



**Department of Treasury and Finance**  
Response to the  
Draft Recommendations  
and Findings from the  
Economic Regulation Authority's Inquiry  
into Tariffs of the Water Corporation,  
Aqwest and Busselton Water

The views expressed herein are solely those of the Department of Treasury and Finance and not those of the Treasurer or the Government of Western Australia.



# Contents

Executive Summary.....	1
Water Tariffs for Perth, Bunbury and Busselton.....	3
Wastewater Tariffs.....	10
Drainage Tariffs .....	13
Water Corporation's Other Tariffs.....	15
Method for Calculating Revenue Requirements.....	18
Operating and Capital Expenditure .....	23
Rate of Return .....	24
Regulatory Asset Values .....	26
Demand Management .....	28
Cost Allocation.....	29
Draft Tariff Recommendations.....	31
Attachment 1: Review of the Proposed Wholesale Market Model .....	32



## Executive Summary

The Department of Treasury and Finance (DTF) welcomes the opportunity to respond to the Economic Regulation Authority's (ERA's) Draft Report on its Inquiry into the Tariffs of the Water Corporation, Aqwest (Bunbury Water Board) and Busselton Water.

The submission below balances the roles held by the DTF in the water industry, which include:

- advisor to the Government on its shareholder responsibilities for its government trading enterprises (the Water Corporation, Aqwest and Busselton Water); and
- advisor to the Government on economic and financial matters.

The draft recommendations and findings of the ERA have been reviewed in light of these roles and as such, there are a number of overarching issues which the DTF would like to see the ERA take into account when finalising its recommendations of its inquiry. These are summarised below and expanded on in the body of this submission.

- The setting of water tariffs should, where possible, balance the objectives of sending efficient pricing signals while aiming to reduce uncertainties and price fluctuations faced by the consumer. In doing so, the modelling should be based on sensible, mid-range assumptions. Where appropriate, assumptions should be consistent with current government policies and not based on unlikely or extreme events. As such, the ERA's proposed tariffs must be recalculated in line with the comments provided herein.
- Decisions about the sustainable, long term level of abstraction from the Gnangara Mound are the responsibility of the Department of Water as the State's water resource manager. The assumptions underpinning the pricing of potable water services by the Water Corporation should be consistent with these decisions.
- The use of the long run marginal cost (LRMC) model for setting water tariffs is strongly supported throughout the water industry, including in Western Australia. As the LRMC model was only introduced in Western Australia in 2005 (on the basis of a recommendation by the ERA), it should remain the prime basis for determining water tariffs. That said, the use of alternate models to corroborate the findings of the LRMC is supported.
- The proposed wholesale market model is not supported at this time. Analysis of the model suggests that its short term focus produces significant fluctuations in tariff levels from year to year which is counter to the preference for reduced uncertainty where possible. Furthermore, the development of a pricing methodology based on a theoretical wholesale market with very little relevance to the Western Australian water industry at this time does not appear appropriate.

- The further investigation of alternate pricing models to supplement the LRMC is however strongly encouraged. However, such investigation should be undertaken outside of the regular pricing inquiry process. As such, it is hoped that the ERA takes the opportunity over the next three years to further investigate and develop alternate models, consistent with Section 27(2) of the *Economic Regulation Authority Act 2003* (the ERA Act), which provides it the power to “produce and publish information on matters relating to its [pricing inquiry] functions”
- The ERA is requested to investigate alternative gearing policies for both public and private sector entities (that are of similar size and nature as the Water Boards) to justify its preferred gearing policy for Aqwest and Busselton Water. It is also requested to provide modelling that illustrates the impact of its alternate gearing policy to the customers of the Water Boards in order to justify its proposed position. If such justification cannot be provided, then the current gearing policies of the Water Boards should be maintained.
- Taking account of externalities (both positive and negative) through water prices is strongly supported. However, pricing externalities for water is complex and requires thorough analysis and a clear rationale for its implementation. Externalities should be defined and directly attributed to water abstraction and consumption before they are internalised into prices (so that additional money recovered from customers is directed at least in part to abatement). Therefore, the ERA is requested to further investigate externalities in water pricing as an adjunct to the pricing inquiry process.

# Water Tariffs for Perth, Bunbury and Busselton

## DRAFT RECOMMENDATION 1

Following consideration of a number of options, the Authority proposes that usage charges for Perth residential customers be transitioned by 2012-13 to:

Consumption (kL)	ERA proposed tariff	Source
0 – 150	\$1.13	LRMC model
151 – 500	\$1.73	Wholesale market model
501 +	\$2.57	LRMC model

and Perth commercial customers would be charged \$1.73 per kL from 2010-11.

The two issues of concern relating to this recommendation are the:

- considerably higher tariff estimates, as a result of:
  - use of negative externality pricing;
  - use of extreme assumptions; and
- usage of alternative models to calculate various tariff levels.

## High tariff estimates

It would appear difficult to justify a water tariff of \$2.57 per kL that is approximately 25 per cent higher than the Water Corporation's estimated cost of the most expensive source option, which is the Southern Seawater Desalination Plant at \$2.00 per kL.

It appears as though the two main reasons for the high tariff estimate of \$2.57 per kL are the inclusion of negative externalities (without being properly defined and costed) and the use of a set of 'extreme' assumptions that are unlikely to occur simultaneously.

## Negative externalities

The key concern in this regard is that the ERA has not properly defined the negative externality applicable across all uses on the Gnangara Mound, which in turn makes it difficult to properly quantify the costs or charges necessary to internalise the externalities. Instead, it has estimated an additional charge on the basis of assumed (but undefined) negative externalities arising from the historic over-abstraction by the Water Corporation on the Gnangara Mound.

The additional charge is calculated by setting a groundwater abstraction rule on the Mound with a range of 135 to 95GL per annum for the period 2008 to 2020, with a targeted long term abstraction of 105GL per annum. However, this rule is 10GL per annum lower than the Department of Water's current groundwater abstraction rule of 145 to 105GL (with a 120GL per annum long term abstraction target).

It is understood from discussions with the ERA that its decision to utilise a lower extraction limit in setting tariffs will effectively 'compensate' the Gnangara Mound for the Water Corporation's over-abstraction and bring the average consumption down to what the ERA considers to be the long-term sustainable yield.

The concern with this approach is that firstly it fails to recognise that the Water Corporation is not the only entity extracting groundwater from the Gnangara Mound. Internalising the externality which results from past over-abstraction on the Gnangara Mound by reducing the abstraction of the highest value user (into the future) is perhaps the least efficient mechanism for achieving optimality.

Fundamental to this point is whether the lost consumer surplus from including the externality 'premium' will be greater than the value of the externality in its own right. Without a tradeable system of entitlements enabling an efficient market for water in Western Australia, this cannot be determined at this time.

