

# Department of Treasury and Finance

Government of **Western Australia**

## Response to the Economic Regulation Authority Issues Paper

### Inquiry into Pricing of Recycled Water in Western Australia

September 2008

#### Disclaimer

The views expressed in this submission are those of the Department of Treasury and Finance and should not be taken to reflect the views of the Treasurer or the Government of Western Australia.

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## **INTRODUCTION**

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This submission addresses the issues paper of the Economic Regulation Authority's (ERA) *Inquiry into the Pricing of Recycled Water in Western Australia*. The key recommendations identified by the Department of Treasury and Finance include:

- recycled water prices should be priced in accordance with other water and wastewater prices and be consistent with the National Water Initiative (NWI) and the 1994 COAG Water Reform Framework;
- cost-reflective prices for recycled water should be encouraged and include avoidable costs and externalities where possible; and
- the ERA should determine a set of guidelines to guide the pricing of recycled water with formal pricing regulation or advice to government on pricing only where there is evidence of misuse of market power.

## **ISSUES**

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### **Market Power**

5. To what extent do service providers have market power in the provision of water recycling services?

Service providers can have a substantial power in the provision of water recycling services. The Water Corporation (WC) has a degree of market power in the provision of water recycling services, as it owns and operates some of these services in Western Australia.

The WC in particular has market power in the provision of recycling services where it has no competitors in some areas where it owns and operates most of the recycling services. Similarly, the WC is also a monopolist in the provision of wastewater services in some places and has market power in the supply of wastewater. Due to the vertically integrated nature of the WC there exists the possibility that the it may be perceived to favour its own wastewater use where this use is in competition with a private provider using its wastewater.

A particular example where the WC has monopoly power in recycled water is Brighton residential estate. The WC is the sole provider of recycled water services to this area, where recycled water is provided to landowners for non-potable use. While landowners choose to live in this area, the use of recycled water as an alternative source is not entirely optional. Other factors may have more weight in the decision to live in this location, including the geographical location and affordability. This gives some pricing power to the WC

(who provides the water services to this area) as landowners have no choice but to utilise the recycled water infrastructure when they purchase land in the area.

However, in country areas the WC's market power can vary. In some towns the WC has both a potable water supply licence and a wastewater licence and therefore complete market dominance in the provision of recycled water. In other areas there is more than one service provider, where many local councils hold a wastewater licence and the WC holds the potable water supply licence. This restricts the dominance of the WC and transfers some market power to local councils. The WC's market power is limited to the extent that there exists, or there is potential for, other service providers and substitutes for recycled water.

6. If providers of water recycling services have market power, should their prices be regulated, and if so, how?

In instances where recycled water is treated to a potable level and substituted directly into the IWSS, then it should be priced the same as all other IWSS water.

In all other circumstances, a monitoring approach is preferred to ensure both the WC and local councils are pricing in accordance with the pricing principles developed by the NWI and the 1994 COAG Water Reform Framework. If through this monitoring process it is discovered that monopoly rents are being achieved, then service providers could then be subject to price regulation or at least pricing inquiries, which report to the Government.

The ERA may also wish to consider the development of pricing guidelines, which translate the pricing principles of the NWI and COAG Water Reform Framework into practical assistance for local councils in the valuation and costing of its recycled water services to ensure ongoing financial viability. This would include an appropriate calculation of avoidable cost of ocean discharge and a reduction in the volume of water being treated at wastewater treatment plants.

In addition, given that there are no mandated recycled water schemes in Western Australia, in most cases it is up to the consumer's discretion whether they use alternative or recycled water sources instead of scheme water. It is appropriate that where recycled water use is voluntary that prices be negotiated between the buyer and seller, rather than through a regulated system, subject to the monitoring suggested above.

## Externalities

7. What is the nature and magnitude of any externalities associated with water recycling?

It is noted that positive externalities exist through a reduction in ocean discharge and a lower volume of water being processed at major wastewater treatment plants, where a private provider uses the WC's wastewater. However, if this benefit is reflected in the cost of wastewater then it is internalised. In contrast, there are negative externalities such as greenhouse gas emissions from pumping and reverse osmosis among other processes. The cost of greenhouse gas emissions is soon to be included in the cost of energy, which could translate into an increase in the cost of recycled water. However, it is difficult to quantify the magnitude of these externalities. With carbon emissions trading, this cost will be explicit.

An externality also exists if potable and recycled water are fully substitutable as could be the case with reverse osmosis treated wastewater. The increased use of recycled water has the potential to delay future source development by reducing the demand on potable water supplies and this could be a material benefit if the plants are large. The use of recycled water is supported if it is determined to be cost competitive. However, it is acknowledged that the use of recycled water in Western Australia needs to be increased significantly to achieve any considerable delay in source development.

8. If there are significant externalities, should water recycling prices be regulated to account for these, and if so, how?

As mentioned earlier, where there would appear to be little competition, the ERA could monitor (or inquire) to see if market power is exploited through inappropriate pricing without properly accounting for benefits. If this occurs, there is a case to price regulate or advise government.

