

Response to the ICRC
Working Conclusions Paper



Regulatory period
commencing 1 July 2008

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1. Introduction

ACTEW Corporation Limited (ACTEW) is the licensed provider of water and wastewater services in the ACT under the *Utilities Act 2000*. The Independent Competition and Regulatory Commission (the Commission) is currently reviewing the prices to apply to ACTEW's water and wastewater services for the five-year period from 1 July 2008.

The *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act) under which the Commission makes price directions, intends that ACTEW be able to raise revenue sufficient to efficiently and sustainably offer services to the required standards and to yield an appropriate return on the capital investment of ACTEW's owners. It is also important that price structures signal to users the sustainable cost of water and wastewater services while raising the revenue in the simplest, fairest and most efficient way.

The Government published Terms of Reference for the review on 28 February 2007.¹ These specify several matters that should, in the context of the criteria set down in the ICRC Act, be the focus of the Commission's review.

On 31 July 2007, ACTEW provided the Commission with a comprehensive submission² that:

- addressed the matters raised in the Terms of Reference;
- summarised ACTEW's functions, obligations and means of service delivery;
- reported on ACTEW's performance during the current regulatory period and the forecast costs of its planned program during the next;
- proposed a form of regulation to provide appropriate incentives for efficient performance and mitigate or compensate risks; and
- canvassed pricing structures for water and wastewater to promote an array of social, economic and environmental objectives.

ACTEW made a further submission³ on 7 September 2007 consolidating its response to the issues and views raised by the Commission in the three discussion papers released in preparation for the review.⁴

On 25 September 2007, the Commission released its *Working Conclusions* paper which "represents the initial step in the formal price inquiry process ... details the Commission's proposed approach to the price determination [and] reflects stakeholder

¹ Corbell 2007

² ACTEW 2007A

³ ACTEW 2007B

⁴ The three discussion papers addressed, respectively, *Technical Regulatory Issues* (ICRC 2006), *Return on Capital* (ICRC 2007A), and *Prices* (ICRC 2007B)

input on the discussion papers and at a pricing roundtable as well as drawing upon ACTEW's submission which was received on 31 July 2007".⁵

Since ACTEW's views on most issues central to the current price review were discussed in its two earlier submissions, the purpose of this submission is to:

- ensure coverage of issues per the terms of reference;
- highlight those elements of its brief for which the Commission has provided little or no working direction;
- ensure that ACTEW's position on the issues is adequately summarised and to correct any apparent misinterpretations on the part of the Commission; and
- respond to requests by the Commission for further information to address any new issues raised by the Commission in the *Working Conclusions* paper.

The submission therefore focuses primarily on the Commission's views on the return on capital (including the regulatory asset base), prices and tariff setting, and regulatory incentives.

ACTEW notes that the assessment process would have been more effective had the Commission taken the opportunity to respond to ACTEW's comprehensive proposals on the cost of capital. Given the importance of this component to the ongoing incentive to invest and commercial viability, it is essential that the Commission lay out a comprehensive assessment for its draft decision in this area in light of the detailed arguments and evidence presented by ACTEW in the submission of 31 July 2007 and its published version of 29 September 2007.

⁵ ICRC 2007C, p1

2. Return on capital

2.1 Revaluation of the Regulatory Asset Base

The Terms of Reference for the review request the Commission to have regard to:

ACTEW's need to invest and sustainably maintain and manage its assets to maximise the security of the territory's water supply, particularly having regard to the current severe drought and the longer term impact of the damage to water catchments arising from the 2003 bushfires

the commercial value of past investment by ACTEW or its predecessor bodies in infrastructure that continues to deliver services and is needed to sustain a high standard of service to all residents of the Territory, **giving particular consideration to an optimised depreciated replacement cost valuation** as applies in relation to other utilities.⁶

an assessment of the commercial value of ACTEW's regulatory asset base that gives particular consideration to all investment in the water network (including water and sewerage assets purchased or transferred from the Commonwealth in 1988 at the time of the creation of the ACT Electricity and Water Authority or otherwise gifted to it) and appropriately reflects the re-instatement of assets returned to service as the result of changes to operating procedures during the current period

2.1.1 *The Commission's position*

The Commission stated in its Discussion Paper 1 (prior to release of the Terms of Reference) that it would not consider a re-determination of the RAB based on an optimised depreciated replacement cost (ODRC) valuation during the current review. The Commission restated this view as one of its working conclusions. The Commission further argued that "a revaluation [is] not necessary to ensure the long term financial sustainability of ACTEW's water and wastewater business."⁷

2.1.2 *ACTEW's response*

ACTEW maintains that the Commission should revalue the RAB in line with an ODRC valuation. ACTEW has put forward its arguments, both in its primary submission and response to the discussion papers, supporting this action. It previously demonstrated that the continued appropriateness of the original method of valuation of water businesses, with the stated policy aim of delaying the impact of moving from historical underpricing of the services, is under scrutiny more widely.