Furthermore, there would appear to be an inconsistent treatment of water sources by the ERA, through only estimating negative externalities on the Gnangara Mound.

It is therefore recommended that the ERA remove the recovery of externalities from its water tariff estimates until a more robust methodology can be developed and agreed. Such a methodology would properly define an externality and the specific costs involved and be met equally by all users on the Mound. To this end, it is recommended that the ERA undertake further research on this matter during the next three year regulatory period, together with interested stakeholders.

## **Extreme assumptions**

The LRMC model, like most other models of its kind, is constrained by the assumptions on which they are based. In its draft report the ERA points to the volatility of the LRMC model as a justification for the very high tariff estimate of \$2.57 per kL and as a reason for the introduction of an alternate model (which is discussed further below).

However, following some detailed analysis of the LRMC model adopted by the ERA, it is clear that the model itself is still robust and it is the assumptions used to generate the wide ranging results which are of concern.

For instance, the high end tariff estimate of \$2.57 per kL appears to be based on a set of assumptions that are contradictory or at the very least unlikely to occur at the same time. This includes the removal of the two day per sprinkler roster (and a subsequent increase in demand) while at the same time, significantly reducing the abstraction by the Water Corporation from the Gnangara Mound (that is, a sharp decrease in supply).

Given that it is extremely unlikely for both of these scenarios to occur simultaneously, their use in setting the level of water tariffs, would appear inappropriate.

As a result of this divergence in views as to the appropriate tariff levels, a more appropriate set of tariffs estimates have been developed using the ERA model and based on a revised set of assumptions. The resultant tariffs are provided in the table below and compared to the ERA's draft recommendations for tariff levels.

<b>Consumption (kL)</b>	<b>Department of Treasury and Finance estimates</b>	<b>Economic Regulation Authority draft recommendations</b>
0 – 150	\$1.22	\$1.13
150 – 500	\$1.72	\$1.73
501 +	\$2.00	\$2.57

These estimates have been derived from the Water Corporation's LRMC model. Consequently any differences in tariff proposals are limited only to differences in assumptions, rather than methodological issues. Furthermore these results are dependent on a number of assumptions regarding the cost and deployment sequence of future sources.

## Unmodified Parameters

In preparing the revised LRMC tariff estimates the following parameters were accepted and utilised:

- per capita demand;
- assumptions on the decline in inflows as a percentage of the previous decades inflows;
- the ERA's proposed volumes for each tariff level; and
- the WC's proposed top tariff level for highest tariff level.

## Modifications to parameters

The following parameters however were modified from those either utilised by the Water Corporation or the ERA:

- the groundwater abstraction rule has been modified to use the revised thresholds of 105GL to 145GL per annum;
- the middle tier was set using average inflows from 2001 to 2007 for the coming decade. Inflows would then decline at the rate proposed by the Water Corporation; and
- the lowest tier would see a decline in inflows from the 1997-2007 average. Inflows would then decline at the rate proposed by the Water Corporation.

### **Lowest Tariff (0 – 150kL per annum)**

The price set for the lowest tariff level is considered largely uncontentious. While the revised estimate is slightly higher than that proposed by either the Water Corporation or the ERA, the difference is largely inconsequential and can be attributed to variance within the sampling and as such, either price would be acceptable as the lowest tariff.

### **Middle Tariff (151kL – 500kL per annum)**

The middle tariff contains the largest divergence of views between those of the ERA and the Water Corporation. By utilising the 2001 to 2007 inflow average and with per capita demand remaining constant, the proposal for the middle tariff level is \$0.15 above that proposed by the Water Corporation.

The difference in price between the ERA and the revised estimate result is statistically insignificant. However, the revised estimate is derived using the LRMC model, rather than the via the ERA's Wholesale Market Model.

Should the ERA wish to set a tariff based on a short to medium term value of water, it is suggested that this would first require a thorough discussion of the appropriate methodology, as previously noted in this submission.

### **Highest Tariff (501+ kL per annum)**

With reasonable assumptions made regarding inflows and groundwater extraction, the LRMC will not exceed \$2.00 per kL within the current regulatory period. Consequently the Water Corporation's proposal of setting the highest tier to reflect the indicative cost of potable water from seawater desalination is accepted as an efficient solution.

## **Alternative models to calculate the various tariff levels**

While the examination of an alternative method of setting water tariffs (in the absence of an efficient market for the commodity) is welcomed, it is considered more appropriate for such research to be undertaken separately to a pricing inquiry process.

## **Consumer impact of a volatile model**

As the Final Report will have a significant social and economic impact for all water consumers in Western Australia, adopting the wholesale market model (WMM) which substantially increases the year to year variance in water tariffs, even if only for the coming regulatory period, is inappropriate and therefore not supported at this time.

While there is inherent uncertainty in setting water tariffs due to the dependence on variable inflows, this problem should not be exacerbated by the introduction of an alternative model unless that model has unambiguously demonstrated that the benefits to society of utilising such a model outweigh the costs.

## Stress testing of the model

Secondly, at this point in time, it is believed that the WMM has not been subject to sufficient rigorous examination such that it could be used to set tariffs, even if the results are broadly consistent with those from the LRMC model.

At this time the LRMC model (both conceptually and practically) has been subject to scrutiny from a wide range of sources and most importantly, is accepted by residential and commercial consumers as a robust methodology for setting water tariffs. While the LRMC methodology may not be perfect given the uncertainty from surface water inflows, it nonetheless remains the constrained optimum for setting water tariffs for the Perth Integrated Water Supply Scheme (IWSS).

Further analysis of the ERA's WMM is provided in Attachment 1.

## Linear programming model

As an alternative to the ERA's WMM and to add to the future debate on water pricing, preliminary development of a linear programming model has been undertaken, which seeks to minimise the total cost of supply over a number of years (which neither the ERA's proposed WMM or the current LRMC model can achieve).

As a result the model will utilise the cheaper bulk water supply sources into the future, but will avoid using surface water (from dams) in one year if that allows it to delay using a much more expensive source in a future year. This is considered to be much more reflective of the manner in which the Water Corporation operates the Perth IWSS and therefore a more appropriate method of modelling prices.

Further development of this linear programming model will be undertaken and the ERA will be invited to provide feedback and comment separately to this pricing inquiry process.

---

## DRAFT RECOMMENDATION 2

Usage charges for Bunbury residential customers be transitioned by 2012-13 to:

Consumption (kL)	ERA proposed tariff
0 – 150	\$0.63
151 – 500	\$1.23
501 +	\$2.07

and commercial customers in Bunbury would be charged \$1.23 per kL.