It is acknowledged that some positive externalities discussed in Issue 7 exist from an increase in the use of recycled water and this supports recycled water prices being adjusted to reflect these externalities (i.e. internalise the externality). However, it is difficult to isolate an efficient method of determining the cost impact of some environmental externalities or for other externalities to ensure an appropriate monitoring arrangement to determine whether they are reflected in the price. The ERA is encouraged to further investigate a methodology of quantifying the value of externalities and how they can be included in recycled water pricing.

It should be noted that the use of a Long-run Marginal Cost Pricing (LRMC) approach for scheme water includes the forward cost of future water sources and is currently being phased in. As previously indicated, if potable and recycled

water are the same product and fully substitutable, then the pricing of recycled water should be congruent to the pricing of other scheme water.

Within the context of regulation for externalities of recycled water, the costs associated with the implementation of health and environmental regulation should also be accounted for within the pricing structure. For example, as mentioned in the issues paper, the Health Department has published a code of practice for reuse of greywater which includes both health and environmental requirements for household greywater recycling.

It is also important to note that a requirement of the NWI is to recover the cost of environmental externalities, although no State has successfully included this in the cost of water. Perhaps in the interim, a proxy could be applied to recover some of the costs of externalities, until a method of quantifying these externalities is developed.

### **Social Objectives**

9. What is the nature of any distributional or other social policy issues associated with the pricing of water recycling?

It is not clear that the original intention of Government's concessions policy for pensioners and Uniform Pricing Policy (UPP) extends to recycled water pricing. However, the social objectives for water services for the UPP are assumed to be to attain:

- an affordable cost of water across the State at a consumption level considered to be the minimum for basic human needs (water for drinking, cleaning and sanitation purposes); and
- a subsidised cost of water across the State, at a consumption level considered to be the average consumption of a household.

The applicability of the UPP to recycled water depends on the chosen use of recycled water. If it is a component of the IWSS or a substitute for potable water then, the same policies applied to other potable water supplies should be applicable. On the other hand, if recycled water is used for non-potable use such as for industry, then the UPP should not apply.

An equity issue would exist if the use of recycled water were to become mandatory in any area, particularly if recycled water were to cost more than other water source options. There would be a concern that some income groups may be disadvantaged, specifically in the outer metropolitan area where land is usually cheaper.

In general, it is recommended that social objectives are best not delivered through water pricing. It is important that voluntary recycled water customers pay

the full costs of their water sourcing decisions and the social objective achieved through different means (see below).

10. If there are significant social issues, should water recycling prices be regulated to account for these, and if so, how?

Government may consider that uniform pricing and concessions should apply to recycled water supplied to consumers.

It is considered that there are better, more targeted approaches to achieve social objectives set by Government than using price subsidies. For example a rebate system would achieve the social objective and not distort price signals. Price subsidisation should be avoided, as it does not send appropriate price signals to the subsidised customers, which in turn, promotes inefficiency and can also result in customers undeserving of subsidisation receiving discounts.

Both recycled and scheme water prices should only include the direct costs associated with the supply of the water to customers where revenue recovery does not exceed the full cost of supply. However, if the Government decides to introduce measures to meet social objectives, flexible regulation or pricing principles may be appropriate.

## **Regulation**

11. If recycled water prices are to be regulated, what are the principles that should apply?

The introduction of a set of pricing principles or guidelines is preferred rather than any formal regulation of recycled water prices except where there is a monopoly provider or a provider with a degree of monopoly power, which is misusing its market power. If guidelines were to be introduced it is recommended that they are in accordance with the principles of the NWI and the 1194 COAG Water Reform Framework. More specifically guidelines should include the following:

- prices for recycled water should be set to recover the full cost of the implementation of the recycled water scheme to send the appropriate signals to customers, and they should also be adjusted for avoidable costs and externalities where possible;
- any regulation or guidelines should promote economic efficiency and not be restrictive. Guidelines should also allow for flexibility in pricing arrangements, catering for different pricing arrangements for different types of recycled water projects;
- prices should be set within the bounds of other water prices and also not allow for any cross-subsidisation between recycled water customers and other water customers; and

- guidelines should also ensure that price setting is transparent and administratively simple where possible.

### **Major Industry**

12. Should major industry be treated in a different way to other metropolitan commercial customers for the purpose of setting water usage charges, and if so, how?

Major industry should not be treated differently to other commercial customers, and a full cost pricing system should be applied to all transactions. However, in practice major industry may have more countervailing market power and the capacity to develop water sources themselves. This may not warrant the same regulation and monitoring of water charges as other commercial customers.

Industry may require higher quality water than that which is available through mainstream water supplies. The high treatment costs of this better quality water should be reflected in the cost of the water to industry. The advantage to industry of purchasing water from the Kwinana Reclamation Plant and the higher costs of this water for example would necessitate a different level of prices for this higher quality water. Flexibility for the WC to negotiate commercial arrangements for large customers in these circumstances is supported, so long as it is consistent with the abovementioned pricing principles.

