, Melbourne, 10th February, 2004

Water Corporation Website,
http://www.watercorporation.com.au/generated/ds_storage_large.jpg, Accessed 30.01.2008