---

## DRAFT RECOMMENDATION 3

Usage charges for Busselton residential customers be transitioned by 2012-13 to:

Consumption (kL)	ERA proposed tariff
0 – 150	\$0.38
151 – 500	\$0.98
501 +	\$1.82

and commercial customers in Busselton would be charged \$0.98 per kL.

---

## Determination of volumetric tariffs

A strong argument for the setting of tariffs in Bunbury and Busselton based on prices in Perth has not been presented by the ERA. This has in turn led to a low tariff level for lower levels of consumption and significantly high tariff estimates for the high end consumers.

Furthermore, there has been no justification as to why Perth has been chosen as the ideal 'market' in which to sell water from Bunbury or Busselton for the purpose of determining a value of water when there are considerable markets for water in the South West of the State with far lower transportation costs.

With any set of tariffs, one of the key requirements (in addition to being efficient) is that they are easily understood and accepted by consumers. In this regard, it is difficult to imagine that the consumers of Aqwest and the Busselton Water Board would understand or accept the very low tariffs set for low end users and the very high tariffs set for high end users simply because that is how prices in Perth are set.

## Pricing signals

While determining the value of water is an important exercise, for the purpose of setting tariffs, the key objective must be the recovery of costs to operate the scheme. To this end, it is recommended that the ERA re-calculate the tariffs for the Water Boards at levels which send appropriate pricing signals to the local consumers. This should be done in a consistent manner to the way prices are set for other towns in the South West, operated by the Water Corporation.

After liaising with Aqwest and Busselton Water, there is also concern that the proposed tariff levels resulting from the ERA's draft recommendations contained in Part Two of its draft report will leave the Water Boards under funded, given their current operating methodologies.

Nonetheless, as this is a consequence of the latter draft recommendations, it is suggested that these be dealt with as a first order consideration and the quantum of tariffs (as discussed above) be addressed subsequent to that.

To this end, it is further recommended that the proposed amendments to the gearing policies of the Water Boards' be properly justified by the ERA on the grounds of benefits to customers and improved performance through benchmarking comparisons to similar sized entities.

---

#### **DRAFT RECOMMENDATION 4**

The Authority recommends that the annual fixed charges for Water Corporation, Aqwest and Busselton Water be transitioned by 2012-13 to \$144.15, \$36.41 and \$34.45 respectively.

---

This draft recommendation is supported, subject to the recommended changes proposed to draft recommendations 2 and 3.

---

#### **DRAFT RECOMMENDATION 5:**

The uniform pricing policy be changed to a tariff cap policy to avoid customers in low cost country towns paying charges significantly higher than the cost of providing the water service.

---

---

#### **DRAFT RECOMMENDATION 6:**

For the purpose of calculating residential water usage charges, country towns be classified into 15 groups with the classification based on the relative cost of providing the water service to each town.

---

The recommendation may lead to overly complex systems that are administratively costly without providing an offsetting increase in efficiency gains.

The ERA notes that the large number of groups will reduce the change in tariff levels to consumers when the town group changes. Hence the benefit of having 15 groups is to minimise the impact on consumers from a change in tariff group. However, the extent of such benefits is dependant on the percentage of towns the ERA expects to change between groupings and with what frequency the ERA anticipates these towns to switch between groupings.

It is important that the ERA provide this information in its Final Report in order for the Government to make an informed decision on the proposed reform.

## Wastewater Tariffs

---

### DRAFT RECOMMENDATION 7

Residential wastewater charges be no longer based on property values but instead be based on estimated winter water usage, which is a reasonable proxy for discharge into the sewer.

---

### DRAFT RECOMMENDATION 8

The transition away from property valuation-based residential wastewater charges be over a period of at least three years.

---

As an indicator of the cost of service, the gross rental value (GRV) method of charging does not provide any clear correlation between prices charged and the cost of service delivery.

However it is unclear whether the benefits of the ERA's draft recommendation to use estimated winter water usage as the basis for residential wastewater charges, would outweigh the costs.

The high level rationale that the level of water consumption in winter is closely correlated to the level of indoor water use (given that the level of outside watering in winter is minimal). This appears to provide a reasonable proxy of wastewater discharge and in most situations, is supported.

Nevertheless, there are concerns regarding the practical implementation of this approach, including:

- variations in seasonal rainfall patterns, when low rainfall in winter (and therefore higher total water consumption) could lead to disproportionately high wastewater charges;
- fluctuations in occupancy of properties that could lead to inaccurate wastewater charges. For example, if a property is vacant over winter but occupied during summer, such as holiday homes, the volumetric wastewater charges could be zero; and
- complexities associated with calculating estimates, including 'discharge factors', which introduces a higher probability of inaccurate charging.

The proposed charging methodology is however applied in Victoria, whereas New South Wales and Queensland for example, apply fixed uniform wastewater service charges for residential customers.

An overview of the Melbourne charging regime in this regard is provided in the box below.

**Example: City West Water – Wastewater charges based on winter water usage**

City West Water in Melbourne, Victoria is the only service provider in Australia that appears to base its estimates of wastewater discharge volumes, as the basis of its wastewater charges, on winter water consumption volumes.

City West Water bases their calculations of residential customer's volume of wastewater discharge on a number of variables including the volume of water supplied to the property, the seasonal factor and the discharge factor. An annual fixed service charge is also applicable.

The seasonal factor is derived by dividing: (a) the total number of days in the meter reading period by the sum of (b), which is the number of days which fall within each particular month within the meter reading period multiplied by the relevant seasonal index for that month for a house or unit.

The correlation between winter water usage and wastewater is far stronger than between GRV and wastewater and, on this basis, there may be equity gains in the ERA's proposed approach. The equity gains are realised as the method seeks to match the level of demand placed on the wastewater system by an individual customer to the charges that a customer might pay.

As with most alternate pricing structures for wastewater, there are little if no efficiency gains to be made with a more complex charge because of the nature of the service being delivered. That is, a wastewater service is fundamentally a health service and even though price is unlikely to influence a consumer's decision regarding the service, it is even more unlikely that any government would want consumers to limit their consumption of the service.

In terms of the application of the winter water usage charge in Western Australia, given the widely varying climatic conditions from the north of the State to the south, there would need to be a significantly large number of discharge factors, unlike City West Water that only relies one discharge factor for its relatively small geographical area. The costs of calculating these discharge factors would likely be prohibitively expensive and open to significant debate by customers.

Therefore, while abandoning the GRV method is strongly supported, the winter usage method does not appear to offer benefits commensurate to the costs of what is an administratively burdensome approach that across Western Australia would require the calculation of numerous discharge factors. Although the benefit of the winter usage method is improved cost-reflectivity the lack of an effective price signalling effect provides little justification for the higher administrative costs.

