ACTEW
CORPORATION

15 November 2010

Ms Wendy Craik
Presiding Commissioner
Inquiry into Australia's Urban Water Sector
Productivity Commission
Locked Bag 2, Collins Street East
Melbourne Vic 8003

Dear Ms Craik

Productivity Commission Inquiry into Australia's Urban Water Sector

ACTEW Corporation (ACTEW) welcomes the opportunity to comment on the issues paper prepared by the Productivity Commission for its inquiry into Australia's urban water sector. In light of the debate on climate uncertainty, and the scale of investment projects underway nationally to secure the supply of water in most urban centres, the Commission's inquiry is timely and welcome.

Whilst recognising the broad scope of the Commission's inquiry, this submission does not attempt to answer all the questions raised by the Commission in its September 2010 issues paper. Instead, the focus is on a few select issues, including:

- supply augmentation and planning decision making;
- pricing of urban water;
- the legal framework for economic regulation; and
- innovation under regulation.

Background

ACTEW is a territory-owned corporation of the ACT Government, the owner of the Territory's water and wastewater infrastructure, and the licence holder under the *Utilities Act 2000* (ACT) for the provision of regulated water and sewerage services in the ACT. ACTEW provides these services to Canberra's 324,000 residents through over 145,000 water connections and 140,000 sewerage connections in the ACT. ACTEW also provides bulk water to the neighbouring NSW city of Queanbeyan (population 37,000).

ACTEW's water and wastewater assets currently include four large dams, two water treatment plants, over 3,000 km of water mains, a similar length of sewerage mains and Australia's largest inland sewage treatment plant. This infrastructure is managed and operated under contract by ActewAGL Distribution, owned equally by ACTEW Corporation and SPI (Australia) Assets Pty Ltd via subsidiary companies.

ActewAGL Distribution also provides electricity and gas distribution services in the ACT and surrounding NSW regions. ACTEW's participation in recent national

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reform of economic regulation in these industries puts it in a unique position amongst water utilities to comment on regulatory reform in the urban water context.

Supply Augmentation and Planning Decision Making

Considerable resources are currently being expended in most Australian cities constructing infrastructure to improve security of supply. Given the considerable welfare impacts these decisions have, economics should be utilised more in supply augmentation and planning decision making.

In recent years, ACTEW and the ACT Government have been engaged in a systematic process of evaluating and implementing options for future water supplies and infrastructure in the ACT. This process has involved a number of key elements, but in particular it has involved applying a systematic evaluation framework consistently to a wide variety of options and then narrowing down the options on the basis of specific criteria and on information available at the time. In contrast to some other jurisdictions, one of the key criteria applied by ACTEW is the net economic benefit (NEB) of a particular project. Projects are selected to ensure that the measured economic gains (in terms of increased security) are greater than the incremental costs (both capital and operating costs) of the project.

ACTEW has always understood that planning for new water supplies requires a balance. The benefits of increased water security (and reduced time in restrictions) must be balanced against the costs of providing that security. Too little new capacity will result in unnecessary costs to the community — costs in terms of relative insecurity in the future. But too much capacity that generates a level of security beyond its value will also impose costs on the community; in this case, costs in terms of the opportunities forgone from the funds that went into the new water infrastructure.

ACTEW has undertaken considerable research to understand, in both qualitative and quantitative terms, the value to the community of increased water security. This has been particularly studied from the perspective of understanding the cost to the community of water use restrictions (which is currently the major drought response available to secure water supplies).

At the same time as seeking to understand the underlying economics of water supplies, ACTEW has also based its planning around sound hydrological and water system modelling, incorporating the best available evidence provided from the CSIRO on climate change and recognising inherent uncertainty involved in any hydrological projections. ACTEW's approach has evolved considerably in recent years as more information has become available as well as in recognition of the limitations of earlier approaches.

ACTEW's future water options analysis has been consistent with the notion of 'real options' analysis identified in some of the water planning literature. Planning involves stochastic analysis of a wide range of possible inflow scenarios (based on

climate modelling) and then combining the stochastic hydrological data with the economic analysis to provide estimates of the full range of expected benefits from particular infrastructure developments.

Along with a systematic underlying methodology, ACTEW has also had to recognise and address the substantial practical issues that arise when planning and implementing new infrastructure. In broad methodological discussion, these practical issues are often missed, but in ACTEW's view their impact can be substantial. In particular, many aspects of new infrastructure projects require the careful sourcing and contracting of expertise on the one hand (not always available domestically), along with management of environmental and other government approvals on the other.

For further and detailed information, a number of reports prepared by ACTEW in considering supply augmentation decisions in the ACT are publicly available at www.actew.com.au/watersecurity/default.aspx.

Pricing of Urban Water

A key challenge in regulating urban water utilities, particularly for an inland city where improved technology such as desalination is not cost effective, is dealing with supply uncertainty that results from drought as well as the possibility of the increased future frequency of drought as a consequence of climate change. Pricing regulation needs to be flexible enough to deal efficiently with short term shortages within regulatory periods, without resulting in revenue surpluses or deficits to the utility.

