# Water Pricing

## A Submission to the Economic Regulation Authority's Inquiry on Urban Water and Wastewater Pricing

September 2004

CHAMBER OF COMMERCE AND INDUSTRY
WESTERN AUSTRALIA

# Table of Contents

# Introduction and Overview

## About CCI

The Chamber of Commerce and Industry of Western Australia (CCI) is the leading business association in Western Australia.

It is the second largest organisation of its kind in Australia, with a membership of 5,000 organisations in all sectors including manufacturing, resources, agriculture, transport, communications, retailing, hospitality, building and construction, community services and finance.

Most members are private businesses, but CCI also has representation in the not-for-profit sector and the government sector. About 80 per cent of members are small businesses, and members are located in all regions of WA.

This document is CCI's submission to the Economic Regulation Authority's (ERA) inquiry into urban water and wastewater pricing. CCI has not commented on all issues covered by the inquiry terms of reference, only on those issues where CCI believed it could add value. CCI also intends to provide supplementary comment on pricing models relevant to the inquiry.

## Summary and Key Points

This submission outlines a framework for evaluation of water regulations. It draws attention to the impediments to competition in the water sector, and the extent to which competitive reforms enhance opportunities in the water and wastewater market place. It also draws on a survey of WA businesses' views of water pricing conducted in the September quarter of 2004.

The availability of transparent pricing for the various elements of the water supply chain – supply, transmission, distribution and retail – is a critical factor that will limit the ability of potential market entrants to establish business viability. Opportunities for co-operation to deliver more efficient and effective water services, especially in a wholesale water market, may also be created through pricing transparency.

CCI's submission highlights the need for Western Australia to have a clear long-term strategy for the management of water resources.

CCI believes that the state's water supply must be capable of being maintained and be sufficient to meet growth. Western Australia's capacity to meet the current and future water needs of its population and businesses depends primarily on ensuring that it has the capital necessary to collect and deliver water and receive and process wastewater.

It is CCI's view that water and wastewater pricing should fundamentally reflect the cost of supply. This view has been adopted nationally through the Council of Australian Governments Water Reform Framework that identified the need for water pricing based on full cost recovery and the amount of water used, incorporating environmental costs in water pricing, and sustainable water use.

CCI also notes that, in the terms of reference to this inquiry, ERA highlighted Section 26 of the ERA Act. CCI is supportive of this section as it applies to the Authority and highlights:

*"…promote regulatory outcomes that are in the public interest…"*

*"…promote competitive and fair market conduct…"*

*"…prevent abuse of monopoly or market power…"*

*"…promote transparent decision-making processes…"*

It is CCI's view that a strong and competitive business sector is in the public interest to deliver choice through diversity of supply, and that, while appropriate regulation is essential, over-regulation must be avoided.

While clearly the ERA must act to ensure fair market conduct, it is CCI's view that this can and should be achieved with light-handed regulation. In particular, regulations for consumer protection should be consolidated under appropriate Acts instead of re-inventing codes of practice. Appropriate legislation should be tightened rather than duplicating codes already put in place by other Federal (eg. Trade Practices Act) and State legislation (eg. Fair Trading). Creating varying sets of rules for similar circumstances in different markets is burdensome to business and confusing to consumers. Over-regulation will dissuade investors and limit benefits to the public.

Opportunities for industry development and industry diversification may provide greater opportunities in the water sector for competition or effective co-operation and result in innovation, reliability and security of supply, and better outcomes for all customers. Further, success in market reform may ultimately also be reflected in community service obligations cost savings to Government.

CCI supports the inquiry process and anticipates that it will lead to competitive reforms to enhance opportunities in the market place. Pricing of urban water should not be done in isolation of the cost of the whole service provision. While appropriate regulation is essential in this process, especially to ensure transparency of pricing by government trading enterprises, over-regulation must be avoided.

CCI would welcome opportunities for further input during the preparation of the draft report, and looks forward to further commenting on the draft report when it is available.

# Overview and Analytical Framework

Before identifying how the water industry should be regulated, it is important to establish whether, and why, it should be regulated.

The ERA Issues Paper's discussion of the reasons for regulation focuses on the specific objectives that the Government hopes to achieve through the regulations it imposes, such as consistency and conservation (p. 23). However, it takes for granted that regulation is a necessary and appropriate role of Government in the case of the water industry.

While CCI accepts some level of regulation is required, CCI contends that the level and type of regulation required must be carefully considered. Indeed, many other essential services are provided efficiently without government provision or regulation.

The following section sketches briefly the analytical framework that CCI will use to evaluate water regulation. CCI contends that the issue of why regulation is warranted must be clearly established before the question of how to regulate, and to what purpose, is pursued.

## Competition and Market Failure

Real markets seldom, if ever, conform to the economic paradigm of perfect competition[1]. For practical or policy purposes, this does not necessarily mean that they fail to deliver outcomes in the community interest. If there is a high degree of competition, accurate product information and prices closely correspond to social costs, then the outcome of most markets will be highly, if not perfectly, efficient. Certainly, it is unlikely in such circumstances that government intervention and regulation will act to improve community welfare significantly.

However, public interest theory has long argued that there are circumstances in which government regulation can act to constrain the operation of markets in ways that improve the welfare of the community. In general, these circumstances comprise instances of what economists call "market failure".

Markets will fail under a range of circumstances:

- where there is a monopoly or natural monopoly or some lesser degree of monopoly power;
- in the provision of public goods[2];
- where there is imperfect or asymmetrical information; and
- where there are harmful or beneficial externalities[3].

A further case where intervention is frequently deemed appropriate and in the community interest, though not really market failure in its strict interpretation, is social intervention intended to distribute benefits to certain groups even if this imposes greater costs on others. As an explicit policy objective, this most commonly entails transfers of money or goods and services from the affluent to the less well off, but it can also be to other groups such as residents of remote and regional areas, or certain ethnic groups.

The term "market failure" is often misunderstood to indicate the failure of markets to deliver what governments, regulators or others think they should deliver, or failure to provide goods because it is not profitable. For economists, market failure refers to a situation in which economic efficiency has not been achieved through market mechanisms. Its result is the failure of a market to produce goods for which there is effective demand, or a mal-distribution of resources which could be improved in such a way that some consumers could be made better off without making others worse off. It is only in the instance of demonstrable market failures that government intervention is justified. Furthermore, even market failure does not necessarily justify government intervention. As a WA Treasury paper states[4]:

> *"While market failure is a necessary condition for Government intervention, it is not a sufficient condition. For one thing, the benefits to the economy of Government intervention must outweigh the net financial costs of the project to Government for the project to be justified."*

Other things being equal, the best solution to market failures is to remove their causes – breaking up monopolies and eliminating legislative sources of monopoly power, for example. However, where this is not possible, more extensive regulation is appropriate. Such interventions should be appropriate to the market failure they address. For example, if the problem is a negative externality, the intervention should seek to internalise it (e.g. by "polluter pays" price adjustments).

While the market failure exceptions to a general preference for competition are important, they remain exceptions. By and large, consumers are better off if markets are left unregulated.

## Regulation

### *Regulatory failure*

Regulation can only make failing markets work better if government is both willing and able to take actions in the community interest – sometimes called the 'benevolent despot' model, which assumes that governments and public servants have both the motivation and the capacity to devise and enforce regulation in the public interest.

However, governments can make mistakes, and those mistakes may be at least as widespread in effect, and potentially more costly, than the errors of private individuals or businesses.

Governments' potential to do more harm derives from many factors, including:

- the greater financial resources available to governments, and the expectation that this makes them responsible for large-scale, comprehensive 'visionary' investments and programs;
- their capacity to legislate to enforce policies;
- the separation of decision-makers from the providers and consumers of goods and services who sometimes have the greatest awareness of what will and will not work in practice, including unintended consequences;
- their bureaucratic and legislative processes for implementing change, which make trial and error learning slower and more cumbersome than in private businesses; and
- the arms-length relationship of decision-makers from the consequences of their actions.

For example, many of the major environmental problems faced in Western Australia today are primarily a result of government failure, not market failure, including policies that encouraged the clearing of native vegetation and over-stocking of rangelands.

Furthermore, government failure may not arise merely from mistakes. 'Public choice' and similar models start from the assumption that politicians and public servants are no less self-interested agents than consumers or producers. In the past 40 years, a growing body of research has focussed on potential sources of sub-optimal community outcomes that result from government failure or regulatory failure, in which government intervention is the cause rather than the cure of undesirable outcomes. As Winston (1993) noted[5], the weakness of traditional regulation theory was its assumption that perfectly informed social welfare maximisers are either managing the regulation or running the regulated firms. [6]

Regulation policy needs to be designed to address the potential for government failure as well as countering the effects of market failure.

### *Regulatory Approach*

Having established a case for regulation in principle, the question arises as to what constitutes good regulation, what are its characteristics, and how do we get it.

According to the Productivity Commission Chairman Gary Banks[7], *"good regulation is regulation which, in achieving its goal, brings the greatest net benefit to the community."* Assessing net benefits means that the direct and indirect costs as well as the benefits of regulation must be properly accounted for.

Banks argues that three other tests are also crucial:

- efficiency - regulation must be the most effective way of addressing an identified problem
- cost minimisation - it must impose the smallest possible burden on those regulated; and
- regard for unintended consequences - it must cause the least collateral damage to others.