⁶ Corbell 2007, sub-clauses 5a, b and c (emphasis added)

⁷ ICRC 2007C, p19

On the question of financial viability, the Commission should, for consistency, consider ACTEW's position under the Commission's own assumptions of the level of debt funding used in calculating ACTEW's cost of capital. Though the 60% level of debt funding to total debt and equity funding assumed by the Commission is greater than the current share of debt in ACTEW's actual capital structure,⁸ credible future climate and hydrology predictions for the ACT imply a significant future infrastructure requirement and a commensurate increased recourse to debt funding.

Issues of future sustainability aside, upward revaluation of ACTEW's RAB is required to provide appropriate recognition of past investments as an element of economic efficiency.

ACTEW believes that applying a replacement cost methodology, such as ODRC, ensures that users are paying the full economic costs of providing water. It is important, particularly during periods of drought, to create a cost base for efficient use of existing water supplies. Where the cost base has been discounted, prices fail to align to the economic costs of providing services, and inefficient use results. This has important implications for the efficient staging of existing and potential sources of water whether by ACTEW or third parties. New or innovative water sources or uses of wastewater will, as a result, be at a considerable cost disadvantage to those provided by existing infrastructure.

ACTEW remains of the view that the value of assets purchased from the Commonwealth Government has not been appropriately included in the asset base valuation and that an adjustment should be made. It is curious for the Commission to argue that the circumstances and implications of purchase were taken into account in setting ACTEW's initial RAB when its repeated public statements indicated a misunderstanding of the true situation.⁹

The Commission's *Working Conclusions* paper response to ACTEW's revaluation proposal included that:

If the Commission was to agree to an immediate increase in the RAB as proposed by ACTEW, this would lead to customers paying extra annual charges of approximately \$800 per annum.¹⁰

In its primary submission ACTEW stated that it would support a transitioning mechanism for revaluation to manage any price changes from an ODRC revaluation over a period of two regulatory periods (10 years). ACTEW reiterates that it does not intend, if an ODRC valuation were agreed, to adjust prices in the first year of the regulatory period to account for the entire difference between the current and new valuation.

⁸ This has the effect of reducing the weighted average cost of capital ACTEW might otherwise achieve since debt is cheaper than equity.

⁹ See ACTEW 2007A, pp165-6

¹⁰ ICRC 2007C, p21

2.2 Reinstatement of the Cotter Dam

As quoted in full further above, the terms of reference specifically require the Commission to have regard to the treatment in the RAB in regard to:

... the re-instatement of assets returned to service as the result of changes to operating procedures during the current period¹¹

2.2.1 The Commission's position

The Commission working conclusions state:

In Discussion Paper 1 the Commission made clear that the initial valuation of the RAB was a valuation of ACTEW's physical assets. This includes all ACTEW's assets, **whether they were in service at the time or not**. No assets were 'optimised' or excluded from the RAB, and assets did not have individual values ascribed to them.¹²

2.2.2 ACTEW's response

ACTEW disagrees with the Commission's conclusions in rejecting its proposal to incorporate the value of the (previously mothballed) Cotter Dam and associated pumping equipment within the regulatory asset base.

The initial valuation of the RAB was an economic valuation, representing the value implied by revenue generated from providing services through the **use** of the physical assets at the time of the valuation. ACTEW contends that it is inconsistent with the principle of excluding inactive assets from the RAB to claim that the economic valuation applies to assets not being used to supply services at the time.

The Commission should consider the following extension of its logic in this case. If ACTEW had instead *sold* or written off the Cotter Dam prior to the initial valuation (rather than mothballing it) and then repurchased it later when once again needed, ACTEW would be able to include the purchase cost in the RAB (as new investment to supply services to customers). Under the Commission's argument, the earlier sale would not have affected the economic valuation used to set the initial RAB. The Commission's proposed treatment of Cotter Dam penalises ACTEW merely because it retained ownership of Cotter Dam, despite it not being used to provide services.

In ACTEW's view, the depreciated value of Cotter Dam should therefore be included in the RAB, now that it has been returned to use.

2.3 Rate of return

The Terms of Reference require the Commission to have regard to:

¹¹ Corbell 2007, sub-clause 5c

¹² ICRC 2007C, p23 (emphasis added)

an appropriate allowance for a cost of capital that ensure optimal incentives to invest and manage the potential risks and costs to the community of under-funding, and under-investment in, infrastructure services.¹³

2.3.1 *The Commission's position*

The Commission's second discussion paper focused on the return on capital and provided discussion of theoretical economic and financial foundations of the Weighted Average Cost of Capital (WACC) and its underlying parameters. However, the working conclusions provided little new thinking on the issue.

2.3.2 *ACTEW's response*

In its major submission, ACTEW provided the Commission with its views on each parameter providing substantial expert opinion on how these should be properly interpreted and applied. As the result of this consideration, ACTEW raised questions concerning several of the assumptions used by the Commission and other Australian regulators. Taking all relevant considerations into account, ACTEW ultimately proposed a WACC of 8.4% (pre-tax real).

