Department of Water
Government of Western Australia

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Our ref:

Enquiries: Derek Perez – Ph 6364 6816

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Inquiry on Country Water and Wastewater Pricing
Economic Regulation Authority
PO Box 8469
Perth Business Centre
PERTH WA 6849

DRAFT REPORT: INQUIRY ON COUNTRY WATER AND WASTEWATER PRICING WESTERN AUSTRALIA

Thank you for the opportunity to comment on the Draft Report prepared by the Economic Regulation Authority.

Please find attached the Department of Water's response to the findings of the Draft Report.

PAUL FREWER
A/Director General

The Atrium, 168 St Georges Terrace, Perth, WA 6000
PO Box K822, Perth, Western Australia 6842
Tel: (08) 6364 7600 Fax: (08) 6364 7601
www.water.wa.gov.au

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Response to Economic Regulation Authority's
Draft Report: Inquiry on Country Water and Wastewater Pricing
In Western Australia

22 March 2006

Department of Water

General Comments

The focus of the Draft Report on Country Water and Wastewater, as with the Urban Pricing Inquiry is consistent with the terms of reference issued to the ERA. However, a significant component of water consumption in rural and regional areas is for irrigation purposes which has been excluded from consideration. The use of water for irrigation was a major driver for the development of the Water Reform Framework, which was later included in the National Competition Policy Agreement. It is also likely to form a significant part of the National Water Initiative.

Clearly the terms of reference do not include the need for considering the price of irrigation water, however the ERA could consider making some general comments on the relationship between the long run marginal cost of water and the prices paid by most irrigation cooperatives for their bulk water. This could perhaps lead in the future to a more general consideration of bulk water prices for irrigation in the future.

The Report does not consider the provision of water to resource activities. In the mining sector much of the Water Corporation's pricing is done by special agreement. The Corporation provides these services at commercial rates including the full recovery of headworks. These headworks charges can be significant, especially in more remote areas such as Kalgoorlie-Boulder, and have led to concerns by the Department of Industry and Resources that these charges could be an inhibitor to development in the region. In this respect it is unclear what the relationship is between CSOs paid for loss making residential services and the revenues generated from special agreement activities. That is, does the pool of revenues generated through all the Water Corporation's activities in Kalgoorlie get compared to its total cost, or are some revenues ring fenced, for the purposes of determining the CSO. Put another way, if a private sector entrant were offered the entirety of the Water Corporation's activities in the Kalgoorlie-Boulder region, including special agreement mining customers, and were required to provide residential and commercial water services at subsidised rates as part of a universal service obligation, what subsidy would they require from Government, if any?

In relation to the comments above, another significant issue that has not been considered is that of the setting headworks charges. Certainly the ERA appear to have considered headworks charges in it revenue estimates, but consideration also needs to be given to the methodology for the determination headworks charges. In particular, given the ERA stated preference for pricing at long run marginal cost (LRMC), is the Water Corporation's approach to determining headworks charges consistent with long run marginal cost (for example, an approach consistent with an extension of Turvey's[1] approach to estimating long run marginal cost).

[1] *TURVEY, R.*, "Marginal cost", *Economic Journal*, Vol. 79, No. 2, pp. 282-299, 1969.

Finally, although pricing at long run marginal cost is often espoused as the most efficient means of pricing, what is meant by LRMC pricing varies depending on the source. The standard micro-economic approach (highlighted in the Appendix to the ERA's draft report), presents static, continuous cost functions. However, it has been argued by Varian,[2] that for capital intensive network industries, over any reasonable time horizon, this form of analysis leads to prices set at short run marginal cost. This takes 'marginal' to mean first derivative, as is the case in the models highlighted in the Appendix to the ERA's Draft Report. However, for bulky infrastructure industries, with indivisible fixed plant sizes, Turvey argues that what is generally of interest is the per unit change in cost that will be caused by a substantial change in future output, not a one unit change.

Turvey's approach is more in line with the ERA's comments on pages 7 and 8, that the LRMC is a forward looking cost. It would also appear to be consistent with the approach actually taken by the ERA in determining LRMC. Although this is difficult to determine without an understanding of the methodology used by the ERA to derive its estimates of LRMC.