In order to achieve these objectives, regulation should encompass key design features:

> Regulation should not be unduly prescriptive. Where possible, it should be specified in terms of performance goals or outcomes. It should be flexible enough to accommodate different or changing circumstances, and to enable businesses and households to choose the most cost effective ways of complying.
>
> Regulation should be clear and concise. It should also be communicated effectively and be readily accessible to those affected by it. Not only should people be able to find out what regulations apply to them, the regulations themselves must be capable of being readily understood.
>
> Regulation should be consistent with other laws, agreements and international obligations. Inconsistency can create division, confusion and waste.
>
> Regulation must be enforceable. But it should embody incentives or disciplines no greater than are needed for reasonable enforcement and involve adequate resources for the purpose.
>
> Finally, regulation needs to be administered by accountable bodies in a fair and consistent manner, and it should be monitored and periodically reviewed to ensure that it continues to achieve its aims. [8]

Banks concluded that most regulation that the Productivity Commission looks at fails at least some of these tests, and some regulation fails most of them. Part of the reason for complexity, inconsistency and vagueness in regulation is that the response to each newly perceived problem or issue in a sector is often to introduce additional regulation. Conversely, existing regulation is less often simplified, and even less frequently repealed. The result is a ratchet effect in which the net of regulation spreads more widely, and its effectiveness diminished steadily.

### *Prescription*

Regulation should not be unduly prescriptive, and where possible, it should be specified in terms of performance goals or outcomes. It should specify ends not means.

For water regulation, a prescriptive approach to some issues is appropriate and desirable – in mandating minimum standards of water quality, for example. However, in other respects, CCI is concerned that the regulatory process is unnecessarily and detrimentally restrictive, and that it over-emphasises processes at the expense of outcomes.

In the context of water pricing, a greater concern is the growing tension between the views of those who would seek to constrain demand for water by regulating and prescribing who can use it, how, and when; and a more flexible, market-driven approach which allows proper pricing and the operation of the market to ensure that this scarce and valuable resource is used as effectively as possible.

## Concluding Comments

This section has outlined some of the analysis and research that provides the theoretical underpinnings for National Competition Policy, and for the establishment of the Economic Regulation Authority. Without such supporting argument, advocacy of regulation can seem arbitrary and ideological. For this reason, the following analysis of reforms to date refers back to this theoretical discussion on occasion, as appropriate.

The following sections discuss some of the issues arising from the regulation of water in the context of some of the principles discussed above.

# Regulation of the Water Industry

## Market Characteristics

The natural monopoly character of the water and wastewater industry, and the public good[2] status of some of the public health and environmental services it provides, mean that the water industry is an obvious candidate for government regulation and intervention.

Furthermore, WA's unpredictable and variable rainfall make resource availability uncertain, and this combined with the expensive and lumpy nature of investment to raise supply means that a more active and interventionist approach to demand management may be more appropriate in the water industry than other sectors, under some circumstances.

The WA water industry has many of these characteristics that establish an *a priori* case for regulation.

As mentioned above (p. 4), the best solution to market failures is to remove their causes. In the case of the WA water industry, however, the scope for such first best solutions is in many cases limited.

Much of the water supply industry is a natural monopoly[9], and while there may be a case for removing some artificial barriers to market participation, and encouraging competition by breaking down vertical integration, some of these solutions would generate new problems, and it is certain that areas of natural monopoly would remain.

Other factors also guarantee a role for regulation in this sector:

- water supply is an essential service, and both water quality and sewerage services are vital to community health;
- the critical ecological importance of environmental flows and other environmental implications of water and wastewater management demands a regulatory framework; and
- the expensive, long-lived, large-scale nature of the industry's necessary infrastructure also mean that the consequences of mismanagement for the WA community would be too severe for investment and maintenance decisions to be left entirely unscrutinised.

For all of these reasons, the underlying causes of the need for government intervention in the water industry either cannot or should not be removed, and regulation is therefore appropriate.

## Demand Management

CCI is a firm advocate of taking a market-based approach to demand management, where possible. In particular:

- if prices truly reflect costs (including externalities) then any attempt to force the community to consume less than it would prefer at the market price diminishes community welfare, except in the case of identifiable market failure;
- in those cases where (non-price) market failures are identified, the best regulatory response

is targeted narrowly at redressing the particular problem, not blanket regulation;

- markets are generally better than regulators at inducing efficient water use. For example, secure, predictable tradeable water rights in the agricultural sector and extending to other intensive business users will encourage inefficient producers to withdraw from the market in favour of efficient ones (but see also *Water Entitlements* comments on p. 12);
- this demands symmetry and equity between different water users. For example, water users who self-supply (both domestically and in business) should be incorporated into the same water resource management framework as users of scheme water and should, where appropriate[10], pay for both the cost of resource planning and management and rent for the resource used (see also *Water management charges* comments on p. 11);; and
- where a market-based approach is not appropriate or adequate – for example, in maintaining adequate environmental flows - regulation should focus on outcomes not processes. This is true both for suppliers - e.g. regulating minimum environmental flows, not how they are to be achieved - and consumers – for example, mandating efficiency standards for domestic appliances, not prohibiting the sale of top-loading washing machines. Furthermore, residual user issues can still be determined in the marketplace (for example, who gets to use the water resource not earmarked for environmental flows).

CCI has some concerns at the extent to which current and recent policy debate emphasises the need to compel the community to change its behaviour to conform to water conservation agendas.

The government has a legitimate leadership role in public education, encouraging responsible water use and explaining the problems and issues of water supply and conservation to the public. But the increasingly authoritarian tone and growing emphasis on command and control solutions to water resource management in some recent debate tends to view proscription not only as a virtue (which CCI would contest) but as an end in itself, not as a means to an end.

Indeed, there was almost a sense of disappointment that the Water Corporation's sensible medium-term strategy for enhancing infrastructure and water availability made apocalyptic visions of imminent catastrophe seem much less probable. Similarly, some of the opposition to the recently-announced decision to build a desalination plant in Western Australia seemed based on the fact that it would achieve its objective of supplying Perth's growing water demand without the need for draconian regulations on water use.

CCI believes that prohibitions, caps, targets and other proscriptive demand limitation measures are a last resort, appropriate only for overcoming urgent short term problems or where clear evidence of market failure demonstrates that a (suitably educated and informed) community would not choose to use (properly priced) water resources in the manner which maximises its welfare.

## Clarity and Independence

Regulation should be clear and concise, communicated effectively and be readily accessible to those affected by it. It should also be consistent across regulators, enforceable, and administered by accountable bodies in a fair and consistent manner (see p. 5).

All current and recent changes to the water industry's regulatory and policy structures need to be considered and integrated. There is a potential for overlap, duplication, ambiguity, and inefficiency in any regulatory structure to emerge from these reviews.

This is perhaps inevitable, as the water industry is important in so many disparate ways that demand regulation – economic, social, environmental and public health concerns being the most obvious.

But regulation policy should seek to minimise inefficiencies.

Where possible, scarce regulatory and industry expertise in government should be concentrated to optimise cost efficiencies and outcomes. In particular, care must be taken that accountabilities (including policy roles) are not duplicated – especially through legislation.

For this reason, CCI has long been a strong supporter of the need for a generic cross-industry regulator responsible for regulating access to utility infrastructure in Western Australia. Similarly, CCI argues that policy advice should be developed at arm's length from the service providers. This is not to say that policy should develop in isolation from the service providers. The expertise and experience of service providers has an important contribution to make in determining both broad-brush policy directions and the feasibility and effectiveness of specific proposals.

As a general rule, including all relevant players and views is the preferred approach to good policy development. Where there is a potential commercial advantage in access to policy and regulatory forums the solution is, where possible, to extend this privilege and access to information to others, not to prohibit input from the industry's key player.

## Economic Regulation

Issues of economic regulation are to be addressed primarily through ERA. Pricing of water tariffs should be regulated, and ideally access pricing and tariffs should be set by an independent market regulator such as ERA, and not by the Minister. However, if the tariff setting mechanism remains with the Minister, ERA should have a role in providing recommendations to the Minister on maximum tariff levels, and the basis of ministerial decisions on price determination should be readily available.

### Pricing

As a general rule, prices should reflect the cost of supply. Consequently, there should be no difference in the pricing regime between Aqwest, Busselton Water and Water Corporation beyond that dictated by the varying market conditions in each location.

Several key broad issues in respect to water pricing are:

- in an industry like water, with large capital and relatively small operating costs, setting price equal to marginal cost may lead to a pricing regime in which revenue never matches cost. In this event, what pricing model should be followed?
- while business, environmentalists and others may agree on the broad principle that costs

(including environmental costs) should be brought to account in pricing arrangements, they differ widely in their expectations of the magnitude of those costs. Is it possible to establish an authoritative and objective process for estimating those costs which will be acceptable to key stakeholders?

- as an essential service, social policy demands that households have ready, affordable access to safe drinking water and sewerage services. How are these social and community objectives to be achieved and financed?

### *Pricing Structures*

If price is to reflect cost and charges are to vary with usage, it follows that the current pricing structure for domestic supply – that penalises heavy users with higher average unit costs, and subsidises low-volume users – are not appropriate. Nor is the use of prescriptive regulation to limit demand. As resources and circumstance allow, domestic scheme water charges should be adjusted to reflect the cost of supply, and proscriptive rules prohibiting water use should be progressively removed (see also the discussions on pages 6 and 7). However, there remains a case for subsidising some water customers on the basis of need or location (see discussion of Community Service Obligations on p. 15), and for community information and advertising exhorting responsible and economical water use (such as the 'Waterwise' campaign, which has been very successful in persuading householders to reduce water use).

Similarly, there may be a case for adjusting business water charges to more directly reflect the cost of supply and the quantity consumed, although these are approximated under current charges based on the size of the supplying pipeline. There was strong support in CCI's business survey for linking costs more closely to volumes of water used (see survey analysis on p. 19).