ACTEW understood and therefore anticipated that the Commission would use its *Working Conclusions* paper to assess the views of stakeholders and indicate a preferred approach to calculating the return on capital. ACTEW is therefore disappointed the paper does not progress the issue beyond outlining ACTEW's views and states only that the Commission is "re-examining these issues and will make a determination in the draft decision".¹⁴

The failure to present its working conclusions on this matter hinders ACTEW's ability to respond to and inform the Commission's assessment of this very important issue.

¹³ Corbell 2007, sub-clause 5d

¹⁴ ICRC 2007C, p37

3. Prices and tariff setting

3.1 Water pricing

In respect of water price setting, the Government's terms of reference outline the Government's intentions with respect to its Water Abstraction charge (WAC), namely to:

- continue to impose the WAC to recover costs and reflect water scarcity;
- set the WAC to achieve the Government's water consumption reduction targets; and
- use the WAC, as required, to achieve further supply driven water restrictions.

In addition, the Government requires the Commission to assess potential forms of regulation to the effect that:

... the Commission should examine all regulatory models available to it under subsection 20(A)(1) of the [ICRC] Act, and report on the various costs and benefits to ACTEW, the territory and the community under each approach¹⁵

3.1.1 *The Commission's position*

The *Working Conclusions* paper provides the Commission's views on designing a price structure for water. The Commission has noted that "there is no simple solution to the problem of designing a tariff structure for water"¹⁶ because prices must attempt to achieve a series of economic, social and environmental objectives.

With regard to particular issues of concern to ACTEW, the Commission

- presented three options including tariff setting based on five-year rather than the current annual consumption forecasts. The apparent reason for a proposed change is a perceived lack of consistency between water consumption forecasts used to set cost forecasts (and hence revenue allowances) and those used to set prices;
- continues to express concern with ACTEW's long standing proposals to implement *daily pricing*. The Commission considers that any improved price signal achieved through a move to daily pricing would be more than offset by the additional burden from having to forecast the quantity of billed consumption on each step in each of the four quarters during the annual pricing reset process.

¹⁵ Corbell 2007, clause 4

¹⁶ ICRC 2007C, p72

3.1.2 ACTEW's response

ACTEW agrees with the Commission that the choice between any two given price structures will almost certainly involve a trade-off between objectives. When considering price structure proposals, the Commission needs to balance competing objectives and adopt pricing approaches that provide a net improvement to the current water pricing structure.

ACTEW has formulated a pricing proposal that it believes achieves an appropriate balance between the relevant objectives facing the Commission. The elements of this proposal have been detailed in ACTEW's previous submissions. In this submission, ACTEW will emphasise its weighted consideration of economic, social and environmental goals.

ACTEW's proposal is that the Commission set an average revenue cap, within which ACTEW can adjust the structure of prices to give effect to changes in economic, social and environmental policy. ACTEW notes that the price direction should allow flexibility for all components of the price structure. This includes flexibility for the fixed charge, which has a role as a balancing item to recover any revenue not recovered by the volumetric charge. This approach can provide *economic, social and environmental benefits* by allowing the price structure to respond to changes in circumstances as they arise. For example, revised estimates of the level of indoor water use could be incorporated in the level of the price step threshold.

Complementary use of the WAC and water restrictions

ACTEW recognises that any water pricing proposal must incorporate a measure of flexibility to account for consumption targets set by the ACT Government.¹⁷ To meet these targets, it may be necessary to increase the WAC-inclusive volumetric charge above the efficient LRMC-based level.

ACTEW believes that there is merit in considering the application of both water restrictions and the WAC as complementary demand management tools during periods of water shortages. Their balanced application would *minimise the social costs* associated with the inconvenience of water restrictions, while also recognising that the relative inelasticity of water demand to price¹⁸ means that consumer behaviour needs to be managed in the interests of the whole community.

A single price step threshold

ACTEW proposed a price step below the level of historical average indoor water use (140-200kL pa) at 274 litres per day (around 25kL/quarter or 100kL/annum). This would

¹⁷ The ACT Government has set two types of targets for water consumption in the ACT in recent years. Firstly, short-term 'drought' water consumption targets have been applied to maintain security of supply as water storage has fallen to low levels. Secondly, the *Think Water Act Water (TWA)* strategy has set long-term water consumption targets for 2013 and 2023.

¹⁸ Water demand in most cases is estimated as relatively inelastic because water has not substitutes for basic uses. See Arbues et al, 2003.

assist in achieving *social objectives* by accommodating water use for health and hygiene purposes for most households at a lower price. *Economic objectives* would be furthered by removing the second price step (currently set at 300kL pa) to ensure that the majority of consumers faces the same marginal price for water (the price of the final kilolitre consumed). Retaining a price step also reduces the burden on low-income households (where this cannot be addressed through CSOs and other concessions).