Residential Water Pricing

The ERA's Draft Report considers the conflicting objectives of achieving economic efficiency (through pricing at LRMC) and achieving equity objectives, in this case through the State's Uniform Pricing Policy. As noted on page 7, standard theory states that efficient pricing requires only that the final unit produced be sold at marginal cost, not that all units be sold at marginal cost (as noted above, considering the final unit is of little relevance to an industry where capacity is expanded not in units but in large blocks of capacity). Indeed, charging for all units at LRMC may result in the service provider earning excessive profits. Given that economic efficiency only requires charging LRMC for the last unit(s) of production, this leaves considerable room to manoeuvre in terms of the way in which tariffs are set in general. Specifically it allows for prices that are greater or less than LRMC for production prior to the last unit(s). This can be achieved through differential pricing either in line with 'willingness to pay' as proposed by Varian[3] or 'ability to pay' in order to reflect equity concerns.

To the degree that increased water consumption can be linked to increased income, the ability to pay principle would suggest charging more to large consumers and less to lower level consumers. This may not be inconsistent with the principle of willingness to pay since it is likely that larger consumers have higher disposable income and

[2] *Varian, H.R.*. Intermediate Microeconomics, W. W. Norton and Company, 1987
[3] *Varian, H.R.*. *Differential Pricing and Efficiency* \First Monday, Vol.1 No.2 - August 5th. 1996.

therefore higher willingness to pay at the margin. This reasoning leads to an argument for a block tariff approach to pricing which reflects ability to pay. That is, at low consumption levels the block tariff would be set lower, high consumption would have block tariffs set higher. Such an approach is actually consistent with current practice in Western Australia. It would also appear to be consistent with Finding 4 of the ERA's Draft Report.

In any event the above discussion is predicated on the assumption that the price of residential water in country towns reflects the cost of providing the service. This however is not the case, the majority of country schemes are run at a loss (on a full cost recovery basis) due to the implementation of the uniform pricing policy. As such, discussions of pricing at LRMC or any variant are largely irrelevant. The only remaining issue relates, not to setting allocatively efficient prices, however this is determined, but rather the efficiency with which the service provider provides the service.

Given the acceptance of the continued application of the uniform pricing policy, suggestions by the ERA to group towns according to how close they are to needing to increase their water supplies (and therefore obtaining a non-zero estimate of LRMC), would have limited applicability. This is because in such cases estimates of LRMC are likely to be well in excess of current tariffs and capture only a small proportion of residential consumers.

Concessions

The ERA's suggestion that there is a need to consider concessions in a broader context is supported (Finding 8). It should also be noted that currently the state Government funds such concessions only where the service is provided by the Water Corporation. Along with considering the objectives of the policy, criteria for eligibility, the options for providing assistance, and the consistent treatment of those considered eligible for assistance, it would also be worthwhile considering how the Government would fund the concessions policy in the case of non-Water Corporation providers.

Commercial Water Pricing

Findings 9 to 12 of the ERA's Draft Report are in general supported. The main argument for applying a uniform pricing policy to country domestic consumers would be based on the high cost of provision and the need for equity between urban and country consumers. Such an argument does not apply to Commercial users. However, care would need to be taken in terms of pricing at LRMC to ensure that the tariffs set in this way did not greatly exceed the marginal willingness to pay, as this could lead to longer term inefficient outcomes in terms of regional development.

Residential Wastewater Pricing

The issue of the relative merits of GRV based charging for residential wastewater has been debated extensively, with general agreement that there is little to be gained, in an economic efficiency sense, from a move to a flat charge (the only viable alternative to GRV). Although, the match between the GRV of residential dwellings and household income is not perfect, it has been demonstrated (in the case of urban residential wastewater) that it is more than reasonable. Further, any move away from it tends to have distributional effects that favour affluent households to the disadvantage of low income households.

With respect to finding 12, the main inhibitor to the provision by alternative service providers for wastewater is not cost reflectivity, but rather the general lack of a mechanism to fund loss making schemes of any kind other than through CSOs to the Water Corporation. A more general approach to funding loss making country schemes would need to be found if alternative providers are to be attracted to enter the market. The main other possible pre-existing service provider that could provide wastewater services is Aqwest. However, Aqwest is currently inhibited in the types of services it can provide by the limitations of the *Water Boards Act 1904*. In the past Aqwest has shown a significant interest in taking over the Water Corporation's wastewater services in Bunbury (for which the Corporation currently receives a significant CSO).