The ERA Issues Paper canvassed the idea of seasonal tariffs (Section 7.1.4). CCI believes that seasonal pricing should only be adopted if the actual cost of supply/service provision is higher in any given season. CCI considers that because of the cost associated with changing metering or reading of meters, there would be no value in pursuing this option at present.

While wastewater pricing should in principle reflect the cost of wastewater service provision and wastewater treatment, the recovery of wastewater through un-metered water flow from residences means that it is not feasible, or at least not cost-effective, to greatly change this system. As a consequence, rating of properties according to property Gross Rental Value (GRV) and similar means would seem to be the most practical means of charging for wastewater services. Alternative proxies might include a flat charge per household (which might be fairer than a GRV bases system, if less progressive), or a fee based on scheme water used (on the grounds that wastewater production and scheme water consumption will be at least partly linked). In either case, pricing policy for wastewater charges should as much as practicable reflect actual costs to ensure the pricing system does not inhibit potential new entrants competing and supplying services in a wastewater market.

Unfortunately, it is hard to devise a pricing system that reward consumers who reduce wastewater production.

### *Water management charges*

Before imposing water management charges, the need for such measures should be clearly made, and any charging regime should as close as practicable reflect the actual management cost associated with the consumption of water. Water management activities need to be appropriately prioritised and delivered efficiently. Further, any charging regime must be accompanied by demonstrable improvements in water management and ultimately efficient and effective service delivery, and/or reduced costs to industry in other activities.

Many Western Australian businesses undertake research, invest capital and implement processes that contribute to the management of the State's water resources. For example, mining companies in WA often help define the water resource, install bores to extract the water and undertake monitoring.

Furthermore, in some cases, business investment has produced system wide improvements in water management. A case in point is a mining company that switched from scheme water to bore water, which had the effect of reducing the pressure for water resources in a tight supply/demand region of the state. Another example is the reuse of reprocessed water by industry.

Industry initiatives, of the type outlined above, constitute a public good and this should be recognised in any charging regime to fund water resource management activities. Industries that have already contributed to water resource management through their own initiatives should be recognised for that contribution and not asked to pay twice, in effect providing cross-subsidies to other users.

### *Transparent pricing and opportunity cost*

Clearly, the Water Corporation must have a price at which it is prepared to buy and the price it will charge to supply water, and most certainly a price differential must exist to allow commercial recovery to Water Corporation's business. However, as a monopoly supplier, market forces alone do not determine the price differential, and in the absence of regulation for transparency in pricing, there is no imperative for this information to be available.

Elements that must be appraised to obtain transparent pricing include:

- the cost of on-going maintenance of infrastructure;
- energy costs in pipeline operation; and
- cost deferral and opportunity costs.

Competitive markets need not be the only benefit of transparent pricing - opportunities for co-operation between Water Corporation and private entities to deliver more efficient and effective water services, especially in a wholesale water market, may also be created through appropriately regulated transparent pricing. Projects that may have outcomes other than water services as their sole aim (such as desalination/infrastructure protection) may more readily establish probable costing of their overall community benefit, an outcome that would better enable government to make decisions on financial or other support for such endeavours.

CCI contends a better understanding of price structure within regional context of supply costs may lead to more marginal sources of supply becoming viable. CCI also notes that opportunities and pricing options change over time, and a transparent pricing structure must also be based on current information.

### *Water Entitlements*

CCI believes that a two-tiered approach could be adopted to water entitlements. Where there are doubts about the effective operation of the market - for example, because the size of the resource cannot properly be determined, or there are a small number or a low diversity of users, the traditional approach of fixed-term, non-tradeable water entitlements would be the appropriate approach.

However, if the catchment or aquifer is nearly fully allocated, and there are a large number and diversity of users, then it is appropriate to define water entitlements as an open ended or perpetual share of the water resources available. This would ensure certainty of title while stimulating water trading to the maximum extent possible.

## Corporate Operation and Efficiency

The operation of the water supply business is an essential factor influencing the efficiency of the industry. Issues include:

- as a natural monopoly, it is unlikely that large parts of the provisions of water and sewerage services will ever be effectively opened to competition. In this context, how are efficiency, innovation and cost minimisation to be delivered?
- much, but not all, of the supply of water and sewerage services comprises a natural monopoly. Competition can be fostered in those parts that are not natural monopolies through -
  - competitive neutrality;
  - tendering;
  - financing of community service obligations; and
  - appropriate approaches to headworks charges and the use of user pays.
- the lumpy nature and large costs associated with major incremental additions to water supply infrastructure make the choice and timing of investments extremely problematic.
- environmental constraints need to be balanced against social and economic objectives in decisions about the nature of additional capital expenditures; and
- decisions on the timing, scale and nature of additions to capacity should be made according to strict principles of cost-benefit analysis and opportunity cost. Visionary but expensive plans such as the Kimberly pipeline should be dismissed if they do not meet these standards.

## Investment

As in all other areas, investment decisions should be guided by principles such as cost-benefit analysis and opportunity cost, ensuring that needs are met in the most efficient way possible. Business recognises that investment is necessary to ensure future supplies, and that this cost will have to be met by customers, including business customers. In CCI's survey of businesses' views of water prices, some 85 per cent answered 'yes' to the question "should the WA

Government invest in infrastructure that will expand the state's water resources even though it may cause water prices to increase?" (see survey analysis on p. 20).

CCI believes that the state's water supply must be capable of being maintained and be sufficient to meet growth. This is the reason for CCI's qualified support for the government's recently announced plan to build as desalination plant in WA. Although costly, the investment will improve certainty. Nevertheless, the proposed plant involved a considerable outlay that would have an impact on state debt and the Government's capacity to undertake other public works.

Clearly desalination is only part of the solution of WA's water problem. It is widely accepted that WA's rainfall pattern has changed, and so government must review its planning to ensure that an effective demand management strategy is in place. CCI advocates the development of a clear long-term strategy for the management of water resources in Western Australia. Accepting that rainfall has declined in the south-west of the State, then additional, multiple water source development is required, demanding a comprehensive review of options and costs, co-ordinated across government agencies and across appropriate ministerial portfolios - with ministerial responsibilities clarified - to ensure the best outcome for the State.

### Competition and Competitive Neutrality

Efficiency demands that the scarce resources we have at our disposal are put to their most productive possible uses. Where resources become depleted or scarce, or there are other reasons for using them less intensively, efficiency demands that the least valuable uses are displaced first.

This is the reason for CCI's preference for market-based solutions to demand management issues, where these can be found. For example, tradeable water use permits could work well to cap exploitation of a limited resource and simultaneously ensure that water use flows to the most efficient producers (but see also *Water Entitlements* comments on p. 12).

Providing clear, tradeable property rights ensures that industry participants with higher costs and lower efficiency willingly cede the right to operate in a market to those whose lower costs and greater efficiency is reflected in the higher price they are prepared to pay for a licence to operate.

For this reason, too, CCI is opposed to any measures to earmark water resources for favoured clients (whether householders[11] or particular industries), to impose more stringent reuse or other regulations on some clients than others, or to treat some service providers (including self-providers) less favourably than others. All users must participate in paying for the costs of the services they use.

The Water Corporation should not be the sole or major carrier of costs associated with researching, managing and rationing the state's water resources. However, regulators should not seek to redirect inappropriate demand management costs into industry.

Much of the Water Corporation's operation is a natural monopoly. However, the test of a natural monopoly is that competition, though permitted, does not materialise. The Water

Corporation should have no legislated monopoly power, nor should it be permitted to use its monopoly status to exclude potential competitors through cross-subsidies, failing to disclose appropriate information, or otherwise engaging in anti-competitive behaviour. It should price transparently (see p. 11).

In the electricity and gas sectors there are access regimes in place for transmission and distribution. The question of whether there is similar potential for competition in the water market and its potential to impact on water pricing should be assessed by this inquiry. If there is prospect for competition, then alternative providers need to be able to access accurate supply chain pricing and have a mechanism for accessing the network.

The integration of new wholesalers and retailers in government enterprise monopolies is already being addressed in other sectors. In any monopolistic market situation the supply and pricing issues are essentially the same. Recommendations arising from this inquiry should not attempt to re-invent the wheel but rather draw on the experiences in these other areas.

The ERA should examine the business cases of any commercial proposal to supply water or wastewater services as an alternative supplier to Water Corporation, or as a wholesale supplier to Water Corporation.

### *Possible Competition – Some Case Studies*

In some cases, the WA market may not support competition, and efforts to stimulate private sector involvement will prove unsuccessful. The Water Corporation argues that most attempts in the past decade to achieve market development have not been successful in Western Australia, and as a consequence there have been delays in provision of services and economic development in some cases. CCI suggests the ERA should examine the outcomes of wastewater processes at Coral Bay and Hopetoun (and especially with reference to Ravensthorpe) to determine whether there is potential for opening up competition or private participation across the supply chain.

However, CCI notes that in other cases, businesses have argued that the market structure of Water Corporation itself has prevented viable competition on technical constraints. Arguments have also been mounted by industry that the approach adopted by the Water Corporation to commercial terms and risks has impeded the adoption of innovative, alternative water supply solutions. The Water Corporation argue that considerable efforts have been made by the Corporation to address technical and commercial arrangements to facilitate opportunities with the private sector.

CCI has discussed commercial case studies with each of three proponents that have initiatives to supply potable water to Water Corporation. Each initiative is based in regional Western Australia. Two propose to supply large volumes of water – 50-60 gigalitres - and one to supply up to 20 megalitres (across small plants supplying 1-2 megalitres each, and simultaneously contributing to desalination of landscapes and infrastructure protection), as wholesalers to Water Corporation for subsequent distribution through the existing water pipeline network.