Marginal cost pricing

A point noted on several occasions by both ACTEW and the Commission¹⁹ is that economic efficiency is best served by setting the volumetric price equal to long run marginal cost.²⁰ ACTEW continues to support the view that a two-part tariff (with a volumetric price equal to long run marginal cost and a supply charge to ensure cost recovery) is the optimal water pricing approach.

The Commission raised a number of the unique characteristics of urban water provision in the context of marginal cost pricing. ACTEW's view is that, although these characteristics may result in a more complex optimal pricing structure in theory, there is insufficient information to undertake the task of determining appropriate changes to the marginal cost two-part tariff structure. Following Ng,²¹ ACTEW believes that the marginal cost two-part tariff structure is optimal in 'expected value' terms.

Water price setting

The Commission has signalled three possible options for setting prices. ACTEW continues to advocate an annual water tariff setting approach.

ACTEW understands the need for the Commission to ensure that costs and revenues do not inappropriately diverge over the course of a regulatory period and it is ACTEW's view that setting prices annually is best able to achieve this. Setting prices in advance at the start of the price review period, on the other hand, increases the risk of significant divergence between costs and revenues.

Consumption forecasts are influenced by many factors, but primarily they depend on forecasts of climate and, in the current circumstances, water restrictions. In the absence of restrictions, there is a continuous relationship between net evaporation and consumption, resulting in consumption forecasts based on average climate being correct on average over many years. Under such circumstances, it may be possible to set consumption forecasts (and prices) for the period of the price path at the time of the price review. However, the current low water storage levels in the ACT result in a discontinuous relationship between climate (represented by, say, 'net evaporation') and water consumption. Consumption may increase over some range of net evaporation, but at certain points, drier climate will result in more severe restrictions, which reduce consumption. This means that a consumption forecast based on a single average

¹⁹ See for example IPARC 1998, p.8, ICRC 2004A, p.112

²⁰ For example, Turvey, R 1976; Saunders et al, 1977

²¹ Ng 1987, p.28

climate scenario is highly likely to exceed the true 'expected' level of consumption. It is therefore necessary to consider at least a range of climate-restriction scenarios in calculating 'expected' consumption. Under these circumstances, prices should be set annually in order to incorporate in consumption forecasts the latest information on water storage levels and hence the likelihood of the various stages of water restrictions. *It is simply not possible to adequately address this issue in a five-year forecast* due to the enormous uncertainty over the likelihood of water restrictions beyond the first year of the regulatory period.

In order to allay the Commission's concerns regarding any incentive at each price reset for ACTEW to 'under-state' its consumption forecast,²² ACTEW had proposed that a forecasting model be agreed as part of this price review. ACTEW has engaged Professor Trevor Breusch and Dr Rebecca Letcher, both of ANU, to develop this forecasting model, consult with ACTEW and the Commission throughout their review, and respond to an external review of their final report to be appointed by the Commission.

Differences between the forecasts produced by the ANU model during the regulatory period and those produced at the current time will undoubtedly arise as the annual model begins to incorporate new information. ACTEW does not see this as a problem and believes that the ANU model can assist in explaining those differences and reconciling its forecasts to those developed at the time of the price review decision.

In its primary submission, ACTEW proposed that risks associated with annual consumption forecast error be shared between ACTEW and its customers via a revenue 'catch-up' adjustment in the subsequent period if consumption over the period is outside a 'deadband' around the forecasts used to set prices. ACTEW proposed this mechanism in parallel with an annual tariff setting approach in which up-to-date storage level and other information would be used to incorporate in prices the 'expected' impact of water restrictions.

The increased uncertainty associated with forecasting consumption over the longer horizon would result in increased reliance on the 'catch-up' mechanism. This would weaken price signals by exacerbating the lag between scarcity and scarcity driven price increases.

ACTEW would also have concerns regarding the application of a deadband to 5-year consumption forecasts. Difficulty in forecasting restrictions beyond the first year of the regulatory period may result in the assumption of a low risk of restrictions and therefore a consumption forecast close to the 'unrestricted' level. This means that ACTEW is more likely to under than over-recover revenue as a result of any forecast error. The deadband is essentially asymmetric under these circumstances, as illustrated in Figure 1.