A preferred alternative, as outlined in the department's response to the ERA's Issues Paper, is one flat charge for all residential wastewater charges. It is acknowledged that the transitional implications of a flat charge would be similar to a charge based on winter water usage. However, a flat charge is less administratively complex and in the case of wastewater charges, is likely to be a better overall solution.

### **DRAFT RECOMMENDATION 9:**

The current fixture-based method of charging non-residential customers for wastewater services is appropriate.

---

This draft recommendation is supported.

The basis for calculating non-residential volumetric wastewater charges is widely practiced in other jurisdictions and broadly considered to closely reflect the cost of service delivery. The continued use of a service charge (based on the number of sewage fixtures) and a usage charge (based on water usage multiplied by a discharge factor) is considered appropriate.

A volumetric component in wastewater charges for commercial customers appears more appropriate because business and industry have greater incentives to reduce water and wastewater charges

## Drainage Tariffs

---

### DRAFT RECOMMENDATION 10

Developers be charged the costs of any drainage infrastructure that is required to service developments (with the developer charge based on the average costs to the Water Corporation of expanding the drainage network over the last 10 years).

---

### DRAFT RECOMMENDATION 11

Residential and commercial customers within the main drainage system provided by the Water Corporation in Perth be charged the costs that remain after the costs attributed to developers have been deducted.

---

These draft recommendations are supported on the basis that the additional drainage services are being created specifically for customers who demand them and who through the developer, will pay for such costs (that is, user-pays).

---

### DRAFT RECOMMENDATION 12

Customers within the Water Corporation's main drainage system in Perth be charged for drainage on the basis of land area.

---

### DRAFT RECOMMENDATION 13

The proposed drainage charges be introduced in 2010-11 and then be held constant in real terms.

---

The current drainage charging approach is based on the GRV method which is neither equitable nor cost reflective. A move away from this pricing structure is desirable, however, a review of drainage structures that is being conducted by the Department of Water should be released before any reforms to pricing are contemplated.

If this review process does not deliver the anticipated outcomes, then a fixed charge payable by all households is the preferred alternative. The reason for this is that it is extremely difficult, if not impossible, to correlate price and demand for drainage services. The service produces public benefits associated with such aspects as safety, health and the environment. For example, drainage prevents roads, parklands and other areas from flooding.

On the basis of an impactor pays approach, it is inequitable to charge one customer more than another for the same service on either the value of their property or the size of their land. The draft recommendations include a flat charge for residential drainage customers with a land area less than 1,000 square meters but do not make reference to residential drainage customers with land area above 1,000 square meters.

Drainage services act in a preventative way (that is, the prevention of flooding) that further complicates the allocation of costs, short of taking a 'willingness to pay' approach. The 'willingness to pay' of some customers relative to others would be administratively costly to pursue and would not result in efficiency gains. Any other basis of pricing that attempts to allocate costs by an arbitrary selection criteria, such as GRV or land area, is implicitly inequitable as it tries to replicate 'willingness to pay' and 'capacity to pay' using unrelated criteria.

The most efficient and equitable (second-best) pricing structure would be a flat charge, that recovers the cost of delivering the service equally from all those who benefit. While the ERA recommends a flat charge for residential customers (with land under 1,000 square meters), it has recommended that non-residential customers be charged on the basis of land area, in three tiers. These tiers appear to be more equitable but bear no relation to cost-reflectivity. However, on the basis of the equitable distribution of drainage costs, these charges are more appropriate for non-residential customers than a flat charge.

It is noted that in its Issues Paper the ERA raised the issue of country drainage charges and questioned whether such charges should be re-introduced but has not commented on the issue further in the draft report.

While it is acknowledged that the re-introduction of country drainage charges is a matter for consideration by the Government of the day, it would be useful to inform this debate if the ERA were to determine the appropriate flat charge for country customers serviced by the Water Corporation.

---

#### **DRAFT RECOMMENDATION 14**

In future, any expenditure on drainage quality be recovered through a levy on all of the Water Corporation's water customers in the scheme.

---

In the event that drainage service providers need to improve the quality of drainage and storm water, a project proposal from the service provider will be assessed in terms of cost-effectiveness, timing and efficiency before any additional charges are levied on customers.

Where these asset improvements are shown to be necessary and the project proposal is approved, the costs should be equitably shared between the beneficiaries of the improved service.

The allocation of these costs should be applied as a flat charge in addition to the annual service charge and displayed on the customer's water bill.

## Water Corporation's Other Tariffs

---

### DRAFT RECOMMENDATION 15

Where practical, charges for minor tariffs associated with water, wastewater and drainage services should reflect the efficient costs of service. The Authority will examine the cost reflectivity of the Water Corporation's minor tariffs for its final report.

---

This draft recommendation is supported.

Cost reflectivity is regarded as a critical component of an efficient pricing regime and should be adopted where appropriate and practical. Importantly, only the efficient costs of service delivery should be incorporated into tariffs and inefficiencies should be improved or avoided where possible so that the customer does not incur these costs.

With regard to the minor tariffs of the Water Corporation, it is understood that these tariffs are largely cost reflective, to the extent that it is administratively cost effective. However, further examination by the ERA is considered worthwhile.

---

### DRAFT RECOMMENDATION 16

Subsidies to public and charitable institutions for water and wastewater services be either paid for by a community service obligation (CSO) payment or discontinued, rather than be paid for by other customers. For the purpose of this report, it has been assumed that these subsidies are funded by a CSO.

---

It is not clear which services the ERA considers to be cross subsidised. Public and charitable institutions should certainly be assisted through a CSO payment (if required by government policy) rather than a cross subsidy and it is understood that that is the case in the way the Water Corporation's CSOs are calculated.

The ERA is however requested to specifically outline any situation it has found in its analysis where this is not the case.

---

### DRAFT RECOMMENDATION 17

Residential caravan bays be charged the standard residential fixed charges for water and wastewater services.

---

Customers in long-term residential caravan bays are charged at rates that are specific to their designated use. While there is merit in achieving a more standardised charging regime, the large differences between classes of customer in caravan parks (that gave rise to the current subsidised rate) should be recognised.

For example, it is important to be aware that the current metering arrangements in caravan parks mean that not all caravan bays are individually metered and, for the bays that are metered, it is not clear whether these can be individually differentiated according to either short-term or long-term residential use. Furthermore, the current billing arrangements are not able to individually identify caravan bay residents for their eligibility for the Government's welfare programs.

Given the administrative complexities associated with charging for caravan bays, the ERA should clearly demonstrate how such administrative costs would be outweighed by any potential efficiency gains that could be realised from amending the charging for caravan bays, as proposed.