The challenge is how to fairly and effectively send a signal about the true increase in the social cost of water at times of scarcity. ACTEW strongly believes that pricing policies are a key determinant of good water policy, and there is scope for continued reform and efficiencies in water pricing policies being used by the urban water sector. Accordingly, the pricing of urban water should be a key focus of the Commission's inquiry.

The ACT approach where water prices are effectively fixed up to five years in advance has resulted in revenues falling short of the efficient costs determined by the independent regulator, because regulatory consumption forecasts have not reflected the actual reduced water consumption under restrictions. This forgone revenue results in potential 'catch ups' in later years, driving a higher price at a time that does not necessarily coincide with the period of water scarcity. Water pricing policies should drive desired consumer responses. This would avoid the situation where having made efforts to conserve water in previous periods, consumers are then penalised by water price increases in future periods.

While price certainty may be valued by some users, the uncertainty created by drought will inevitably emerge somewhere in the system. Under the current approach to drought (temporary water use restrictions), this uncertainty arises through the triggering and duration of quantitative restrictions. This is in turn a form of price uncertainty, as water use restrictions increase the effective cost of water to users.

Whether price or quantity uncertainty is preferable probably varies from user to user, as different users are likely to have different attitudes to, and ability to deal with, risk. What is clear, however, is that the temporary measures to deal with drought shortages should attempt to minimise the cost of the shortages by essentially equating the marginal cost across different users. Flexible and cost minimising approaches to dealing with temporary shortages are both good social policy and a recognised component of adaptation strategies for climate change.

Dynamically efficient water pricing (a term used by Professor Quentin Grafton of the Australian National University) or drought or scarcity pricing has been the subject of much debate in recent years. Implementing such a pricing policy would provide a formal link between prices and water availability, allowing prices to vary as a means of conserving water either in conjunction with or instead of behavioural restrictions, which are widely regarded by economists as being a less efficient rationing mechanism.

These pricing policies extend to those consumers and water uses not normally subject to restrictions (for example, commercial users and indoor uses). The value of water use forgone is minimised by allowing consumers to choose the water uses they cut back on. ACTEW recognises, however, that there may be some practical difficulties with the implementation of such a pricing policy, including the timing impacts arising from water billing cycles (usually a quarterly cycle), addressing public perceptions of water businesses simply increasing their profits from increased prices, and public sensitivities around higher prices for an essential service such as water.

While the recent rainfall in the ACT has reduced some of the immediate urgency around drought policy responses, ACTEW is of a view that appropriate pricing and policy responses to scarcity will remain a substantive policy issue in years to come. ACTEW intends to continue developing its methodologies for empirical analysis in order to enhance the information base needed to develop sound drought pricing policies.

The Legal Framework for Economic Regulation

Analysing the scope for benefits from regulatory reform is a critical component of the Productivity Commission's inquiry into the case for microeconomic reform in the urban water sector. ACTEW believes that there are significant community benefits to be gained from reform of the legal and incentive framework for regulation of the urban water (and wastewater) sector.

The current framework for water regulation in the ACT provides a broad range of factors to be balanced by the regulator. This is a very difficult assignment that effectively results in considerable discretion to the regulator and significant levels of regulatory risk for the utility. It offers neither the operational flexibility or administrative and compliance cost savings of a light-handed approach, nor the regulatory certainty of a heavily prescriptive rules-based approach, such as that used in the national economic regulation of energy distribution by the Australian Energy Regulator. The risk imposed on businesses is substantial.

While ACTEW would prefer a lighter-handed approach consistent with the original intention of the Hilmer Review in 1993, the merits of more prescriptive approaches to water regulation with suitable merits review mechanisms are worth exploring. This review is a good opportunity to reassess the incentive framework inherent in water regulation to ensure the incentives faced by water businesses promote appropriate behaviour and decision making. Such a move would allow water businesses to make important investment decisions with greater certainty and confidence.

Innovation Under Regulation

A significant drawback of the governance structures typically applied in regulated natural monopoly markets, such as the urban water market, is the lack of reward to innovate. Whilst in the short term this may result in lower prices, it may also deprive water consumers of more significant price decreases or quality increases that may flow from research and development in the longer term.

Professor Martin Cave noted in the 2009 Independent Review of Competition and Innovation in Water Markets Final Report that reform of the regulatory regime in the UK would increase the incentives for innovation by water companies. The report recommends the inclusion of a statutory requirement on regulators to promote innovation. ACTEW notes potential similarities in the Australian regulatory environment and considers this could be a worthwhile area to be explored by the Commission in establishing the need and case for microeconomic reform in Australia's urban water sector.

Given increasing uncertainty over water supplies, reforming the regulatory approach to this issue to allow regulated entities to recover greater costs of research and development (within appropriate frameworks) would provide genuine economic benefits in the urban water sector over time.

ACTEW looks forward to ongoing involvement throughout the remainder of the inquiry.

Yours sincerely,

Mark Sullivan
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