²² ICRC 2006, p36

Daily pricing

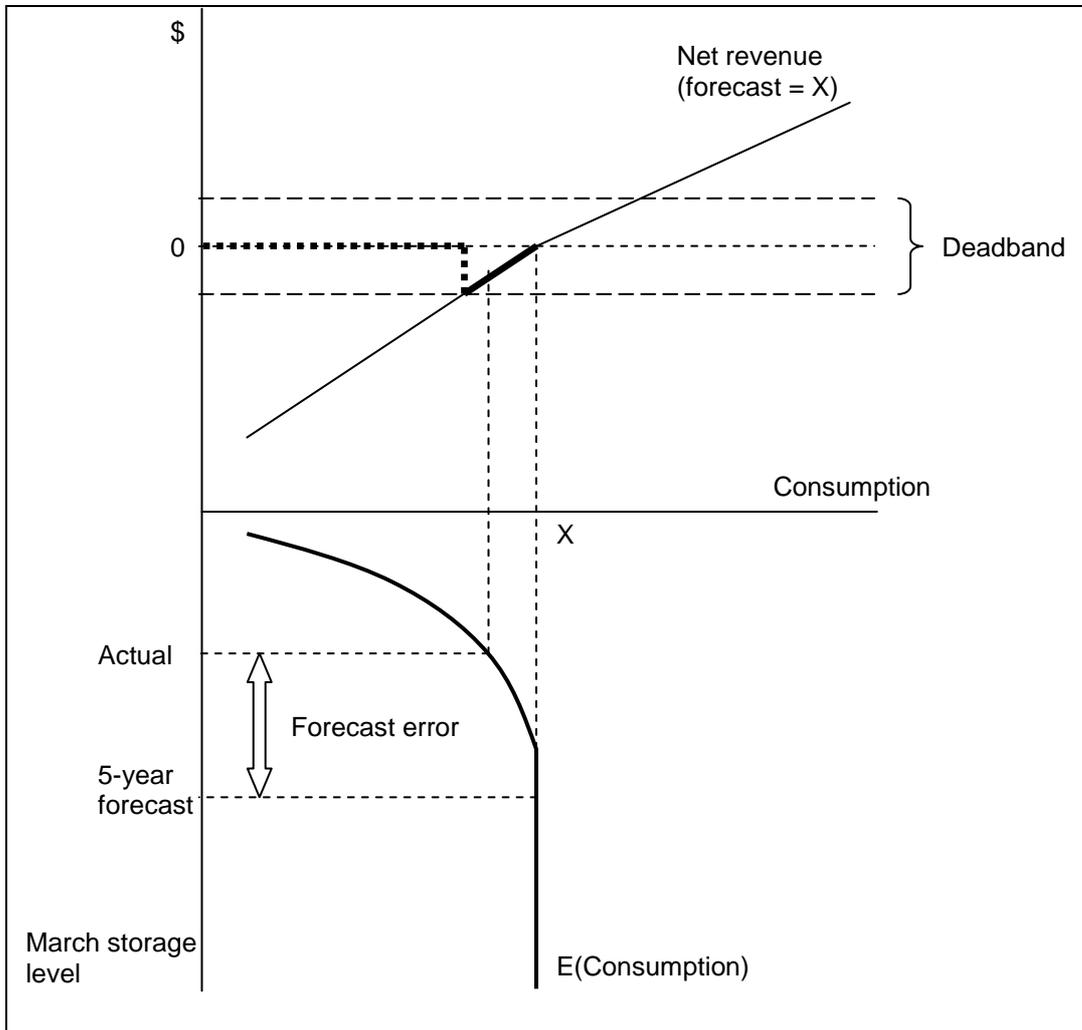
ACTEW continues to propose that any step in the volumetric charge should be applied on a daily basis to ensure a more consistent price signal throughout the year. The resulting increased consistency in pricing from one quarter to another would provide *social benefits* due to increased predictability of bill amounts and *economic benefits* in terms of the resource allocation resulting from cost reflective price signals.

The issue of price signalling is essentially a debate over whether it is more important that customers receive price signals based on their annual or quarterly consumption. The *Working Conclusions* paper argues that “customers who consume the same amount of water in a year should face the same bill”²³. This statement concerns ACTEW because it introduces and implies the notion of an ‘annual bill’. ACTEW reiterates that it does not bill customers annually, but rather quarterly. The most direct price signal given to customers is each quarter when they receive their bill. Therefore, ACTEW believes that a pricing regime should provide consistency in the price signals received each quarter. Daily pricing achieves this objective and ACTEW believes that the price signals offered by daily pricing provide a significant and necessary improvement on the price signals currently offered by annual pricing.

ACTEW is ready and able to provide the extra data that the Commission would require for annual price resets under daily pricing and does not believe that the additional operational burden alone could be ample justification for rejecting a move to daily pricing. ACTEW has already provided the Commission’s forecasting consultants with consumption distribution profiles for five customer groups for 36 quarters.

²³ ICRC 2007C, p71

Figure 1: Asymmetry of expected revenue outcomes under a deadband mechanism



Note: The lower part of the diagram represents for a range of March storage levels the expected consumption outcomes for the following financial year. The bold lines in the upper part of Figure 1 represent the 'expected' revenue outcomes when prices are based on a consumption forecast that is close to unrestricted consumption. It is clear that a negative net revenue outcome is more likely than a positive outcome. The 'actual' outcome in the diagram represents an outcome in which storage levels are lower than predicted at the time of the price review resulting in negative net revenue for ACTEW.