If such a case cannot be made, given the problems associated with identifying the types of customers within a caravan park, then the current charging arrangements should be maintained in the short to medium term. In the longer term however, this may be a policy issue which the Department of Water (on behalf of the Government) should address.

## **DRAFT RECOMMENDATION 18**

Water usage charges for farmland, local government standpipes and stock watering be set cost reflectively, and include a quota for residential use set at residential prices, with commercial pricing for usage above the quota.

---

Consistent with the previous point, a more standardised charging regime has merit and it is desirable to move towards cost reflective pricing where practical. However, it is also necessary to take into account differences in services within the water network and the original purpose of the infrastructure in some parts of the network. It is understood that the water services for farmland, local government standpipes and stock watering were intended to be a non-potable supply point, for such purposes as drought-proofing and emergency supply.

Given this deviation in service standards from residential and commercial, it is necessary to consider whether residential and commercial prices are appropriate, particularly as network upgrades to these parts of the system could be extremely costly. Furthermore, there would be significant impact on affected customers.

As the original purpose of the infrastructure for these customers was to provide a non-potable supply, it would appear to be inappropriate for those customers to be charged a residential price that assumes potability of the water.

## **DRAFT RECOMMENDATION 19**

Small mining customers be charged for water usage at the country non-residential tariffs.

---

This draft recommendation is supported on the basis that the adjustment to the pricing regime will achieve greater standardisation of prices and improved levels of equity, while being practical and cost effective to implement.

## **DRAFT RECOMMENDATION 20:**

Wastewater charges for non-residential vacant land be based on a fixed charge, and the additional GRV-based component removed.

---

The departure from the use of GRV is a pricing priority due to the relatively arbitrary nature of the approach. Therefore, a shift to a fixed charge appears reasonable, particularly because it is a more efficient charge and of course less administratively burdensome.

## Method for Calculating Revenue Requirements

---

### DRAFT RECOMMENDATION 21

The tariffs of the Water Corporation, Aqwest and Busselton Water be set for a three year regulatory period, and no longer be revised on an annual basis (other than to adjust for inflation).

---

This draft recommendation is supported.

It is considered that a pricing review every three years will provide a reasonable balance between the impost it places on the service provider and the ongoing need to review the appropriateness of water prices at regular intervals.

This is also consistent with the recent revocation by the Treasurer of the annual inquiry terms of reference.

---

### DRAFT RECOMMENDATION 22

The Water Corporation, Aqwest and Busselton Water be able to retain, for the length of the regulatory period, any operating expenditure savings that are greater than the savings required to achieve the operating expenditure efficiency target.

---

---

### DRAFT RECOMMENDATION 23

For the length of the three-year regulatory period, the Water Corporation, Aqwest and Busselton Water should not be compensated whenever actual demand varies from forecast demand. Instead, the service providers should bear this demand risk.

---

The rationale behind these recommendations and the intended incentives that would be created by their implementation are acknowledged and supported. However, such settings may result in potentially unsatisfactory operating practices.

For example, it is a concern that after the pricing review service providers may cut back or delay essential maintenance and upgrades in order to increase profits in one regulatory period. In the following period a provider might then resubmit its forecasts for review with greater expenditure required in order to offset any damage incurred by the previous regulatory period's delay to its maintenance and upgrade program. Such an occurrence may be difficult to prevent with most oversight devoted to new expenditure and not decisions to delay service maintenance and upgrades.

Furthermore, as a commercialised government owned trading enterprise, the Water Corporation must perform in line with its commercial objectives. However, consistent with the preference of the former Government it adopted demand minimisation strategies in response

to the drying climate, despite such strategies being at times, inconsistent with its commercial principles.

It is important to note also that despite the much higher levels of rainfall in the South West of the State, Aqwest and Busselton Water voluntarily adopted demand management initiatives (including sprinkler restrictions) in their respective operating areas in order to maintain consistency with the rest of the State serviced by the Water Corporation and the State Government.

If demand risk was to be adopted by the service providers it would be in their interests to encourage water use and increase demand which would be inconsistent with the water efficiency and water savings message and discourage voluntary initiatives such as those previously adopted by the Water Boards.

As demand management initiatives communicated through service providers have been effective in reducing water use, incentives for providers to perform the reverse may be confusing to customers with Government providing one direction and the service provider another.

---

#### **DRAFT RECOMMENDATION 24**

Any significant capital expenditure proposal that exceeds a certain threshold amount be subject to a capital expenditure efficiency test, conducted by the Authority under its inquiry function (submissions are invited on the appropriate level of the threshold).

---

Caution should be exercised in considering the implementation of a capital expenditure efficiency test. In changing the regulatory framework to include a 'within-period' test for capital expenditure there should be a cost/benefit analysis of providing more oversight on service provider investment and whether any additional analysis may become overly burdensome compared to current procedures.

While electricity networks may have such a test, there are significant differences between the two industries and maintaining similar regulatory devices may not be appropriate. For example, the New Facilities Investment Test (NFIT) referenced by the ERA is part of the Electricity Networks Access Code and third party access regime, yet there is currently no third party access arrangement for the water industry in Western Australia (although such arrangements are being considered by the Government in response to the ERA's recommendations contained in its Final Report on its Inquiry into Competition in the Water Sector).

For unusually large and singularly identifiable capital projects (such as major new source development projects) there may be benefit in an ERA assessment of net benefits compared to other reasonable options, although such reviews will need to be considered on a case by case basis.

Nevertheless, it is understood that under the existing pricing inquiry structure the ERA already examines the current and projected capital expenditure of the Water Corporation, including processes, which were noted as providing “confidence that capital projects are selected and prioritised appropriately”<sup>1</sup>.

Given the positive review of the Water Corporation’s capital processes, the ERA’s own ability to examine capital works during the inquiry process and the Government’s final decision-making powers for any investment (taking into consideration wider funding priorities), there may not be a need for additional within-period testing of capital investment efficiency.

### **DRAFT RECOMMENDATION 25**

Reviews of service standards for Water Corporation, Aqwest, Busselton Water Board be aligned with, and incorporated into, tariff reviews.

---

This draft recommendation is supported.

### **DRAFT RECOMMENDATION 26**

Tariffs be escalated on an annual basis in line with the annual increase in the eight city average Consumer Price Index.

---

This draft recommendation is noted.

As stated in its Response to the ERA’s Issues Paper, the DTF requires its government owned service providers to use the ‘Budget rate’ which is based on the actual, annual rate of inflation measured to September each year.

It is understood that the eight city average Consumer Price Index may provide a more accurate measure in calculating return on investment, however at present there are no exemptions to the Budget rate pricing policy.

