Water and Rivers Commission Submission to the Economic Regulation Authority Inquiry on Urban Water and Wastewater Pricing in Relation to Water Resource Management Costs

Water and Rivers Commission

September 2004

Table of Contents

Summary

The Commission proposes that:

- Providing a safe and secure water supply requires a high order of management activity to regulate the use and protect the sources that provide the supply.

- Water service providers should pay for the cost of water management where it is their use that generates the management requirement.

- Payment for water management costs incurred on behalf of water service providers is:

    i. consistent with national policy directions established under the 1994 COAG water reform framework agreement, the 1995 COAG National Competition policy and the 2004 COAG National Water Initiative; and

    ii. being introduced in other States and Territories.

- User payment for water management costs is an efficient way of recovering costs and ensures that the needs of the water users are met. Funding the costs from other sources, such as the consolidated fund, may mean that funds are allocated at a level that is below that needed to protect the interests of water service providers.

- Developing water resource management charging for water services options involves:

    i. determining the 'efficient' water resource management costs to be funded;

    ii. determining the costs to be borne by service providers;

    iii. calculating the charges required to achieve specified cost recovery levels;

    iv. assessing the impacts of charging options on the parties; and

    v. introducing the charges in a way that minimises adverse impacts.

- Analysis undertaken for the Water and Rivers Commission suggests that one third of the cost of water resource management undertaken in 2002-03 by the Commission is incurred because of the activity of water service providers.

- The costs attributable to managing and protecting the water supply of water service providers should be charged to utilities on a user pays basis and recovered by the service providers from customers through water use charges. Further work is required to determine the costs attributable to urban water supply but it is likely to be in the order of five cents a kilolitre or $15 a year for a typical domestic service.

- The introduction of charges should be immediate but staged to ensure that there is time to accurately determine the costs of management and establish a level of management that is efficient. Progressive introduction of charges will minimise the risk of overcharging. A suggested suitable starting charge is 30 per cent of the estimated cost (currently five cents a kilolitre) increasing uniformly until the full user payment is established after three years.

- While the ideal goal of cost recovery system should be to recover costs incurred in the management of each resource from the relevant resource users, this is likely to be impractical and lead to a large range in costs from place to place. The principle of uniform charging for urban water is now well established in WA and should be adopted, in the first instance, in respect of water resource management cost recovery.

Introduction

This paper has been prepared within the Department of Environment, on behalf of the Water and Rivers Commission, as an submission to the Economic Regulation Authority (ERA) inquiry into Urban Water and Wastewater pricing.

This paper focuses on the need to manage the use and quality of water resources for the purpose of dealing with the impacts and protecting the interests of water service providers. The paper identifies the scale of costs of the work and discusses how the costs could be passed on to utility customers.

The submission does not address drainage service matters. This is also an area where the Department provides a support role to the water service delivery. The principles espoused in this submission should also be applied to drainage services.

The structure of water pricing tariffs is also matter of interest to the Department. Generally speaking, the Department favours consumption based charges over fixed costs so as to encourage water conservation. Consumption charges, as a minimum, should cover all costs incurred because of the rate or volume of water use.

Terms of Reference

This submission principally addresses the requirement, in the Terms of Reference, for the Inquiry to investigate and report on:

- *the appropriate charging structures and recommended tariff levels for the Water Corporation's and the Bunbury and Busselton Water Boards' urban water supply service (residential and non-residential);*

In doing this the submission addresses the requirement for the Inquiry to consider, in relation to the cost of providing the services,

- *any additional resources needed to meet the required standards of quality, reliability and safety, including such matters as the protection and development of future water resources.*

and

- *the need to maintain ecologically sustainable development, including by appropriate pricing policies that take account of all feasible options for protecting the environment.*

The submission also provides assistance for the Inquiry to meet the requirement to have regard to the pricing principles of the 1994 CoAG water reform agreement, in particular that a water business should recover the costs of externalities and, that in determining prices, transparency is required in the treatment of externalities, including resource management costs.

Water resources management

Water use is a legitimate concern of policy makers as water is not allocated by a model of perfect competition, hence environmental values are largely ignored, and the activity of one user affects the quality and quantity available for other users.

This impact of water user on the resource, the environment, and other users is the basis of the need to manage the water resource. The manager allocates licences to access and use defined volumes of water and imposes obligations in the form of conditions.

The manager of water resources in Western Australia is the Water and Rivers Commission, formed in 1996 and charged with the task under its own legislation. Presently the Commission operates as a unit within the Department of Environment which employs about 300 professionals in water management.