The introduction of a pricing mechanism to support different water quality requirements for industry in general is supported, subject to this pricing distinction not creating additional complication or significant additional administration costs. There is also value in investigating any advantages of special pricing agreements between the WC and major industrial customers for recycled water, similar to those currently available to major industry for developer contributions.

### **Recycling Targets**

13. What role should recycling targets play in the adoption of recycled water?

Water recycling targets provide a good framework to reach the NWI and the 2007 State Water Plan objective of increasing the use of recycled water. However, the use of recycling targets is only useful if economically efficient recycled water projects are put in place to reach these targets.

The use of recycling targets is supported, but these targets should be flexible. It is imperative that the cost of recycling is competitive to avoid the introduction of recycling projects, which meet recycling targets, but cost more than other means of supplying water.



## **Rebates**

14. What role should rebates play in the adoption of recycled water?

The use of rebates to compensate consumers for the higher cost of recycled water is not encouraged as this discourages the recycled water industry from lowering costs. The ERA is encouraged to assess the economic efficiency and cost effectiveness of a rebate scheme to promote the use of recycled water. Any such investigation to manage demand in this way must include the calculation of cost per kilolitre of water and the avoided cost of water saving technology potentially delaying future water sources. A rebate scheme should only be proposed if the cost per kilolitre of recycled water is comparable with the benchmark LRMC.

## **Reservation of Water from Wastewater Treatment Plants**

15. What role should the reservation of recycling targets play in the adoption of recycled water?

Water allocation management plans where water from wastewater treatment plants is reserved for a particular use are not supported. A reservation policy does not ensure that water is allocated to its highest value use, which is necessary for the efficient allocation of water supplies.

The ERA's suggestion of auctioning water instead of a reservation policy is supported. This will provide a mechanism whereby water suppliers are able to compete for water supplies based on the value they attribute to their use. It promotes competitiveness and market efficiency. It will also assist the WC in the planning of its operations and resourcing.

In general the use of recycling targets is supported, however there should be flexibility in how these targets are achieved. This issue has been further discussed above in Issue 13.

## **Mandatory Standards**

16. What role should mandatory standards play in the adoption of recycled water?

It is noted that the setting of mandatory standards such as the 5 Star Plus scheme introduced by Government, can be a useful approach to reach recycled water targets. It should be noted however, that there is concern about the introduction of further regulatory burden on both the housing industry and existing homeowners for schemes such as this.

The benefits of setting mandatory standards must be weighed against the costs. Retrofitting of existing properties may bring benefits of reduced consumption of

scheme water, potentially delaying future water sources. However, there is a risk that the cost of imposing such water saving measures exceeds the long run marginal cost of new water supplies.

The ERA is encouraged to look closely at the costs and benefits of the setting of these standards. In particular, a full assessment should include an analysis of the cost of mandatory standards, including the cost of compliance and any negative impact on customers. If regulation were to be introduced to enforce mandatory recycled water use, there would be merit in also conducting a Regulatory Impact Statement (RIS). An RIS monitors and assesses the costs and benefits of a proposal to determine the burden a particular regulation has on the State and increases transparency in Government decisions.

### **Access Regimes**

17. What views do interested parties have on access regimes as a means for facilitating the adoption of recycled water?

The introduction of a State-based third party access regime for Western Australia is supported, as per the recommendation of the ERA's Inquiry on Competition in the Water and Wastewater Services Sector final report (Competition Final Report). If a third party access regime were introduced to wastewater services, it could be an opportunity to allow private sector participation and encourage competition. Furthermore, it may be simpler to introduce an access regime for recycled water, as the supply constraints and the need to ensure a homogenous product that apply to drinking water are not as prevalent for recycled water (where the end use is the non-potable market).

In addition to the inefficiencies and inequities of property value based charges, there are also the problems which arise when considering access pricing for wastewater infrastructure, that as evidenced in the New South Wales 'Services Sydney' example, rely on appropriate wastewater charging structures.

The recommended access price for the wastewater infrastructure of Sydney Water was determined by the Australian Competition and Consumer Commission (ACCC) to be a 'retail minus' approach. Such an approach is based on the basic principles of charging the access seeker the difference between the retail price of the services and the incumbent's avoidable costs.

Assuming therefore that any State based access regime is based on the New South Wales experience (as recommended in the Competition Final Report), the continued use of value based charges for wastewater would heavily distort the access price payable to the incumbent and provide inefficient pricing signals to access seekers.

Any third party access regime must meet the criteria outlined in section 44M of the Trade Practices Act 1974, as well as the Competition Principles Agreement

and the Competition and Infrastructure Reform Agreement. Also, it would be imperative for prices to be priced in accordance with wastewater prices from other sources if such a regime were to be introduced.

The importance of access regimes is recognised, as part of the NWI and will further be investigated as part of the Government's response to the final report of the ERA Competition Inquiry.