### **DRAFT RECOMMENDATION 27**

For the purpose of calculating revenue requirements, gifted assets be excluded from the calculation and cash contributions be offset against capital expenditure in the year in which the cash contributions are received. However, any revenue adjustment associated with changing the regulatory accounting treatment of developer contributions would not commence until the next regulatory period (and would then be recovered as a real annuity spread over the life of the Water Corporation’s capital expenditure).

---

This draft recommendation is supported in-principle.

---

<sup>1</sup> ERA Draft Report: page 126.

While there are increased levels of volatility in tariffs arising from the current treatment of developer contributions, there is concern about the negative financial implications referred to by the ERA that may result from a change in treatment.

From a shareholder perspective, long term financial sustainability, returns to Government (through tax and dividend payments) and performance is important, especially given the highlighted debt levels predicted from the proposed change in treatment for developer contributions. Further discussion of the quantum of impact is therefore warranted in order to provide the Government with sufficient information on the issue.

As noted previously, it is understood that the ERA is considering this issue in the context of the electricity industry. There may be similarities between proposed treatments and a strong case for consistency between the two utility industries (due to an apparent lack of industry specific factors requiring different treatment). It is therefore suggested that the ERA consider the matter in context of any potential change to electricity developer contribution treatment.

---

## DRAFT RECOMMENDATION 28

Cash contributions from developers be calculated consistent with the recommendations of the Inquiry into Developer Contributions to the Water Corporation (e.g. by excluding any contributions to source expenditure).

---

This draft recommendation is not supported at this time.

While the Final Report has been tabled in Parliament, the Government is still considering its recommendations. It is therefore too early to assume a particular decision and base further recommendations on that presumption. It would be more appropriate to therefore calculate cash contributions separately for both options discussed in the ERA's final report on its Inquiry into Developer Contributions for the Water Corporation, as well as the current approach.

The variation in developer revenue for the Water Boards is also a considerable concern given the lack of supporting information for the figures<sup>2</sup> and the ERA is therefore requested to address the issue in its Final Report.

Under the approach recommended by the ERA only distribution costs are paid for by developer contributions, with source development and transmission costs paid through tariffs. Therefore, the projections made by the ERA for the Water Boards should be reviewed due to the unlikely event that developer contributions for Busselton Water contain no distribution works (and minimal works for Aqwest). This is especially unusual given the large growth rates for customer numbers projected for Busselton Water.

---

<sup>2</sup> ERA Draft Report: page 104, table 7.2.

From a higher level perspective, careful consideration should also be given to the appropriateness of adapting the recommendations from the ERA's final report on its Inquiry into Developer Contributions for the Water Corporation, to the Water Boards. Such consideration will need to take account of the Water Boards' unique circumstances and methods of operation, particularly given the reserve funding methodology for capital works employed by both Boards.

### **DRAFT RECOMMENDATION 29**

CSO payments be set for a three year regulatory period using the same financial model as is used to calculate tariffs.

---

CSO payments are paid by the Government to the Water Corporation for a good or service the Water Corporation provides, that it would not otherwise do on a commercial basis. CSO payments are transparently funded through the budget process from the consolidated account and are assessed as part of the annual budget process.

The intention of CSO payments is to provide the Government with the flexibility to deliver on its non-commercial objectives, through a commercialised service provider such as the Water Corporation and where costs differ materially from forecasts, the Water Corporation is accountable to the Minister for Water.

Setting CSO payments for three years is therefore not supported as it would deprive the Government of the necessary flexibility in setting the State Budget and delivering on its non-commercial objectives.

New programs (particularly aimed at social equity) typically require CSO payments and where a program might begin half way through a regulatory period, payment might be required to be deferred under the ERA's draft recommendation. Such an occurrence would unfairly penalise the Water Corporation and be contrary to the current CSO policy.

It should also be noted that a review of CSO policy and CSO payments will soon be undertaken. Subsequently, this draft recommendation may be better considered in such a forum.

In regards to using the same financial model as used for tariffs in calculating CSO payments, the current CSO policy sets out how CSOs should be costed and it is difficult to comment on the proposal without information on how the ERA's proposed approach would differ from the Water Corporation's own cost model.

## Operating and Capital Expenditure

---

### DRAFT RECOMMENDATION 30

Water Corporation's revenue requirement be set on the basis of reductions in base real operating costs per connection of 1.88 per cent per year.

---

This draft recommendation is supported.

---

### DRAFT RECOMMENDATION 31

Aqwest's and Busselton Water's revenue requirements be set on the basis of their operating and capital projections.

---

This draft recommendation is supported.

---

### DRAFT RECOMMENDATION 32

Customers should not pay for any premium associated with the Water Corporation's strategy to procure up to 20 per cent of the energy requirements of the Southern Seawater Desalination Plant from renewable energy sources that are untested at a commercial scale.

---

This draft recommendation is supported.

Despite the decision of the former Government that 20 per cent of energy requirements be contracted from commercially untested renewable energy sources, any excess cost beyond a reasonable level should not be borne by consumers. A reasonable supply cost could be practically measured as the average unit price charged for the remaining 80 per cent being supplied by renewable energy.

## Rate of Return

---

### DRAFT RECOMMENDATION 33

For Water Corporation, the rate of return (pre tax real) be set at 5.41 per cent.

---

### DRAFT RECOMMENDATION 34

For Aqwest and Busselton Water, the rate of return (pre tax real) be set at 5.72 per cent.

---

The draft recommendations are noted.

The advice of the Western Australian Treasury Corporation has been sought on this matter and on that advice it is considered that from a shareholder's perspective the rates of return proposed are very low. In particular, the following issues relating to the calculation of the weighted average cost of capital are of concern and may be worth re-examination prior to the release of the Final Report.

## Market Risk Premium

The ERA has proposed the use of a market risk premium of 6 per cent based on previous practitioner approaches and an assumed tendency of others to over estimate the premium, based on a historical analysis.

Given the current economic climate, the market's appetite for risk has decreased significantly and therefore the premiums required to compensate for the adoption of systemic (or non-diversifiable) risk have increased.

In contrast, the historical practitioner analysis is entirely based on the years 2005 to 2008, which is a period of superior economic performance and a lower need to compensate for the adoption of risk.

While regulatory frameworks are still new in Australia, a more historically rounded analysis of risk premiums would be appropriate given changes in market conditions.

To this end, the WATC has recommended that the Australian Energy Regulator's (AER's) final decision on the Review of the WACC Parameters be considered in this context. The report was released in May 2009 and recognises additional market uncertainty which it points to in justification of its adopted risk premium of 6.5 per cent.

## The Cost of Debt

The cost of debt for the water industry should be maintained at a level equivalent to a credit rating of BBB+, on the basis of the AER's recent decision (as discussed above) and also as there is an overwhelming majority of service providers that have a credit rating of BBB+, particularly in the water industry.