3.2 Wastewater pricing

3.2.1 ACTEW's proposals

In its major submission to the Commission, ACTEW outlined a potential wastewater pricing regime for non-residential customers that could, if required, phase out current

reliance of flushing fixtures-based charging and achieve a better balance of cost recovery between residential and non-residential customers. This comprised:

- a volumetric charge based on metered water consumption scaled by a discharge factor (an estimate, usually deemed on a business activity basis, of the proportion of water used discharged to sewer);
- a supply charge proportional to the squared cross section of the water meter connection (or an alternative measure of required sewer capacity), scaled by the applicable discharge factor; and
- excess strength charges applying on a cost reflective basis by contaminant mass for acceptable discharges.²⁴

3.2.2 *The Commission's response*

The Commission's *Working Conclusions* paper states that it:

... broadly supports ACTEW's proposal to move away from fixtures based charging for non-residential customers and towards more cost reflective charging²⁵

The Commission canvasses three options for it to resolve the wastewater pricing issue to its satisfaction in time for its final decision. However the Commission immediately dismisses its third option: that of deferral until the 2012 regulatory review, stating that:

... it is unreasonable to expect those entities that are disadvantaged by existing arrangements to remain so for another five years. The fact that the NWC [National Water Commission] has expressed concern also requires the problems with the tariff structure to be addressed sooner rather than later.²⁶

Of the remaining two options presented by the Commission, ACTEW prefers *Option 2* which is to:

Request ACTEW to put forward detailed proposals for those elements of the wastewater pricing structure which can be finalised in the short term, so that they can be considered and approved as part of this price determination. These may, for example, include the removal of the fixture-based charge and the introduction of volumetric pricing arrangements for non-residential customers. Matters for which final proposals cannot be developed in time for consideration as part of the final decision (for example, contaminant charges) would be deferred until the next regulatory period.²⁷

However ACTEW would reserve the right to retain fixtures based charging as a transitional measure and also to introduce strength based charging for trade waste should it be in a position to do so.

²⁴ ACTEW 2007A, p55

²⁵ ICRC 2007C, p76

²⁶ ICRC 2007C, p77

²⁷ ICRC 2007C, p76

3.2.3 ACTEW's further response

In view of the Commission's clear intent for changes to be made, ACTEW will develop a proposal for those elements of the wastewater pricing structure which can be finalised in the short term, so that they can be considered and approved as part of the Commission's final decision. Proposed actions in this direction, subject to investigation of impacts pending the Commission's draft decision, are:

- continuation of a flat fixed wastewater charge for all residential customers;
- extension of the residential flat fixed charge to non-residential customers (in lieu of the fixtures charge), with the flat charge for larger customers factored up to reflect water meter size and a notional sewage discharge factor²⁸ and subject to the minimum charge being equal to the flat residential wastewater charge;
- introduction of the concept of a volumetric charge for wastewater discharged by non residential customers, based on a discharge factor applied to metered water consumption and with a 'free' discharge allowance of, say, 500kL/annum such that small non-residential customers with similar system demands to residential customers pay the same as residential customers.
- undertaking studies to enable development of non-residential trade waste strength-based charging arrangements during the next regulatory period.

This fixed/volumetric wastewater charge concept is in line with that operated for some years by Sydney Water. ACTEW would undertake to develop its knowledge of activities undertaken by customers, initially through extensive data matching between its sewerage and trade waste customer bases.

However, since systematic modelling of the impact of such a regime is not currently possible, fixtures-based charging will need to be retained to some degree during the transition to volumetric charging. The proposal in ACTEW's major submission is for a transition path over four years where prices reflect a gradual increased weighting on the new tariff structure with a corresponding decreased reliance on the existing tariff.²⁹ As is the principle with water pricing, flexibility will be required in transition to ensure that adverse impacts are properly managed.

The Commission needs also to consider ACTEW's costs of implementation in its decision.

²⁸ The discharge factor would be notional in the early stages of transition until sufficient information on customer activities and their indicative discharge factor, or those of their non-residential tenants is established. It may be possible for customers with discharge factors significantly different from the notional figure to apply for appropriate adjustment.

²⁹ ACTEW 2007A, p55, Table 4.8

4. Regulatory incentives

4.1 Incentives for efficiency

The Terms of Reference for the current review direct the Commission to have regard to:

... achieved efficiencies in service delivery and appropriate incentives to both ACTEW and the operator, currently ActewAGL, to ensure ongoing efficiencies.³⁰

4.1.1 *The Commission's position*

The Commission, in its *Working Conclusions* paper, discusses the merits of introducing a rolling efficiency incentive mechanism to improve the incentives for ACTEW to deliver operating cost efficiencies throughout the entire regulatory period. The Commission's working conclusion was that a formal efficiency carryover mechanism was not required for two reasons:

- firstly, the paper states that existing arrangements appear to provide sufficient incentives for ACTEW to maintain and improve service standards and reduce costs; and
- secondly, in the Commission's view, ACTEW has not proposed an incentive scheme that meets the criteria identified by the Commission.