All three have been unable to objectively analyse their business case due to what is described as inadequate supply chain pricing from Water Corporation. Similar issues on the absence of accurate and transparent supply chain pricing are discussed in greater detail in "A new water supply to the Goldfields - Review of the viability of a desalinated seawater pipeline from Esperance to Kalgoorlie/Boulder"[12].

Discussions between proponents and Water Corporation have revealed differing assessments of the wholesale value of water by both parties. This might suggest that the proponents are offering non-commercial solutions and Water Corporation's operations are extremely effective and price competitive, appropriately reflective of sunk costs, or alternatively that the differential is the result of an unrealistic wholesale price set by Water Corporation. CCI is aware that Water Corporation has supported ERA examination of its own pricing assessments, and understands Water Corporation's support for finding potential commercial solutions to augment supplies.

A key issue is in the calculation of the cost of Community Service Obligations which is based on the whole operations of Water Corporation at the corporate level and across all schemes and water infrastructure systems, rather than through a regional breakdown of scheme and infrastructure costs. CCI is aware of studies by ACIL Consulting of water supply to the Goldfields[13] that clearly indicate that insufficient information exists for this component of water pricing to be available in a regional context, and so prevents assessment of an independent business model. This is in part a result of different costs applying at the same location, depending on the incremental volumes, time frame and future growth rates (ACIL provided 5 different costs for providing water to Kalgoorlie). Additionally, the cost of providing pricing at all locations could far outweigh the benefits.

Similarly, the pricing and supply of water to industry clusters, and especially to Kwinana, may provide new opportunities in the water and wastewater market place that deliver both benefits to industry and the supply of urban water and treatment of urban wastewater. Access to additional water supply is an extremely important issue for a number of major industries in Kwinana. CCI is aware of previous and current discussions between Kwinana industry and the Water Corporation about the potential for accessing parts of the water supply and wastewater disposal chain. To date, the Water Corporation has been the only one to develop the opportunities.

Because of commercial and other sensitivities of some of these projects, CCI has not provided details here in its public submission, and indeed CCI offers no assessment of the business models of these initiatives. However, they are worthy of further consideration, and CCI invites dialogue with the ERA together with project proponents on these matters on a confidential basis. In so doing, the ERA should also consider the appropriate, cost effective type of regulatory arrangements that could be given the extent of opportunity for competition and cooperation.

### Community Service Obligations

CCI recognises that governments have a legitimate concern to protect the interests of potentially disadvantaged consumers in the markets for some essential goods and services.

Governments' involvement generally entails ensuring that all members of the community have the opportunity to access essential goods and services (even in remote areas where it might otherwise be uneconomic to supply them), and in many cases also ensuring that they can afford to access them by targeting subsidies at low income groups.

The nature and extent of the consumer interests to be guaranteed through Community Service Obligations are a matter for community determination to be implemented through the political process.

However, while the detail of Community Service Obligations is not a primary concern to business, the funding of those obligations is of interest. CCI is particularly concerned that the financing of Community Service Obligations should be equitable, be transparent, and be achieved in a way that has the least impact on competition and economic efficiency.

Community Service Obligations should not be financed through cross subsidies between a supplier's customers. Such arrangements have a number disadvantages:

- they tend to cause inefficiency, because customers base consumption decisions on prices that do not reflect costs, resulting in inefficient resource use;
- they often undermine competitiveness because incumbents must be protected from competitors who might "cherry pick" the customers paying prices above cost; and
- they are not transparent. Community Service Obligations are generally imposed by government as a means of fulfilling social objectives. They necessarily entail costs. It is important for the community to understand exactly what costs it is incurring and what benefits it is receiving when it imposes Community Service Obligations;
- they may not be equitable. There is no correlation between the extent to which a user contributes to or benefits from a subsidy and any usual concepts of "ability to pay".

In general, the most effective way for government to finance Community Service Obligations is through a direct subsidy from general government's consolidated revenue fund. The water industry was one of the first in WA to adopt this model, an initiative welcomed by CCI at the time.

Where the subsidy is provided to an operator in a contestable market, access to subsidies should itself be contestable, with contracts awarded to those operators that can fulfil the government's Community Service Obligations at the lowest cost.

In practice, this principle tends to be most applicable in the water industry in servicing greenfield sites. But while this issue may be of less significance in this inquiry focussed on urban pricing structures, in developing a consistent and comprehensive framework for water and wastewater pricing in Western Australia, these matters must be considered in deliberations by the ERA.

Where subsidies are provided to operators in non-contestable markets (i.e. to monopoly suppliers), they should be audited carefully and reviewed regularly.

Use of a range of diversified water wholesalers by Water Corporation, or competitive access to alternative service providers by retail customers, may favour regional consumers. Further, a more competitive, innovative market should ultimately reduce the level of Community Service Obligations expenditure by governments, and also deliver more reliable supplies. It should also lead to more affordable expansion of infrastructure, and assist the development of new industries in areas where this may not have been possible.

# Survey of Business Opinion

Every quarter, CCI conducts a Survey of Business Expectations that is sponsored by Bankwest. The survey's main function is to collect data on business peoples' perceptions of economic and business conditions, and expectations for the coming year and quarter. In addition, each survey includes a brief set of supplementary questions on a topical issue. The September 2004 survey asked about respondents' views of water pricing issues. The analysis below summarises results from the 387 responses received[14]. A full table detailing the sample demographics and cross-tabulated data appears in Appendix 2 (p. 26).

## Cost of supply

Businesses were asked: "*Approximately how much of your business's operating costs is taken up by Water Corporation charges for water use*?"

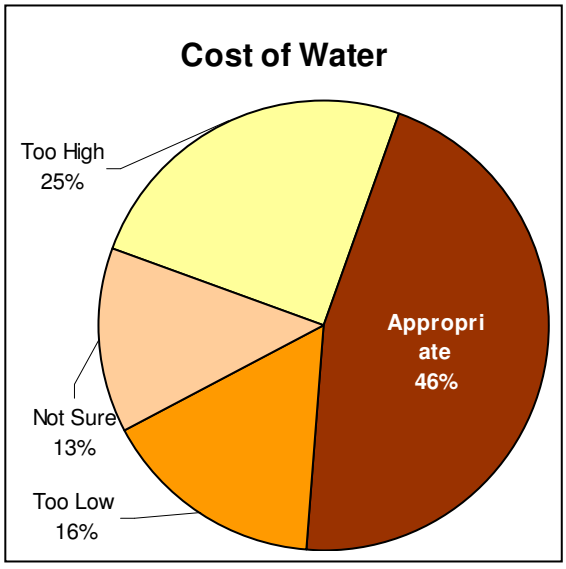
Not surprisingly, the typical cost was very low relative to total operating costs.

Of those respondents answering the question, 44 per cent indicated that water represents less than one per cent of operating costs, and 34 per cent indicated less than 0.5 per cent.

Businesses were also asked: "*Do you think the current cost of water services in WA is: too high, appropriate, too low, or not sure*."

The largest groups of respondents (46 per cent) indicated that prices are appropriate.

Of the remainder, respondents were more likely to indicate that they think prices are 'too high' (25 per cent) than that they are 'too low' (16 per cent). Some 13 per cent indicated that they were 'not sure'.

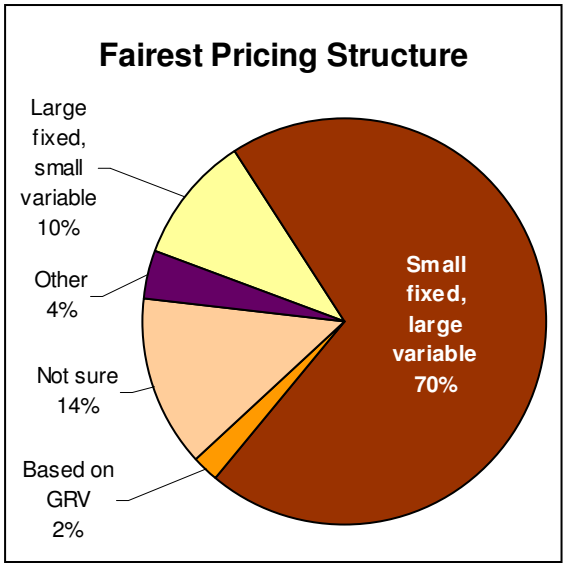


## Pricing Structure

Question 3 asked:

*"Which system of water pricing do you think is the fairest*?

a) *A large fixed component with small additional charges according to volumes used.*
*b) A small fixed component with large additional charges according to volumes used.*
*c) Charges based on the gross rental value of the property.*
*d) Not sure.*
e) *Other."*



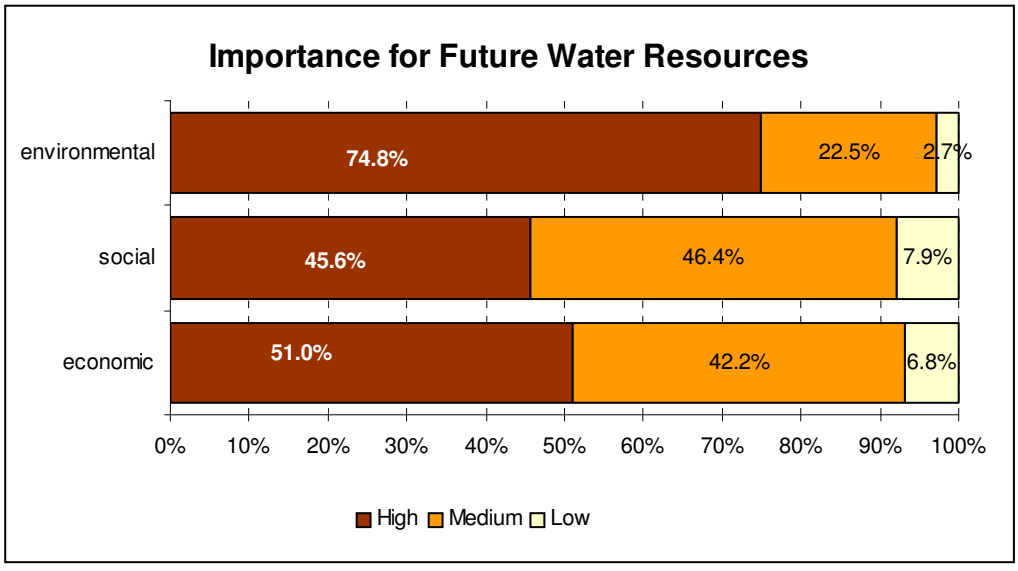

By far the strongest support (70 per cent) was for a system of charging based primarily on the volume of water used, with a relatively small fixed component.