The Metropolitan Melbourne Water Price Review by the Essential Services Commission examines a water utility during a similar timeframe as the AER Report and has set a credit rating of BBB+. Specific water regulator reviews would appear to be more appropriate for comparison in setting credit rating levels.

It is also important to note that while the ERA has generally assumed the water industry is less risky than the electricity industry as a whole, the Water Boards may be a special exception. Given the Water Boards' small size (both in market share and asset value) as well as limited ability to compete there is a case that they are inherently more risky compared to the Water Corporation.

---

### DRAFT RECOMMENDATION 35

The rates of return for Water Corporation, Aqwest and Busselton Water should be updated in 2010 prior to the tariffs being set for the regulatory period.

---

This draft recommendation is strongly supported.

Given current volatile market conditions (and potential increase in cost of debt from any Commonwealth guarantee), a revision to rates of return before implementation is justifiable.

## Regulatory Asset Values

---

### DRAFT RECOMMENDATION 36

The initial asset values used for the purpose of determining tariffs be set at \$11.3 million for Aqwest and \$9.0 million for Busselton Water (as at 30 June 2005, in real dollar values of 2005).

---

It is agreed that it would be inappropriate for service providers to earn a return on developer contributed assets. However there is concern regarding the large revision down of the Water Boards' asset values and the associated impact on profitability (demonstrated by an almost halving of Busselton Water's predicted national tax equivalent regime payments<sup>3</sup>).

The original deprival value methodology in the ERA's 2005 major pricing inquiry report was adopted to ensure there would "not be significant variations in either tariffs or net payments to government from what had been previously expected<sup>4</sup>".

The two new methods employed by the ERA are aimed at removing any influence of developer contributions, however this should be balanced with the original intent of the regulatory asset base calculation in 2005 to minimise variations in the net payments to government.

As the revised asset bases are a middle point between the new approaches, it would be better to balance the original motive of the asset base calculation and the removal of developer contributed assets by making the revised asset bases a middle point between the 2005 base and book value exercise. For Aqwest this middle point would be between \$25.1 million and \$19.4 million, while Busselton Water would be between \$14.7 million and \$9.7 million.

---

### DRAFT RECOMMENDATION 37

The initial regulatory asset value for Water Corporation was set in 2005 and should not be revised.

---

There appears to be an inconsistent treatment of the regulatory asset base between the Water Corporation and the Water Boards. While the two new methods calculated a decrease in asset values for Aqwest and Busselton Water, it calculated an increase for the Water Corporation, yet the ERA is recommending maintaining the Water Corporation's asset values as they currently stand.

---

<sup>3</sup> ERA Draft Report: page 157, table 16.3.

<sup>4</sup> ERA 2005 Final Report: page 134.

The ERA is requested to explain why, if the deprival method is removed from consideration, the Water Corporation's regulatory asset base has not been recommended for an increase, in line with its own calculations.

## **SUBMISSIONS SOUGHT**

Submissions are sought on whether the Water Corporation's Strategic Development Plan, or a similar document providing the five year direction, but without commercially sensitive information, should become a public document.

---

Commercially sensitive information within the Strategic Development Plan prevents these documents from being disclosed to the public. Comparatively, similar business plans for private sector companies are not generally available to the public.

Strategic Development Plans are prepared by a number of government business enterprises (GBEs) and allow clear communication of forecasts and planning between a GBE its Minister and the Treasurer.

Any requirement upon the Water Corporation to provide additional disclosure to the public should be examined in light of requirements upon other commercial businesses and would preferably be determined voluntarily by the Water Corporation following an analysis of costs and benefits.

## Demand Management

---

### DRAFT RECOMMENDATION 38

Demand restrictions be reconsidered once the Southern Seawater Desalination Plant is operational.

---

This draft recommendation is supported.

Nevertheless, it is important to note that the decision to retain sprinkler restrictions after the commissioning of the Southern Seawater desalination plant will a decision for the Government.

---

### DRAFT RECOMMENDATION 39

Rebates for water efficient products (other than rain sensors, garden assessments and flow regulators) be discontinued, as the water savings achieved are more costly to society than the alternative of producing more potable water.

---

The draft recommendation to discontinue inefficient rebates for water efficient products is strongly supported.

Nevertheless, it is noted that the Waterwise Rebate program for all water efficient products is being discontinued after 30 June 2009.

## Cost Allocation

---

### DRAFT RECOMMENDATION 40

The annual fixed charge be set at the same level for all small-use water customers (those using a 20mm meter), whether they are residential or small business customers.

---

While the draft recommendation to move towards a more cost reflective approach to fixed charges is supported in-principle there are a number of issues which the ERA is requested to investigate further before reaching a final recommendation on this issue.

The first issue is the reasoning behind the decision to differ the fixed charges for residential and commercial customers in the first place and whether the re-adjustment of those charges to a more equal basis would not distort the recovery of costs from the respective classes of customers.

Furthermore, the recommended implementation of an immediate increase in volumetric charges to commercial customers while phasing in the proposed reduction in fixed charges is of some concern.

The concern relates to the period during which commercial customers are already paying higher volumetric charges whilst not receiving the total benefit of the corresponding reduction in the fixed charge. During this period, unless otherwise addressed, it would appear as though commercial customers would be paying charges in excess of the cost of their service and on this basis, the ERA's draft proposal is not supported.

---

### DRAFT RECOMMENDATION 41

The uniform approach to charging metropolitan and country commercial wastewater customers be removed.

---

The draft recommendation to move towards a more cost reflective approach to charging metropolitan and country commercial wastewater customers is supported, provided the comments at draft recommendation 5 and 6 above are taken into account.

---

### DRAFT RECOMMENDATION 42

The costs of providing wastewater services within a scheme be allocated between residential and commercial customers in a way that is reflective of relative estimated discharge into the sewer.

---

The draft recommendation to adopt a cost reflective approach to allocating the cost of providing wastewater services between residential and commercial customers is supported in-principle.

However, as outlined above in comments relating to draft recommendation 7, the proposal to base wastewater charges on winter water usage is not the preferred alternative to the current GRV method and rather a fixed charge would appear to be a more optimal replacement.

## Draft Tariff Recommendations

---

### **DRAFT RECOMMENDATION 43**

---

The tariffs of the Water Corporation, Aqwest and Busselton Water be set in accordance with the tariffs in Schedules 1, 2 and 3 of Appendix H.

---

Based on the issues raised in this submission, this draft recommendation is not supported. Instead, the ERA is requested to re-calculate the tariffs of the Water Corporation, Aqwest and Busselton Water on the basis of the amendments proposed in this response.