4.1.2 *ACTEW's response*

ACTEW agrees that it has adequate incentives to achieve efficiencies in the early years of the regulatory period. However, as noted by the Commission,³¹ efficiency gains made during the regulatory period are only retained (with any certainty) for the remainder of that period. This results in a progressively diminishing incentive over the course of the regulatory period for ACTEW to achieve efficiencies and the incentive to delay efficiency-seeking effort from the end of one regulatory period to the start of the next.

It could be argued that the most important factors in an effective incentive mechanism are predictability and transparency of regulatory response to the business' efficiency initiatives. These minimise regulatory risk. The Commission's position appears to be that the costs of a workable efficiency carryover mechanism (in terms of its potential to encourage perverse outcomes) exceeds these benefits.

ACTEW continues to believe that the rolling efficiency carryover mechanism applied to operating costs by regulators in other jurisdictions in Australia and the UK appropriately

³⁰ Corbell, S. MLA 2007, sub-clause 5g

³¹ ICRC 2007C, p45

adjusts the regulatory regime to ensure consistent incentives apply over the course of a regulatory period.

ACTEW continues to advocate introduction of a five-year rolling efficiency carryover mechanism on operating costs to be applied at the 2013 price review for performance during the 2008/09 to 2012/13 period. ACTEW is keen to work with the Commission to develop a formula acceptable to it and proposes that, as a first step, the Commission detail in its draft decision its intentions for a certain and predictable mechanism.

With respect to treatment of efficiencies during the current period, ACTEW has delivered efficiencies in operation of the water and wastewater services, as reported in its major submission, principally via the incentives for performance embodied in its contract arrangements with ActewAGL for operation and management of the water and wastewater networks. In doing so, ACTEW has acted on the reasonable expectation, given confirming statements by the Commission since its 2004 determination, that an appropriate mechanism would be adopted at some time during the period.³² ACTEW therefore sees it as incumbent on the Commission to reward efficiencies made during the current period by a means which is consistent with its published principles.³³

4.2 Incentives for expenditure on research and development

The terms of reference for the review required the Commission to have regard to:

... incentives for ACTEW to undertake commercial investment in research and development in water and sewerage services in the Territory³⁴

In its major submission, ACTEW explained that certain potential areas for research and development (R&D) expenditure may not be financially viable for ACTEW although they may well be supported by an analysis which included prospective social returns. It may well occur that under the Commission's *ex post* regime for testing capex prudence that R&D of an exploratory nature or with a potential high social rate of return might be found imprudent. ACTEW cited as a particular example of this the case of water reuse where the Commission, in its current (2004) water and wastewater determination, explicitly warns ACTEW that investments in reuse projects would be subject to particular scrutiny as to the existence of a business case.³⁵

³² ICRC 2007A, p18

³³ ICRC 2007C, p48

³⁴ Corbell 2007, sub-clause 5f

³⁵ In its Working Conclusions paper (ICRC 2007C, p9) the Commission misinterpreted ACTEW's use of the phrase "formulate a business case" to mean "to go through the process of assessing the business case" rather than the intended meaning of "to justify a project as superior in a business sense to other possible options including that of doing nothing". All projects undertaken by ACTEW are routinely subjected to the latter test. The Commission therefore has no cause to be "slightly perturbed" by ACTEW's actions in this regard.

4.2.1 *The Commission's position*

As part of its working conclusions, the Commission indicated its complete support for ACTEW:

... undertaking appropriate, well-targeted and cost effective R&D that will ultimately result in lower tariffs and/or higher service levels for ACT water and wastewater customers³⁶

The Commission concluded also that:

... it is incumbent upon a regulator to scrutinise proposed R&D expenditure relatively closely during the price review process to ensure that customers' interests are being safeguarded³⁷

4.2.2 *ACTEW's response*

The Commission's response to this issue suggests that it believes that regulation offers both incentive and opportunity for a regulated business to over-indulge in potentially wasteful R&D. ACTEW believes that the both theory and response of other regulators indicates that under-provision of R&D is the most likely outcome of the regulatory process.

The incentive for R&D expenditure problem arises in two ways:

- firstly, the benefits from an R&D investment that improves business operations and thereby lowers operating costs will be passed through to customers at the next regulatory review. This lowers the return to the business from the R&D investment such that it is insufficient to justify the initial R&D investment, despite there be reasonable prospects for the expected total return (to the business and customers) exceeding the R&D costs; and
- secondly, an R&D investment is unlikely to deliver a return within a single regulatory period, such that there is potential for an ex post review to deem the investment imprudent.

This means that there are insufficient incentives within the existing regulatory framework for ACTEW to invest efficiently in R&D.