Only 10 per cent supported a mainly fixed charge, and just two per cent supported prices linked to gross rental value.

Of the four per cent indicating a preference for "other" pricing systems, the most commonly specified was one in which charges are solely linked to volume used, with no fixed component.

## Important issues

Respondents were asked: "*How important are economic, social and environmental issues to them in considering the future of Perth's water resources*?"

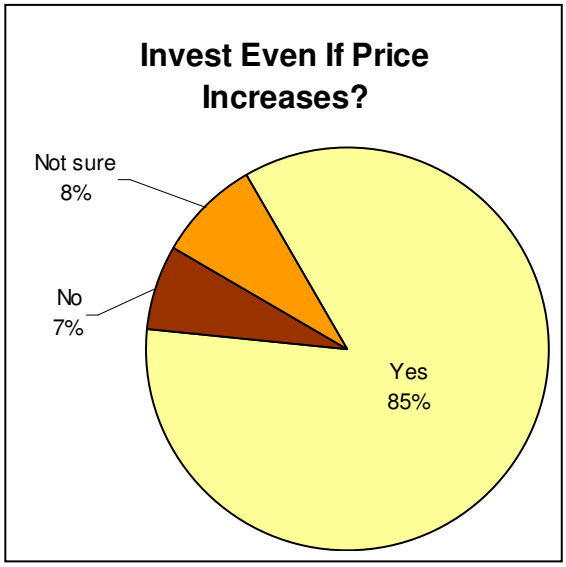


All three factors ranked highly, with environmental issues attracting the most concern (75 per cent ranking it 'high') and social factor the least concern (although 46 per cent still ranked this of 'high' importance) and 51 per cent ranked economic considerations 'high'.

## Investment

Respondents were asked "*Should the WA Government invest in infrastructure that will expand the state's water resources, even though it may cause water prices to increase?*"

A surprisingly large proportion (85 per cent) indicated that the government should invest in expanding the water infrastructure even if it causes prices to rise. Of the remainder, more were 'not sure' (eight per cent) than opposed expansion (seven per cent).



# Conclusions

Chamber of Commerce and Industry of Western Australia contends:

- the State's water supply must be capable of being maintained and be sufficient to meet growth. Western Australia's capacity to meet the current and future water needs of its population and businesses depends primarily on ensuring that it has the capital necessary to collect and deliver water and receive and process wastewater;
- water and wastewater pricing should fundamentally reflect the cost of supply;
- a strong and competitive business sector is in the public interest to deliver choice through diversity of supply, and that, while appropriate regulation is essential, over-regulation must be avoided;
- prohibitions, caps, targets and other proscriptive demand limitation measures are a last resort, appropriate only for overcoming urgent short term problems or where clear evidence of market failure has occurred;
- there is a need for a generic cross-industry regulator responsible for regulating access to utility infrastructure;
- seasonal pricing should only be adopted if the actual cost of supply/service provision is higher in any particular season - given the cost of changing metering or reading of meters, that there appears no value in pursuing this option at present;
- wastewater pricing should in principle reflect cost of wastewater service provision and wastewater treatment. However, the recovery of wastewater through un-metered water flow from residences means that it is not feasible, or at least not cost-effective, to greatly change this system;
- a two-tiered approach could be adopted to water entitlements;
- the ERA should examine the potential for opening up competition or private participation across the supply chain;
- a sound understanding of price structure within regional context of supply costs may lead to more marginal sources of supply becoming viable;
- governments have a legitimate concern to protect the interests of potentially disadvantaged consumers in the markets for some essential goods and service; and
- the financing of Community Service Obligations should be equitable, be transparent, and be achieved in a way that has the least impact on competition and economic efficiency.

CCI supports the inquiry process and anticipates that it will lead to competitive reforms to enhance opportunities in the market place.

CCI contends there is a need for Western Australia to have a clear long-term strategy for the management of water resources.

CCI would welcome opportunities for further input during the preparation of the draft report, including meeting with the ERA together with project proponents of case studies mentioned in this submission, and intends to provide supplementary comment on pricing models.

CCI looks forward to providing further comment on the draft report when it is available.

# Appendix 1: Inquiry Details

### *Terms of reference*

I, ERIC RIPPER, Treasurer (following consultation with the Minister for the Environment and the Minister for Government Enterprises) and pursuant to section 32(1) of the *Economic Regulation Authority Act 2003* (the ERA Act), request that the Economic Regulation Authority (the Authority) undertake an inquiry into the water and wastewater pricing of the Water Corporation (as established by the *Water Corporation Act 1995*) and the water pricing of the Bunbury Water Board and Busselton Water Board (as established by the *Water Boards Act 1904*).

The Authority is to investigate and report on the following matters related to the pricing of water and wastewater services in Western Australia:

- the appropriate charging structures and recommended tariff levels for the Water Corporation's and the Bunbury and Busselton Water Board's urban water supply services (residential and non residential); and
- the appropriate charging structure and recommended tariff level for the Water Corporation's urban wastewater services (residential and non residential).

Section 26 of the ERA Act requires the Authority to have regard to certain matters:

- the need to promote regulatory outcomes that are in the public interest;
- the long-term interests of consumers in relation to the price, quality and reliability of goods and services provided in relevant markets;
- the need to encourage investment in relevant markets;
- the legitimate business interests of investors and service providers in relevant markets;
- the need to promote competitive and fair market conduct;
- the need to prevent abuse of monopoly or market power; and
- the need to promote transparent decision-making processes that involve public consultation.

In conducting its investigation, the Authority must review:

- the regulatory asset base of each of the service providers; the non capital cost forecasts of the service providers;
- the depreciation and forecast capital expenditure program of the service providers; and
- the appropriate rate of return on public sector assets, including appropriate payments of dividends to the Government of Western Australia.

The Authority must give consideration to, but will not be limited to, the following matters:

- the methodology for assessing the revenue requirements of the service providers;
- the most appropriate price path and period, including the requirement for periodic reviews of that price path;
- the current structure and level of urban water and wastewater prices;
- the cost of providing the services concerned, including

- a target for improvement in the efficiency in the supply of 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

- - how changes in standards and operating conditions faced by the service providers impact on its revenue requirements;
- the impact of pricing policies on borrowing, capital and dividend requirements and, in particular, the impact of any need to renew or increase relevant assets; considerations of demand management;
- the effect on and of general price inflation over the medium term;
- the need to maintain ecologically sustainable development, including by appropriate pricing policies that take account of all feasible options for protecting the environment;
- the social impact of the recommendations; and
- the effect of any pricing recommendation on the level of government funding (through Community Service Obligation payments).

In developing its recommendations the Authority is to have regard to the following policies:

- the pricing principles of the 1994 COAG water reform agreement (as set out in Appendix to this reference);
- the Western Australian State Government's Uniform Pricing Policy;
- the Western Australian State Government's Sustainability Policy;
- the Western Australian State Government's Community Service Obligations Policy; and.
- the pricing mechanisms available to the utility service providers through the *Water Agencies (Powers) Act 1984* and the *Water Boards Act 190*4.

The Authority will release an issues paper as soon as possible after receiving the reference. The paper is to facilitate public consultation on the basis of invitations for written submissions from industry, government and all other stakeholder groups, including the general community.

A draft report is to be made available by 18 March 2005 for further public consultation on the basis of invitations for written submissions.

A final report is to be completed by no later than 12 August 2005.

This will ensure that any recommendations adopted by the Government are available for implementation in 2006/07.

ERIC RIPPER MLA, Deputy Premier; Treasurer; Minister For Energy.

## *Guidelines*

**Guidelines for the application of Section 3 of the Council of Australian Governments (COAG) water reform agreement (the COAG pricing principles):**

1. Prices will be set by the nominated jurisdictional regulators (or equivalent) who in examining full cost recovery as an input to price determinations should have regard to the principles set out below.
2. The deprival value methodology should be used for asset valuation unless a specific circumstance justifies another method.
3. An annuity approach should be used to determine the medium to long-term cash requirements for asset replacement/refurbishment where it is desired that the service delivery capacity be maintained.
4. To avoid monopoly rents, a water business should not recover more than the operational, maintenance and administrative costs, externalities, taxes or tax equivalent regime (TERs), provision for the cost of asset consumption and cost of capital, the latter being calculated using a weighted average cost of capital.
5. To be viable, a water business should recover, at least, the operational, maintenance and administrative costs, externalities, taxes or TERs (not including income tax), the interest cost on debt, dividends (if any) and make provision for future asset refurbishment/replacement (as noted in (3) above). Dividends should be set at a level that reflects commercial realities and stimulates a competitive market outcome.
6. In applying (4) and (5) above, economic regulators (or equivalent) should determine the level of revenue for a water business based on efficient resource pricing and business costs. Specific circumstances may justify transition arrangements to that level.
7. In determining prices, transparency is required in the treatment of community service obligations, contributed assets, the opening value of assets, externalities including resource management costs, and tax equivalent regimes.