## Attachment 1: Review of the Proposed Wholesale Market Model

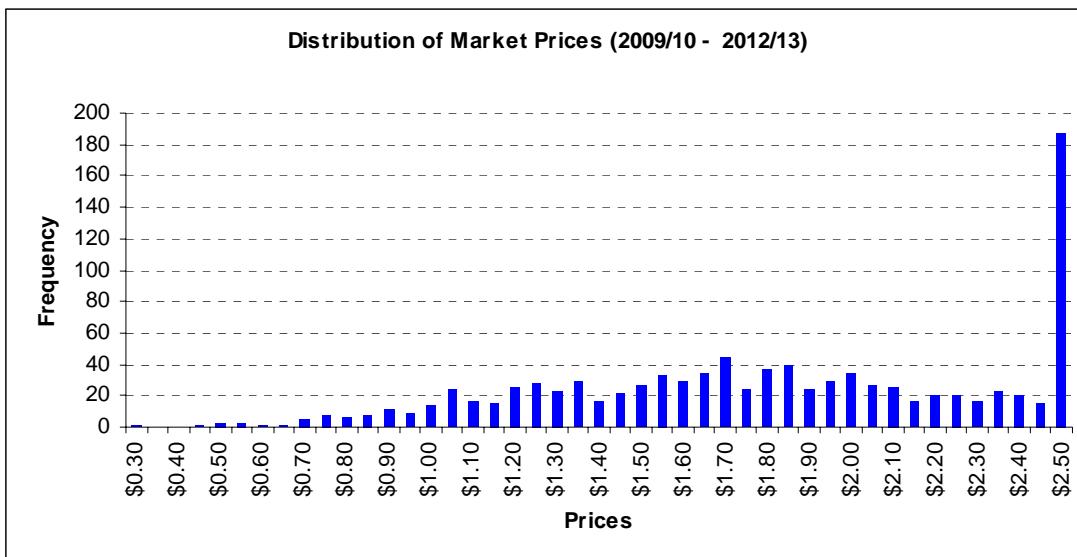
An analysis of the ERA's wholesale market model (WMM) has been undertaken in order to determine whether, from a practical perspective, the proposed methodology will result in a palatable means of setting water prices from both an efficiency and policy perspective.

Two avenues were explored. In the first instance, the WMM was subjected to a range of inflow scenarios representing the historical averages in order to determine the distribution of the three and eight-year average market price. Secondly, an examination of individual year price changes illustrates additional problems with the WMM.

Utilising an inflow simulation function, similar to that used within the Water Corporation's Long Run Marginal Cost (LRMC) model, allows for the analysis of wholesale market prices under a range of possible and probable inflow scenarios. This produces a more robust estimate of the market price than has been included by the ERA in the Draft Report, which utilised a point estimate to derive the \$1.73 per kL price. This price was then used to set the mid-level tariff.

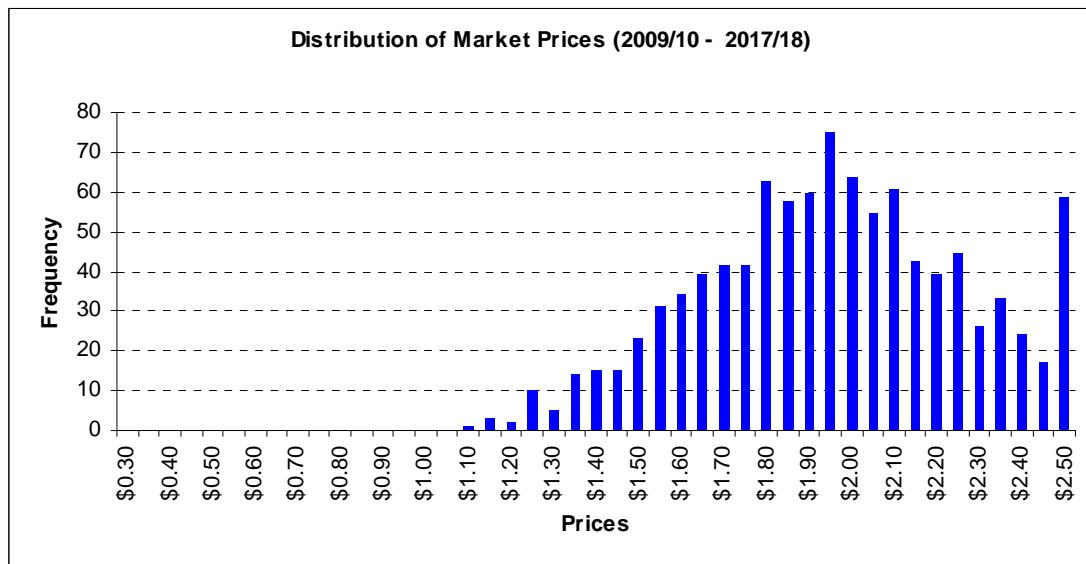
The analysis performed on these estimates has held all non-inflow parameters (that were used to derive the \$1.73 per kL estimate) unchanged. Figure 1 below illustrates the distribution of the expected three-year wholesale market price utilising the 2001-2008-inflow average. The key result is that while the mean price was \$1.815 per kL, such an estimate is not particularly informative given the significant frequency with which the market reaches the assumed ceiling price of \$2.50 per kL.

**Figure 1**



In regards to the 2009-10 to 20017-18 period, the results are somewhat more stable, with an expected market price (again based on 2001-2008 average inflows) of \$1.951 per kL. The distribution of results is also illustrated in Figure 2.

**Figure 2**



What both results demonstrate is that the expected price from the WMM is significantly higher than the \$1.73 per kL estimate provided in the Draft Report, noting that this difference is also constrained by the assumed \$2.50 per kL ceiling price.

It is also necessary to discuss the year-on-year stability of prices that the WMM produces. In 6.112 per cent of simulations, the WMM results in a floor-to-ceiling (or vice-versa) shift in the market price for 2009-10 and 2010-11. The WMM allows this to occur when high inflows in one year are followed by significantly lower inflows in the next year. A failure to have regard for the effect of consuming stored water in one year on the prices in subsequent years is the fundamental determinant of this variance, as opposed to inflow uncertainty.

Consequently, while price instability is not problematic per se, in regards to the water sector the instability would be unacceptable given that the variance results primarily from the characteristics of the WMM rather than physical or environmental constraints on the Perth Integrated Water Supply Scheme.

Given these findings it is recommended that the mid-level tariff not be set using results from the WMM as it has been concluded that the WMM does not provide an efficient estimate of the value of potable water in the Perth IWSS. It is believed that by not having regard for the opportunity cost of consuming stored water in any given year, over extraction will occur, thereby increasing prices above an efficient level.