The Commission should be aware that the potential lack of incentive for R&D investment among regulated businesses has been acknowledged by the UK regulator Ofgem. In a 2004 paper, Ofgem recognised that there are potentially sub-optimal levels of R&D investment by regulated companies and has acted to promote an incentive scheme to encourage R&D by the electricity distributors under its regulatory oversight. Ofgem specifically recognises a constraint on R&D by regulated businesses as follows:

An [R&D] project could have the potential to deliver a product or solution that could reduce costs for many years. Under the current arrangement the [regulated business]

³⁶ ICRC 2007C, p7

³⁷ ICRC 2007C, p8

will only see the benefit for a five year period before it is captured for the consumer. This can significantly reduce the economic case for the original investment and therefore presents a strong disincentive to take the risk.³⁸

The scheme allows businesses to propose projects which are research based and could lead to improved business efficiency up to a capped limit within the revenue allowance.

ACTEW proposed in its major submission that further discussion take place with the Commission on the design of a specific mechanism within the regulatory framework to provide greater certainty as to the regulatory treatment of identified R&D expenditure.³⁹ The agenda for such discussions should incorporate assessment of a mechanism such as used by Ofgem to encourage appropriate provision of R&D expenditure.

4.3 Perverse incentives in the treatment of gifted assets

In its initial discussion paper for the review, the Commission raised the issue of the regulatory bias against the receipt of gifted assets. This bias arises as a result of gifted assets being treated as revenue for taxation purposes in the year of receipt. This in turn results in a perverse outcome for the business, since the tax payment is immediate but corresponding tax reductions through taxation depreciation accrue only over the life of the asset, resulting in a net loss in net present value (NPV) terms. The situation has been somewhat exacerbated by the ACT Government's policy of normally requiring a return of 100% of ACTEW's profits as a dividend.

The Commission observed in Discussion Paper 1 that this issue could be resolved through the introduction of a post-tax regulatory framework. However, both ACTEW and the Commission have in the past argued against a post tax framework, in ACTEW's case because of the additional complexity involved in the creation of a taxation asset base for the business and the complexity of transitional issues.

In its major submission citing the similar intentions of other regulators, ACTEW proposed that the situation be addressed instead through addition of the NPV loss to the opex building blocks.

The Commission's Working Conclusions paper responds to ACTEW's proposal by stating in part:

ACTEW has noted that the taxation system results in ACTEW incurring an NPV loss as a result of the treatment of gifted assets. The Commission does not dispute that this is the case. However, the Commission does not consider that it is the role of the regulator, particularly under a pre-tax WACC approach, to attempt to compensate businesses for perceived shortcomings in the taxation system.⁴⁰

³⁸ Ofgem 2004, p24

³⁹ ACTEW 2007A, pp16-17

⁴⁰ ICRC 2007C, p27

ACTEW agrees that any shortcomings of the tax system are not a matter for the Commission. On the other hand, ACTEW would contend that the maintenance of appropriate incentives for the business to act optimally is clearly an area of responsibility for the Commission. By accepting gifted assets ACTEW incurs a real cost, such that it would be in ACTEW's interest to refuse to accept gifted assets, or alternatively undertake the capital investment itself. In ACTEW's view, the regulatory framework should not create this perverse incentive.

Unless the bias against acceptance of gifted assets is addressed, it will remain in ACTEW's interest, and indeed ACTEW's responsibility, to discourage asset gifting, even where the practice may have broader economic benefit.

4.4 Managing increased water supply risks

As part of its submission ACTEW argued that there was a need to refine the risk sharing framework associated with uncertainty as to the availability of water over the forthcoming regulatory period. In particular ACTEW has proposed:

- the introduction of a contingent project mechanism;
- refinements to the definition of an 'augmentation event' as part of the cost pass through arrangements; and
- a deadband arrangement to manage differences between actual and forecast water supply during the regulatory period.

ACTEW notes that the Commission has not addressed these proposals as part of its *Working Conclusions*.

In ACTEW's view, these proposals are fundamental to the incentives created by the regulatory framework, and the approach to managing the risks associated with uncertainty as to water supplies during the coming regulatory period. ACTEW encourages the Commission to provide its working conclusions on these matters prior to finalising its draft report.

5. Summary of outcomes

The following table presents a brief summary of the relevant terms of reference, ACTEW's corresponding proposals and the Commission's responses in the Working Conclusions paper.

<i>Term of reference</i>	<i>ACTEW proposal</i>	<i>ICRC response</i>
Asset valuation		
Inclusion of assets purchased by ACTEA from the Commonwealth	Adjust RAB	No adjustment required
Reinstatement of Cotter Dam and Pump Station	Adjust RAB	No adjustment required
Revaluation to ODRC	Adjust RAB	No adjustment required
Rate of return	8.4% pre-tax real	No conclusion
Incentives for efficiency	Predicable and transparent efficiency carryover mechanism	No conclusion. Current schemes ineffective or subject to gaming
R&D scheme		Incentives for overuse – requires monitoring
Capex/opex allowance and prudence	Pending completion of report by MMA and WorleyParsons	
Pricing and tariff setting		
WAC as demand management measure	Merit in balanced application with water restrictions	
Daily pricing	Introduce	No conclusion
Demand forecasts for pricing	Annual based on mutually agreed forecasting model Dead band adjustment	Annual or five yearly with adjustment Dead band adjustment

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