The Commission achieves its water management responsibilities by four operational processes:

1. Resource characterisation: which involves investigating the resources, their relationship to environmental factors and sensitivity to withdrawal;
2. Water allocation: making sure water is efficiently and fairly allocated for varying uses while maintaining environmental values;
3. Protection and conservation of water quality;
4. Waterways and catchments protection: protecting the rivers and wetlands through landuse planning, salinity management and floodplain management.

The national approach to water management cost recovery

An increasing need for improved water management was recognised at the national level in 1994 by the Council of Australian Governments (COAG) in a package of water industry reforms. First step measures included separating water management from the supply of water and included, in agreement with National Competition Policy, a strategy to include the full cost of supply in water prices. The cost of water was to include the cost of any 'externalities' with any remaining subsidies to be transparent.

COAG recognised that under-pricing water encouraged excessive consumption of water and adverse environmental impacts. Increasingly throughout Australia the full cost of supply has come to include the cost of managing the resource. COAG intended to recover the full cost of all water services attributable to specific identifiable beneficiaries or impactors by way of charges commensurate with the level of services provided in generating the benefit, or required to manage and offset the impact of their activities.

In 2003, COAG agreed to update its 1994 reform agenda through development of the National Water Initiative. This was agreed on 25 June 2004 (excepting Tasmania and Western Australia). The details are outlined in an Inter-Government Agreement (IGA).

The Agreement outlines a number of actions including cost recovery and management that are considered best practice. Sections 67 and 68 of the IGA follow.

67. The Sates and Territories agree to bring into effect consistent approaches to pricing and attributing costs of water planning and management by 2006 involving:

i) The identification of all costs associated with water planning and management, including the costs of underpinning water markets such as the provision of registers, accounting and measurement frameworks and performance monitoring and benchmarking

ii) The identification of the proportion of costs that can be attributed to water access entitlement holders consistent with the principles below;

a) charges exclude activities undertaken for the Government (such as policy development and Ministerial or Parliamentary services)

b) charges are linked as closely as possible to the costs of activities or products.

68. The States and Territories agree to report publicly on cost recovery for water planning and management as part of annual reporting requirements, including:

i) the total cost of water planning and management; and

ii) the proportion of the total cost of water planning and management attributed to water access entitlement holders and the basis upon which this proportion is determined.

The NWI therefore provides signatories with some direction to recover the costs associated with planning and management (while excluding Government related costs). Other sections relate to environmental externalities.

Funding water management in other jurisdictions

The Australian Capital Territory, New South Wales, Victoria and South Australia have all introduced a degree of charging water users for the benefits gained from management of the resource. Tasmania charges utilities a royalty for the use of water. Queensland is in the process of introducing charges.

In NSW all Sydney Catchment Authority costs are passed on to users in water costs. Canberra residents are charged 20c/KL for management costs. In South Australia no management fees are imposed until an area is proclaimed under relevant legislation. While the Mount Lofty Ranges, the source of much of the utility supply to Adelaide, are not yet proclaimed, Adelaide users are charged 1c/KL for water drawn from the Murray River.

Rural water users have paid full costs in Victoria for 10 years but urban utility users do not have a user pay fee for management. The three major Tasmanian utilities are paying back to Treasury infrastructure capital costs at 3c/KL but are not yet paying a management fee.

Western Australian approach to cost recovery

With some minor exceptions, no management charges are currently levied on users. With the exception of some State and Commonwealth purpose-funded programs (eg the Natural Heritage Trust) the water resource management is currently largely funded from the WA State Consolidated Fund.

The community, through the Draft Water Conservation Strategy in WA, recommended that water resource management charges should be applied to all users who benefit commercially from water and additional resources be provided for water resource management. Water resource management charges are seen by some members of the community as being a method of funding a sustainable water future.

The Government has adopted a policy of not introducing charges to fund water resource management, although this policy is believed to be addressed primarily to self supply, not service providers.

Objectives of charging regime

The objective of the water resource management charge regime for WA should be to contribute to the sustainable management of the State's water resources. It could do so by:

- providing a higher level of funding to enable the Water and Rivers Commission to undertake a higher level of management activities desired by the water users; and

- reducing the need for the Commission to undertake the activities by providing incentives to water users to either undertake the activities themselves or to change their water use patterns to minimise the adverse impacts.

Principles for developing water resource management charges for Western Australia

The commission suggest that the following principles be applied maximise efficiency of water resource management charging options:

- Users should pay directly only for management activities that generate benefits to them or address the impacts of their use;

- Charges should not recover more that the 'efficient' costs of water resource management activities;

- The cost sharing arrangements should reinforce policies related to water use, including water use efficiency incentives and social outcomes;

- The charging regime should be adaptable and accept the need to change in the future (eg incorporate externality pricing);

- Costs of remedying damage caused by past use should generally be borne by the community, not current users, except to the extent that the remedies deliver benefits to users.