### Explanatory Notes

- The reference to "or equivalent" in principles 1 and 6 is included to take account of those jurisdictions where there is no nominated jurisdictional regulator for water pricing.
- The phrase "not including income tax" in principle 5 only applies to those organisations that do not pay income tax.
- "Externalities" in principles 5 and 7 means environmental and natural resource management costs attributable to and incurred by the water business.
- "Efficient resource pricing" in principle 6 includes the need to use pricing to send the correct economic signals to consumers on the high cost of augmenting water supply systems. Water is often charged for through a two-part tariff arrangement in which there are separate components for access to the infrastructure and for usage. As an augmentation approaches, the usage component will ideally be based on long-run marginal costs so that the correct pricing signals are sent.
- "Efficient business costs" in principle 6 are the minimum costs that would be incurred by an organisation in providing a specific service to a specific customer or group of customers, or the minimum amount that would be avoided by not providing the service to the customer or group of customers.
- Efficient business costs will be less than actual costs if the organisation is not operating as efficiently as possible.

# Appendix 2: Business Opinion Survey - detailed results.

***Q. 1) Approximately how much of your business's operating costs is taken up by Water Corporation charges for water use?***

| Water cost % total | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | zero | 32 | 8.2 | 12.2 | 12.2 |
| | < 0.1% | 23 | 5.9 | 8.7 | 20.9 |
| | < 0.5% | 34 | 8.7 | 12.9 | 33.8 |
| | < 1% | 26 | 6.7 | 9.9 | 43.7 |
| | < 2% | 85 | 21.9 | 32.3 | 76 |
| | < 5% | 36 | 9.3 | 13.7 | 89.7 |
| | 5%+ | 27 | 6.9 | 10.3 | 100 |
| | Total | 263 | 67.6 | 100 | |
| Missing | System | 126 | 32.4 | | |
| Total | | 389 | 100 | | |

***Q. 2) Do you think the current cost of water services in WA is: too high, appropriate, too low, or not sure?***

| Cost | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Too High | 90 | 23.1 | 24.9 | 24.9 |
| | Appropriate | 165 | 42.4 | 45.7 | 70.6 |
| | Too Low | 58 | 14.9 | 16.1 | 86.7 |
| | Not Sure | 48 | 12.3 | 13.3 | 100 |
| | Total | 361 | 92.8 | 100 | |
| Missing | System | 28 | 7.2 | | |
| Total | | 389 | 100 | | |

***Q. 3) Which system of water pricing do you think is the fairest?***

| Fairest Charging System | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Large fixed, small variable | 38 | 9.8 | 10.2 | 10.2 |
| | Small fixed, large variable | 260 | 66.8 | 70.1 | 80.3 |
| | Based on GRV | 8 | 2.1 | 2.2 | 82.5 |
| | Not sure | 51 | 13.1 | 13.7 | 96.2 |
| | Other | 14 | 3.6 | 3.8 | 100 |
| | Total | 371 | 95.4 | 100 | |
| Missing | System | 18 | 4.6 | | |
| Total | | 389 | 100 | | |

***Q. 4) How important are economic, social and environmental issues in considering the future of Perth's water resources?***

| Importance: economic | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | High | 186 | 47.8 | 51 | 51 |
| | Medium | 154 | 39.6 | 42.2 | 93.2 |
| | Low | 25 | 6.4 | 6.8 | 100 |
| | Total | 365 | 93.8 | 100 | |
| Missing | System | 24 | 6.2 | | |
| Total | | 389 | 100 | | |

| Importance: social | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | High | 167 | 42.9 | 45.6 | 45.6 |
| | Medium | 170 | 43.7 | 46.4 | 92.1 |
| | Low | 29 | 7.5 | 7.9 | 100 |
| | Total | 366 | 94.1 | 100 | |
| Missing | System | 23 | 5.9 | | |
| Total | | 389 | 100 | | |

| Importance: environment | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | High | 273 | 70.2 | 74.8 | 74.8 |
| | Medium | 82 | 21.1 | 22.5 | 97.3 |
| | Low | 10 | 2.6 | 2.7 | 100 |
| | Total | 365 | 93.8 | 100 | |
| Missing | System | 24 | 6.2 | | |
| Total | | 389 | 100 | | |

***Q. 5) Should the WA Government invest in infrastructure that will expand the state's water resources, even though it may cause water prices to increase?***

| Invest even if prices rise | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 314 | 80.7 | 84.9 | 84.9 |
| | No | 25 | 6.4 | 6.8 | 91.6 |
| | Not sure | 31 | 8 | 8.4 | 100 |
| | Total | 370 | 95.1 | 100 | |
| Missing | System | 19 | 4.9 | | |
| Total | | 389 | 100 | | |

| Market area | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Perth | 243 | 62.5 | 62.5 | 62.5 |
| | WA Country | 94 | 24.2 | 24.2 | 86.6 |
| | Interstate | 24 | 6.2 | 6.2 | 92.8 |
| | Overseas | 17 | 4.4 | 4.4 | 97.2 |
| | n/a | 11 | 2.8 | 2.8 | 100 |
| | Total | 389 | 100 | 100 | |

| Broad sectors | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | other production | 96 | 24.7 | 24.7 | 24.7 |
| | manufacturing | 90 | 23.1 | 23.1 | 47.8 |
| | distribution | 80 | 20.6 | 20.6 | 68.4 |
| | services | 115 | 29.6 | 29.6 | 97.9 |
| | n/a | 8 | 2.1 | 2.1 | 100 |
| | Total | 389 | 100 | 100 | |

| size of firm | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | large | 37 | 9.5 | 9.5 | 9.5 |
| | medium | 132 | 33.9 | 33.9 | 43.4 |
| | small | 209 | 53.7 | 53.7 | 97.2 |
| | n/a | 11 | 2.8 | 2.8 | 100 |
| | Total | 389 | 100 | 100 | |

## Cross-tabulations

**Market area by Cost Cross-tabulation**

| % within Market area | | Cost | | | | Total |
|---|---|---|---|---|---|---|
| | | Too High | Appropriate | Too Low | Not Sure | |
| Market area | Perth | 22.60% | 47.80% | 14.80% | 14.80% | 100.00% |
| | WA Country | 30.60% | 41.20% | 20.00% | 8.20% | 100.00% |
| | Interstate | 31.80% | 45.50% | 13.60% | 9.10% | 100.00% |
| | Overseas | 14.30% | 42.90% | 28.60% | 14.30% | 100.00% |
| | n/a | 30.00% | 40.00% | | 30.00% | 100.00% |
| Total | | 24.90% | 45.70% | 16.10% | 13.30% | 100.00% |

**Market area by Fairest Charging System Cross-tabulation**

| % within Market area | | Fairest Charging System | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | Large fixed, small variable | Small fixed, large variable | Based on GRV | Not sure | Other | |
| Market area | Perth | 9.00% | 71.80% | 2.60% | 14.10% | 2.60% | 100.00% |
| | WA Country | 14.80% | 65.90% | 2.30% | 12.50% | 4.50% | 100.00% |
| | Interstate | 4.30% | 78.30% | | 13.00% | 4.30% | 100.00% |
| | Overseas | | 66.70% | | 13.30% | 20.00% | 100.00% |
| | n/a | 27.30% | 54.50% | | 18.20% | | 100.00% |
| Total | | 10.20% | 70.10% | 2.20% | 13.70% | 3.80% | 100.00% |

**Market area by Importance: economic Cross-tabulation**

| % within Market area | | Importance: economic | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| **Market area** | **Perth** | 48.10% | 43.30% | 8.60% | 100.00% |
| | **WA Country** | 53.00% | 43.40% | 3.60% | 100.00% |
| | **Interstate** | 52.20% | 43.50% | 4.30% | 100.00% |
| | **Overseas** | 73.30% | 20.00% | 6.70% | 100.00% |
| | **n/a** | 63.60% | 36.40% | | 100.00% |
| **Total** | | 51.00% | 42.20% | 6.80% | 100.00% |

**Market area by Importance: social Cross-tabulation**

| % within Market area | | Importance: social | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| **Market area** | **Perth** | 44.90% | 47.00% | 8.10% | 100.00% |
| | **WA Country** | 45.80% | 47.00% | 7.20% | 100.00% |
| | **Interstate** | 39.10% | 47.80% | 13.00% | 100.00% |
| | **Overseas** | 60.00% | 40.00% | | 100.00% |
| | **n/a** | 54.50% | 36.40% | 9.10% | 100.00% |
| **Total** | | 45.60% | 46.40% | 7.90% | 100.00% |

**Market area by Importance: environment Cross-tabulation**

% within Market area

| | | Importance: environment | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| **Market area** | **Perth** | 75.50% | 21.50% | 3.00% | 100.00% |
| | **WA Country** | 69.90% | 26.50% | 3.60% | 100.00% |
| | **Interstate** | 73.90% | 26.10% | | 100.00% |
| | **Overseas** | 86.70% | 13.30% | | 100.00% |
| | **n/a** | 81.80% | 18.20% | | 100.00% |
| **Total** | | 74.80% | 22.50% | 2.70% | 100.00% |

**Market area by Invest even if prices rise Cross-tabulation**

| % within Market area | | Invest even if prices rise | | | Total |
|---|---|---|---|---|---|
| | | Yes | No | Not sure | |
| **Market area** | **Perth** | 83.80% | 6.40% | 9.80% | 100.00% |
| | **WA Country** | 87.20% | 9.30% | 3.50% | 100.00% |
| | **Interstate** | 78.30% | 4.30% | 17.40% | 100.00% |
| | **Overseas** | 86.70% | 6.70% | 6.70% | 100.00% |
| | **n/a** | 100.00% | | | 100.00% |
| **Total** | | 84.90% | 6.80% | 8.40% | 100.00% |