An alternative approach to encouraging market entry would be to value the schemes using a 'line in the sand' approach. To the degree that the revenue generated by these schemes is sufficient to cover operating and maintenance and an allowance for a renewals annuity, and some additional revenue as a return on the 'line in the sand valuation' the schemes could be tendered to new entrants in regional groupings.

As the ERA would be aware, there are a number of Country Shires which provide their own wastewater services. The problem for these schemes is that as they are not a Government owned corporation, they do not have access to CSO funding. This puts the country operations at a disadvantage relative to their Water Corporation counterparts. This gives further support to the need for a more general scheme for the funding of loss making schemes. A more general CSO Scheme would not only allow for the entry of alternative service providers but would support the more equitable treatment of non-Water Corporation communities.

Caps on Individual Wastewater Charges

On pages 28 and 29 of the Draft Report the ERA notes that the Water Corporation average charge for the 2004/05 period was $472/year for country and $443 for Perth. However, the recent boom in Perth property prices and the tightness of the rental market have led to median Perth rents exceeding $200 a week. Consequently, it would be expected that median charges, based on GRV, would be moving towards $531.33 (depending on the recency of the latest property valuation). This would put median wastewater charges in Perth within 15 percent of the top cap in country towns, if there is not a subsequent reduction of the Water Corporation rates for Perth metropolitan wastewater services. The ERA may want to consider examining the impact of the tight rental market and property boom in Perth on the proximity of median wastewater charges in Perth in relation to the county cap. This analysis should seek to determine that to there is a reasonable distinction between the highest charge in the country and the median charge in the metropolitan area.

In relation to finding 18, the effect of the cap would appear to be either to remove some of the positive redistribute impact of GRV based charging or to increase the relative size of the CSO. Although there are a number of country towns on 12 cents/dollar GRV most towns are paying considerably less (*see Water Agencies (Charges) By-laws 1987* Schedule 2). The ERA is probably aware that the costs included by the Water Corporation to determining charges in country towns varies from town to town. This is a function of location costs and a historical issue, as regional offices were able to determine costs independently and consequently some included shared costs and others only direct costs. The rate in the dollar GRV was then set to recover these costs. Hence the variation in GRV charges across country towns.

It therefore does not follow that all country consumers are facing higher rates in the dollar than metropolitan users, as claimed on by the Water Corporation (page 28). It should also be noted that the Water Corporation adjusts many of its rates in line with new Valuer General's valuations to ensure that increase as a result of general revaluation do not lead to an overall increase in wastewater bills in excess of 7 percent in any one year. This is done by reducing the rate in the dollar.

Commercial Wastewater Pricing

The ERA's view, as expressed in findings 19 and 20 is supported. Although it is likely the prospect for competition in wastewater service provision might be compromised by uniform commercial pricing across schemes (Finding 21), there are other inhibitors. In particular, the Water Corporation's ready access to CSOs. Further, although under National Competition Policy efforts were made to introduce arrangements that were competitively neutral, such as the introduction of Tax Equivalent Regime (TER), it remains true that from a State perspective there are financial benefits to having the Water Corporation provide services. For example, the Water Corporation pays dividends to the State, and under the National Tax Equivalent Regime (NTER) taxes paid by the Water Corporation are returned to the State. Neither of these is the case if a private sector provider provides the service.

As such, although the Department of Water does not disagree with the ERA's assertion in Finding 21, there are structural issues that have a greater significance in terms of the introduction of competition than uniform pricing.

Community Service Obligations (CSO)

The issue of how CSOs should be determined and who should receive them has had an impact on the recent development of the Water Industry in Western Australia. As indicated by the ERA, the interplay between CSO policy and the uniform pricing policy needs further attention, particularly in light of commitments under National Competition Policy to 'full cost pricing', and in relation to commitments that may arise if Western Australia decides to become a signatory to the National Water Initiative.

The ERA may wish to recommend that this issue be considered jointly by the Department of Water and Treasury.