Developing water resource management charging options involves:

- Determining the 'efficient' water resource management costs to be funded;

- Determining the proportion of these costs to be applied to water service providers;

- Checking that the impact of charges is equitable and reasonable on various users; and

- Making recommendations regarding a preferred cost recovery regime.

This approach parallels that undertaken by IPART in setting bulk water charges in New South Wales.

Expenditure on water resource management in WA

What level of water resource management costs should be recovered is an important first question. Both economic efficiency and equity considerations suggest that the water resource management costs to be recovered from users should reflect the efficient level of such costs: users should not be expected to pay for unnecessary or excessive costs. Water resource management charges would be set to recover the costs of a well-defined and agreed water resource management program over a specified period (say three years) to fund an 'efficient' level of water resource management activity.

Recurrent expenditure on water management activities by the Commission was analysed for the year 2002-03 and found to be in the order of $46 million (see Table 1 below).

Table 1 Commission recurrent expenditure budget 2002-03

Business/Business Output	Cost ($)
Corporate Support	**23,439,174**
Commission Communications	954,313
Commission Corporate Administration	5,363,663
Commission Corporate Development	191,830
Commission Financial Management	13,389,881
Commission Human Resource Management	704,971
Commission Information and Information Technology Management	2,834,516
Strategic Context	**698,366**
Define and Manage Water Use segments	698,366
Protection and Conservation	**1,760,386**
Protection of Public and Private Water Supplies	942,041
Land Use Planning	818,345
Resource Information	**4,173,421**
Assess Environmental Impacts in Water Resources	934,549
Measure and Monitor Water Quantity and Quality	3,099,854
Water Resource Appraisal for Resource Development	139,018
Water Allocation	7,998,772
Regulation Licensing and Community Awareness	3,381,496
Rural Water Planning	2,008,000
Water Allocation Policies	586,293
Water Allocation Values and Management Plans	2,022,983
Waterways and Catchments	**8,408,125**
Floodplain and Urban Drainage	-
Salinity Management	4,813,217
Waterways Protection	3,338,032
Wetland Protection	256,876
Total	**46,478,244**

In addition, the Commission had a capital program of $2.5 million for 2002-03. This program primarily relates to acquisition of land and equipment and replacement of monitoring facilities.

The Auditor General Reported to the WA Government in October 2003 that the Commission was not fulfilling its function of managing the resource due to a shortage of funding. The report recommended an increase in funding to enable the statutory obligations to be met.

The Auditor General's report identified the budget allocations for Commission core functions have effectively declined by about $9 million in real terms since 1998/99. The forward estimates at that time projected further reductions in appropriations for current outlays.

The increase in budget needed to implement a coordinated State water resources program over the next decade to address the failure reported by the Auditor General was estimated to require approximately an additional $12 million operating costs and $4 million capital costs each year, towards the end of the decade. This is equivalent to about a 2 per cent increase per year in real terms over the decade. The forecast increase in demand for water by the utility is 16 per cent to the same date (National Land and Water Resources Audit 2000).

Since the time of the Auditor General's report additional funds, increasing from $1.1M in 2003-04 to $3.2M a year in 2005-06 and subsequent years, have been provided to address deficiencies in licence administration. Consideration is being given to increasing the funding for the underlying management activities of resource characterisation, resource allocation and resource protection. The Commission estimated that the cost to fully implement the National Water Initiative would have required this increase in expenditure to be in the order of $20M a year.

Determining which costs are to be recovered from service providers

A set of issues relates to what proportion of and for which types of activities should Commission costs be delegated to which water users. Given that water resource management expenditure typically involves both public and private benefits, there is a need for a basis for determining what type and level of expenditures incurred by the Commission should be recovered from users, and what should continue to be funded by government.

Is the water resource management function (whatever the level of activity), being undertaken at least cost? The absence of competitive markets for Commission services is generally seen as creating a strong case for regulatory oversight as a substitute for competition. Users who will be levied water resource management charges can be expected to seek assurance from a regulator, such as the Economic Regulation Authority, that Commission costs are efficient.

This exercise has taken the Commission's 2002-03 budget recurrent expenditure of approximately $46 million as the base for the purpose of water resource management cost recovery.

Netted out were expenditures on programs that are funded externally (eg National Heritage Trust funded programs), and amounts paid under the rural farm grants scheme (around $2 million).

The cost base should incorporate capital-related costs. At present, the Commission's recurrent expenditure includes a capital user charge (CUC). The CUC is a charge levied by the government on State government agencies, designed to reflect the opportunity cost of capital on the assets employed by those agencies. The CUC for the Commission is around $8 million, based on an 8 per cent rate of return on the $100 million of net assets currently held by the Commission.