**Broad sectors by Cost Cross-tabulation**

| % within Broad sectors | | Cost | | | | Total |
|---|---|---|---|---|---|---|
| | | Too High | Appropriate | Too Low | Not Sure | |
| Broad sectors | other production | 20.20% | 48.80% | 17.90% | 13.10% | 100.00% |
| | manufacturing | 25.30% | 49.40% | 10.80% | 14.50% | 100.00% |
| | distribution | 29.90% | 45.50% | 10.40% | 14.30% | 100.00% |
| | services | 25.50% | 41.80% | 21.80% | 10.90% | 100.00% |
| | n/a | 14.30% | 28.60% | 28.60% | 28.60% | 100.00% |
| Total | | 24.90% | 45.70% | 16.10% | 13.30% | 100.00% |

**Broad sectors by Fairest Charging System Cross-tabulation**

| % within Broad sectors | | Fairest Charging System | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | Large fixed, small variable | Small fixed, large variable | Based on GRV | Not sure | Other | |
| Broad sectors | other production | 13.50% | 66.30% | 1.10% | 15.70% | 3.40% | 100.00% |
| | manufacturing | 10.30% | 73.60% | 2.30% | 9.20% | 4.60% | 100.00% |
| | distribution | 14.50% | 63.20% | 5.30% | 15.80% | 1.30% | 100.00% |
| | services | 5.40% | 74.10% | 0.90% | 14.30% | 5.40% | 100.00% |
| | n/a | | 85.70% | | 14.30% | | 100.00% |
| Total | | 10.20% | 70.10% | 2.20% | 13.70% | 3.80% | 100.00% |

**Broad sectors by Importance: economic Cross-tabulation**

| % within Broad sectors | | Importance: economic | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| Broad sectors | other production | 56.30% | 39.10% | 4.60% | 100.00% |
| | manufacturing | 52.90% | 42.40% | 4.70% | 100.00% |
| | distribution | 46.70% | 41.30% | 12.00% | 100.00% |
| | services | 47.70% | 45.00% | 7.20% | 100.00% |
| | n/a | 57.10% | 42.90% | | 100.00% |
| Total | | 51.00% | 42.20% | 6.80% | 100.00% |

**Broad sectors by Importance: social Cross-tabulation**

| % within Broad sectors | | Importance: social | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| Broad sectors | other production | 50.60% | 42.50% | 6.90% | 100.00% |
| | manufacturing | 44.20% | 50.00% | 5.80% | 100.00% |
| | distribution | 35.10% | 50.00% | 14.90% | 100.00% |
| | services | 48.20% | 45.50% | 6.30% | 100.00% |
| | n/a | 71.40% | 28.60% | | 100.00% |
| Total | | 45.60% | 46.40% | 7.90% | 100.00% |

**Broad sectors by Importance: environment Cross-tabulation**

| % within Broad sectors | | Importance: environment | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| Broad sectors | other production | 68.60% | 26.70% | 4.70% | 100.00% |
| | manufacturing | 72.10% | 27.90% | | 100.00% |
| | distribution | 67.60% | 28.40% | 4.10% | 100.00% |
| | services | 84.80% | 12.50% | 2.70% | 100.00% |
| | n/a | 100.00% | | | 100.00% |
| Total | | 74.80% | 22.50% | 2.70% | 100.00% |

**Broad sectors by Invest even if prices rise Cross-tabulation**

| % within Broad sectors | | Invest even if prices rise | | | Total |
|---|---|---|---|---|---|
| | | Yes | No | Not sure | |
| Broad sectors | other production | 88.60% | 4.50% | 6.80% | 100.00% |
| | manufacturing | 88.20% | 4.70% | 7.10% | 100.00% |
| | distribution | 85.70% | 7.80% | 6.50% | 100.00% |
| | services | 77.90% | 9.70% | 12.40% | 100.00% |
| | n/a | 100.00% | | | 100.00% |
| Total | | 84.90% | 6.80% | 8.40% | 100.00% |

**size of firm by Cost Cross-tabulation**

| % within size of firm | | Cost | | | | Total |
|---|---|---|---|---|---|---|
| | | Too High | Appropriate | Too Low | Not Sure | |
| size of firm | large | 23.50% | 35.30% | 14.70% | 26.50% | 100.00% |
| | medium | 22.80% | 51.20% | 16.30% | 9.80% | 100.00% |
| | small | 26.20% | 44.10% | 16.90% | 12.80% | 100.00% |
| | n/a | 33.30% | 44.40% | | 22.20% | 100.00% |
| Total | | 24.90% | 45.70% | 16.10% | 13.30% | 100.00% |

**size of firm by Fairest Charging System Cross-tabulation**

| % within size of firm | | Fairest Charging System | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | Large fixed, small variable | Small fixed, large variable | Based on GRV | Not sure | Other | |
| size of firm | large | 11.10% | 75.00% | | 11.10% | 2.80% | 100.00% |
| | medium | 11.90% | 70.60% | 2.40% | 11.10% | 4.00% | 100.00% |
| | small | 9.50% | 68.50% | 2.50% | 16.00% | 3.50% | 100.00% |
| | n/a | | 77.80% | | 11.10% | 11.10% | 100.00% |
| Total | | 10.20% | 70.10% | 2.20% | 13.70% | 3.80% | 100.00% |

**size of firm by Importance: economic Cross-tabulation**

| % within size of firm | | Importance: economic | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| size of firm | large | 62.90% | 34.30% | 2.90% | 100.00% |
| | medium | 50.00% | 39.50% | 10.50% | 100.00% |
| | small | 48.50% | 45.90% | 5.60% | 100.00% |
| | n/a | 70.00% | 30.00% | | 100.00% |
| Total | | 51.00% | 42.20% | 6.80% | 100.00% |

**size of firm by Importance: social Cross-tabulation**

| % within size of firm | | Importance: social | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| size of firm | large | 42.90% | 54.30% | 2.90% | 100.00% |
| | medium | 48.00% | 41.60% | 10.40% | 100.00% |
| | small | 43.90% | 49.50% | 6.60% | 100.00% |
| | n/a | 60.00% | 20.00% | 20.00% | 100.00% |
| Total | | 45.60% | 46.40% | 7.90% | 100.00% |

**size of firm by Importance: environment Cross-tabulation**

| % within size of firm | | Importance: environment | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| size of firm | large | 67.60% | 29.40% | 2.90% | 100.00% |
| | medium | 76.80% | 20.00% | 3.20% | 100.00% |
| | small | 74.00% | 23.50% | 2.60% | 100.00% |
| | n/a | 90.00% | 10.00% | | 100.00% |
| Total | | 74.80% | 22.50% | 2.70% | 100.00% |

**size of firm by Invest even if prices rise Cross-tabulation**

| % within size of firm | | Invest even if prices rise | | | Total |
|---|---|---|---|---|---|
| | | Yes | No | Not sure | |
| size of firm | large | 82.90% | 5.70% | 11.40% | 100.00% |
| | medium | 85.50% | 7.30% | 7.30% | 100.00% |
| | small | 84.60% | 7.00% | 8.50% | 100.00% |
| | n/a | 90.00% | | 10.00% | 100.00% |
| Total | | 84.90% | 6.80% | 8.40% | 100.00% |

**Water cost % total by Cost Cross-tabulation**

| % within Water cost % total | | Cost | | | | Total |
|---|---|---|---|---|---|---|
| | | Too High | Appropriate | Too Low | Not Sure | |
| Water cost % total | zero | 10.30% | 48.30% | 24.10% | 17.20% | 100.00% |
| | < 0.1% | 18.20% | 50.00% | 13.60% | 18.20% | 100.00% |
| | < 0.5% | 18.20% | 45.50% | 24.20% | 12.10% | 100.00% |
| | < 1% | 12.00% | 68.00% | 12.00% | 8.00% | 100.00% |
| | < 2% | 28.60% | 44.00% | 17.90% | 9.50% | 100.00% |
| | < 5% | 25.00% | 61.10% | 5.60% | 8.30% | 100.00% |
| | 5%+ | 44.40% | 37.00% | 3.70% | 14.80% | 100.00% |
| Total | | 23.80% | 49.20% | 15.20% | 11.70% | 100.00% |

**Water cost % total by Fairest Charging System Cross-tabulation**

% within Water cost % total

| | | Fairest Charging System | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | Large fixed, small variable | Small fixed, large variable | Based on GRV | Not sure | Other | |
| Water cost % total | zero | | 83.90% | | 9.70% | 6.50% | 100.00% |
| | < 0.1% | 4.30% | 82.60% | | 13.00% | | 100.00% |
| | < 0.5% | | 88.20% | | 8.80% | 2.90% | 100.00% |
| | < 1% | 19.20% | 65.40% | | 11.50% | 3.80% | 100.00% |
| | < 2% | 12.90% | 71.80% | 2.40% | 9.40% | 3.50% | 100.00% |
| | < 5% | 5.60% | 63.90% | 5.60% | 19.40% | 5.60% | 100.00% |
| | 5%+ | 14.80% | 51.90% | 3.70% | 29.60% | | 100.00% |
| Total | | 8.80% | 72.50% | 1.90% | 13.40% | 3.40% | 100.00% |

**Water cost % total by Importance: economic Cross-tabulation**

| % within Water cost % total | | Importance: economic | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| Water cost % total | zero | 51.60% | 35.50% | 12.90% | 100.00% |
| | < 0.1% | 52.20% | 34.80% | 13.00% | 100.00% |
| | < 0.5% | 47.10% | 41.20% | 11.80% | 100.00% |
| | < 1% | 53.80% | 42.30% | 3.80% | 100.00% |
| | < 2% | 51.80% | 41.20% | 7.10% | 100.00% |
| | < 5% | 44.40% | 55.60% | | 100.00% |
| | 5%+ | 46.20% | 46.20% | 7.70% | 100.00% |
| Total | | 49.80% | 42.50% | 7.70% | 100.00% |

**Water cost % total by Importance: social Cross-tabulation**

| % within Water cost % total | | Importance: social | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| Water cost % total | zero | 45.20% | 45.20% | 9.70% | 100.00% |
| | < 0.1% | 47.80% | 39.10% | 13.00% | 100.00% |
| | < 0.5% | 29.40% | 61.80% | 8.80% | 100.00% |
| | < 1% | 50.00% | 50.00% | | 100.00% |
| | < 2% | 48.20% | 43.50% | 8.20% | 100.00% |
| | < 5% | 42.90% | 48.60% | 8.60% | 100.00% |
| | 5%+ | 44.40% | 51.90% | 3.70% | 100.00% |
| Total | | 44.40% | 47.90% | 7.70% | 100.00% |

**Water cost % total by Importance: environment Cross-tabulation**

| % within Water cost % total | | Importance: environment | | | Total |
|---|---|---|---|---|---|
| | | High | Medium | Low | |
| Water cost % total | zero | 90.30% | 6.50% | 3.20% | 100.00% |
| | < 0.1% | 73.90% | 26.10% | | 100.00% |
| | < 0.5% | 73.50% | 23.50% | 2.90% | 100.00% |
| | < 1% | 73.10% | 26.90% | | 100.00% |
| | < 2% | 70.20% | 26.20% | 3.60% | 100.00% |
| | < 5% | 71.40% | 20.00% | 8.60% | 100.00% |
| | 5%+ | 74.10% | 25.90% | | 100.00% |
| Total | | 74.20% | 22.70% | 3.10% | 100.00% |

**Water cost % total by Invest even if prices rise Cross-tabulation**

| % within Water cost % total | | Invest even if prices rise | | | Total |
|---|---|---|---|---|---|
| | | Yes | No | Not sure | |
| Water cost % total | zero | 83.90% | 9.70% | 6.50% | 100.00% |
| | < 0.1% | 86.40% | 4.50% | 9.10% | 100.00% |
| | < 0.5% | 79.40% | 11.80% | 8.80% | 100.00% |
| | < 1% | 84.60% | 3.80% | 11.50% | 100.00% |
| | < 2% | 90.60% | 3.50% | 5.90% | 100.00% |
| | < 5% | 77.10% | 14.30% | 8.60% | 100.00% |
| | 5%+ | 77.80% | 14.80% | 7.40% | 100.00% |
| Total | | 84.20% | 8.10% | 7.70% | 100.00% |

**Invest even if prices rise by Cost Cross-tabulation**

| % within Invest even if prices rise | | Cost | | | | Total |
|---|---|---|---|---|---|---|
| | | Too High | Appropriate | Too Low | Not Sure | |
| Invest even if prices rise | Yes | 20.50% | 48.30% | 18.20% | 12.90% | 100.00% |
| | No | 40.00% | 40.00% | 8.00% | 12.00% | 100.00% |
| | Not sure | 46.70% | 30.00% | 3.30% | 20.00% | 100.00% |
| Total | | 24.10% | 46.20% | 16.20% | 13.40% | 100.00% |

## Notes and References

### Bibliography

Baldwin, Richard E. And Frédéric Robert-Nicoud (2002) *Entry And Asymmetric Lobbying: Why Governments Pick Losers* NBER Working Paper 8756, November 2002

Banks, Gary, 2001, *Competition and the Public Interest*, presentation to National Competition Council Workshop, Public Interest Test under NCP

Chamber of Commerce and Industry of WA (CCI):

- 1995 Economic Reform: A Discussion Paper Examining The Processes And Pressures Leading To The Adoption Of Economic Reform In The Australian States (response to the Hilmer Report).
- 1998 Market Failure, Industry Concentration And Regulation
- 2002 Mid-Term Review: A Business Assessment of the Labor Government's Record in it First Two Years
- 2004 Submission to the Productivity Commission Inquiry into the Impact of National Competition Policy

Department of Treasury and Finance (WA):

- 2002, Project Evaluation Guidelines

Krueger, Anne O:

- (1974) *The Political Economy of a Rent-Seeking Society*, American Economic Review 64 (June 1974). p. 291-303.
- (2004) *Willful Ignorance: The Struggle to Convince the Free Trade Skeptics*: Address by Anne O. Krueger, Acting Managing Director International Monetary Fund To the Graduate Institute of International Studies Geneva, May 18, 2004 [http://www.imf.org/external/np/speeches/2004/051804a.htm]

National Competition Council:

- 2002, *Annual Report 2001-2002*, AusInfo, Canberra.
- 2003, Assessment of governments' progress in implementing the National Competition Policy and related reforms: Volume one – Overview of the National Competition Policy and related reforms, AusInfo, Canberra.

Peltzman, Sam. *Toward a More General Theory of Regulation*, Journal of Law and Economics 19 (August 1976): 211-240.

Posner, Richard. *Theories of Economic Regulation*, Bell Journal of Economics and Management Science 5 (Autumn 1974): 335-358.

Stigler George J. Friedland, Claire (October 1962): *What Can Regulators Regulate? The Case of Electricity*" Journal of Law & Economics 5 p 1-16

Stigler, George J. (1971) *The Theory of Economic Regulation* Bell Journal of Economics and Management Science 2 (Spring 1971): p. 3-21.

Tullock, Gordon (1967)) *The Welfare Costs of Tariffs, Monopolies and Theft*, Western Economic Journal 5 (1967). p. 224-232.

Winston C., *Economic Deregulation: Days of Reckoning for Microeconomists*, Journal of Economic Literature, Vol. XXXI (September 1993) pp 1263 – 1289

## Notes

[1] In economic terms, perfect competition is characterised by costless entry and exit into a market with homogenous goods and services and with many buyers and sellers. All participants have perfect knowledge of market conditions, and none is such a large buyer or seller that they are able to influence the market price of the product. In this simple model, excess profits attract new firms into the market and drive down prices to a point where they match the marginal cost of production, and the industry earns "normal" profit (the level of profits which neither attracts new firms to a particular industry, nor induces any firms to leave the industry). This market arrangement leads to an optimal outcome for consumers through the most efficient production of goods or services, efficient allocation of resources between firms and industries and dynamic efficiency as the economy develops over time.

[2] Like "market failure" the expression "public good" has a particular meaning in economic literature and regulation theory that is often misunderstood in popular policy debate. A public good is *excludable* and *non-rivalrous. N*on-rivalrous *means* it can be enjoyed simultaneously by any number of people without its availability to any one user being diminished. The marginal cost of supplying a non-rivalrous good or service is zero, and so it is never profitable to provide it efficiently.

Private markets will nonetheless supply non-rivalrous goods so long as they are *excludable.* For example, cinemas exclude people from watching films unless they have bought a ticket. The marginal cost of admitting an extra individual may be zero, but the admission charge ensures that fixed costs are covered and a profit is made. Competition between cinemas ensures that profits are not large, but the usual economic condition for an efficient competitive market (price equals marginal cost) is not met.

Unlike its use in the wider community, for economists the term public good does not reflect any intrinsic virtue or characteristics of the good, nor the sector of the supplier. A free to access pornographic Internet web site is a public good, a hospital bed or welfare payment is not.

[3] An externality is a cost or benefit arising from an agent's activities that affects a second party for which that party is not compensated or charged.

[4] Department of Treasury & Finance (2002) p.19

[5] Winston (1993) p. 1266

[6] For a more extensive discussion of regulation theory, see CCI's 2004 Submission to the Productivity Commission Inquiry into the Impact of National Competition Policy [http://chamberofcomm.vivid.global.net.au/getfile.aspx?Type=document&ID=5466&ObjectType=3&ObjectID=7665]

[7] Gary Banks, 'Challenges for Australia in Regulatory Reform', Productivity Commission, 10 July 2001, p.2.

[8] Ibid. p. 2-3

[9] A "natural" monopoly is a market in which the entire market demand can be met by a single supplier at a lower cost than two or more firms. Such a market will generally not support competition, and if competition does arise, it will diminish efficiency.

[10] Charges should be based on demand management, cost of supply and scarcity, not a one-size-fits-all volumetric charge, for example. A case can be made that the reasonable costs that could be demanded of household and small business bore users for their share of resource management and resource rent for water used would be so low that it would be highly inefficient to collect – the cost of administration and compliance would greatly exceed the direct costs to be recouped. This also implies that scarcity and opportunity cost should be taken into account when charges are set, which would in tun mean higher prices in some places than others.

[11] This does not necessarily preclude either the social goal of ensuring that all individuals get access to a minimum necessary quantity and quality of water, nor other forms of community service obligations. Rather, it demands that that, as far as possible, these should be compatible with market based solutions – for example, making subsidies for community service obligations contestable (page 15).

[12] http://www.ourwaterfuture.com.au/community/ FINAL_REPORT_TO_TASKFORCE_PUBLIC_DOCUMENT.pdf

[13] "The True Cost of supplying water to Kalgoorlie and the Goldfields via the G&AWS" Final report to the Department of Mineral and Petroleum Resources, 24 May 2002. ACIL Consulting.

[14] Only 'valid' responses are used in the summary and charts in this section (ie excluding respondents who did not answer the question). A full breakdown of results, including missing responses is given in the tables in Appendix 2.