For this exercise, capital costs have been included in the total expenditure base.

The impacter pays approach to apportioning costs is used as being consistent with economic principles and less prone to inducing perverse incentives and less subject to arbitrariness than alternative methods such as beneficiary pays.

To allocate the costs of individual water resource management activities between stakeholders, it is necessary to itemise the specific activities involved. The Commission defined some 70 products that contributed to the business outputs. An estimate was made of the costs incurred by the Commission in each of these 70 products. For example, water quality protection costs are assigned 50 per cent to the utility, while waterway and catchment activities costs are assigned 26 per cent to utilities and mostly to Government.

Corporate support and strategic context business expenditures - which constitute substantial proportions of the costs for the Commission - were allocated across the other Commission activity, outputs and products on a pro-rata basis, according to the level of expenditure on these items.

The resultant service provider cost recovery target at a statewide level is $15 million a year for water supplies, including irrigation supplies. This represents a full user cost recovery level that may be achieved over a period of time. It is a conservative approach to allocating costs shares to current extractive water users in that:

- legacy costs (ie costs attributable to past water or land users) have been allocated to the government;

- future – as opposed to current – users costs have been allocated to the government. This includes the costs of activities such as developing water resources to cater for future growth. These costs should be recovered from future users.

The $15m cost has been used in this exercise to calculate indicative urban water resource charges although it includes the costs of activity to manage non-urban irrigation water resources. The non-urban costs have not yet been identified but will be a small part of the sum.

Broad charging options

The principal advantage of a uniform water resource management charge is that it is administratively simple and straightforward to implement quickly. Regionally based charges are superior to the uniform charges in that they reflect to a greater extent the different water resource management costs in different areas of the State.

The water resource-based approach (regional) most closely relates the charge to the underlying cost drivers. This option requires accurate modelling of costs at the resource level and could be pursued as a medium term objective. However, until this information is available, it is likely to be impractical.

The charging base

For each of the broad charging options, there are alternative charging bases, such as the number of services, volume of entitlement, actual use or a combination of these.

On efficiency and equity grounds, volume of use by water service customers should be the predominant charging base.

Implementation strategy and timing issues

It may be desirable for a number of reasons to phase in the levels of user cost recovery. The initial charge and pace of adjustment to full user cost recovery is a matter for judgement, although an initial charge of 30 per cent of the best estimate of the full cost is suggested.

A low level of cost recovery may entail an overly long and graduated implementation program. This needs to be balanced against the probability that the higher the initial level of user cost recovery the greater the likelihood that some users or groups of users would be overcharged for their water resource management costs, given the incomplete state of knowledge on cost breakdowns at this stage.

Impact analysis

Before implementing a water resource management charging regime, it is important to have a good understanding of the likely impact of the proposed charges.

The number of households supplied by the utility and the sum sought suggests that the impact on the majority of households would be less than $20 a year.

Commercial users pay a portion of their water charges as a fixed charge, dependent on the size of the meter serving the property. The Commission understands that average commercial use in the metropolitan area is 1400 -1600 KL each year, implying a resource management charge of $70 - $80 per annum on a volumetric basis. Analysis of the impact across a range of businesses, charities, recreational facilities, schools, etc. needs to be undertaken. For most business supplied by the utility, water charges are a small proportion of costs, usually less than 5 per cent. The proposed charge appears to be a minor increase to a minor cost. Further analysis is required to indicate whether business will be inhibited.

Conclusion and Preferred option

The Commission considers that the Terms of Reference of the Inquiry require the introduction of charges that recover the water resource manager's costs incurred, on behalf of a water service provider, in protection and development of water resources and addressing externalities, including environmental protection. The Commission has pointed to the practice of recovering these externalities in the ACT which has established a charge of 20c/KL. The cost in Perth is likely to be much less that this.

The preferred water resource management charging option may vary depending on the weight placed on particular objectives, and also on whether a short or long term view is taken. Thus, the preferred option for immediate implementation may differ from that preferred in the longer term, when more options become feasible as data constraints are removed. A consideration in the initial charging model therefore is the flexibility to change as more data becomes available.

In light of these considerations, a statewide charging approach represents a safe option for immediate implementation because of its simplicity, notwithstanding that it fails to establish a direct link between costs and services provided and may not be seen as equitable. It may be used as an initial way of quickly establishing a water resource management regime, subject to a commitment to explore and adopt greater differentiation if this is practical.

The Water Corporation supplied 330 GL to urban users in 2003 suggesting a water resource management fee of 4.6c/KL to recover $15 million. At this charge 76% of households (with less than 350 KL use) would pay less than $16 per year in resource management charges. At 30 per cent the introductory charge level would be less than $5 per household per year.