



ACTEW Corporation

Submission to the Independent
Competition and Regulatory
Commission on the Enlarged Cotter
Dam Project

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1 Introduction

Providing water to the National Capital was a key consideration in determining the boundary of the Australian Capital Territory and the site for Canberra.

The city was planned during the 1901 to 1911 federation drought and the wrangling over the allocation of the waters of the Murray River. The demand for water drove the final decision on the location of the ACT borders, which are based on major water catchments. The main catchments considered were the Cotter, Gudgenby, Naas and Paddy's River, which all lie within the Territory.

The origins of Canberra and the ACT are linked with water, and our future must be as well. Since the earliest times in the history of the ACT, successive administrations have created a series of dams and water features that distinguish Canberra from other cities. As a major inland city in the midst of its worst drought on record however, our major water challenges lie in front of us.

ACTEW, in close consultation with the ACT Government, has developed a water security strategy that we believe will provide certainty in uncertain times. The strategy has been developed with the best possible advice, and contains a broad range of considerations that pushes the boundaries of innovation and best practice.

The strategy is based on a theme of security through diversity. The Enlarged Cotter Dam is an essential component of the strategy. This landmark project will assist with securing Canberra's water supply into the future. But it is not a "silver bullet". It is only part of the equation

In the development of its water security strategy, ACTEW has used innovative approaches and new ways of thinking. Inherent in such innovation is scrutiny and potential disagreement. ACTEW welcomes debate about water issues, and will continue to provide sound advice to Government, to be prudent and conservative, to be innovative in the management of our most precious resource, and to always be open to new ideas and collaboration into the future. ACTEW's recommendations to date, including on the decision to construct the Enlarged Cotter Dam, are founded on a thorough and rigorous examination of the detailed and complex material before it.

This submission explains the background to the development of the water security strategy leading to the decision to progress with Enlarged Cotter Dam as a component of the overall strategy. The development of the strategy is discussed in section 2 of this submission, while progress on its implementation is addressed in chapter 3.

The ICRC review was prompted by the final cost announcement of the Enlarged Cotter Dam as an element of the water security program as the result of the misunderstanding with the use of preliminary estimates for which ACTEW takes responsibility. The ICRC draft report and the report of its consultant, Halcrow, strongly support the process by which the final project cost has been arrived at and the robustness of that estimate.

The ICRC is also strongly supportive of the use of net economic benefit (NEB) as a means of ensuring that the projects undertaken are an efficient use of the community's resources. However, the ICRC has differed in its understanding and interpretation of several important areas of the analysis. ACTEW is determined that these differences in understanding will be overcome or at very least the ICRC will come to an understanding of the sound basis, including on the basis of positive NEB, on which decisions have been made. Issues raised by the ICRC are canvassed in chapter 4 of the submission, while chapter 5 proposes a way forward for incorporating lessons learned from the process and ensuring that remaining issues are resolved in advance of the review of water prices from 2012/13.

Specific responses to specific matters raised in the draft ICRC Report are provided in Appendix A to the submission.

2 Security through diversity

2.1 Think water act water

The ACT water security strategy has been developed and refined over the last 6 years. The initial trigger was when the ACT Government released its water resources strategy *Think water, act water – a strategy for sustainable water resources management* (ACT Government, 2004a) on 28 April 2004.

This strategy assessed all aspects of ACT water resources, including water supply, demand management, institutional arrangements, regulation and innovation.

Through a comprehensive consultation process, *Think water, act water* identified a series of objectives to guide sustainable management of water resources in the ACT, including to:

- Increase the efficiency of water usage; and
- Provide a long-term reliable source of water for the ACT and region.

Furthermore the strategy states:

A range of water supply options for the future will continue to be considered in case water use efficiency measures are not able to save enough water to avoid the need to construct water supply infrastructure. This planning process is being developed in a strategic manner to ensure there is no risk to the long-term security of water supplies in the ACT.

Previous analysis indicated that the ACT would need to augment its water supply by 2017, to meet demand for a population of about 405,000. Several issues emerged that motivated reassessment of this prediction:

- The current drought was developing into one of the worst on record, with experts concerned about permanent climate change for the region;
- The Cotter River water supply catchment was almost completely burnt in the bushfires of 2003 and was expected to deliver reduced inflows to water storages as it recovered;
- The ACT Government announced a population policy in the Canberra Spatial Plan (ACT Government, 2004b) of 500,000 by 2032;
- The Government's water strategy, *Think water, act water*, had set water efficiency targets of a reduction in per capita mains water use of 12 per cent by 2013 and 25 per cent by 2023; and
- Environmental flow guidelines, first introduced in 1999, were under review.

As water restrictions continued, the impacts on the community were being realised as significant, requiring a decision about what levels of conservation and usage would be acceptable in planning for a long-term reliable water supply.

Think water, act water charged ACTEW with the responsibility for assessing the reliability of the existing water supply and recommending options for new water sources for the ACT Government, and set a target of March 2005 to achieve this.

2.2 Future Water Options

In 2005 ACTEW presented a report to the ACT Government outlining an analysis of options for the future supply of water to the ACT and the surrounding region. The report was developed in the context of the following planning assumptions:

- the Government's water conservation targets will be met;
- environmental flows will be delivered according to ACT Government guidelines;

- catchment re-growth will respond to bushfires;
- the population will continue to grow according to the ACT Government's Spatial Plan;
- ACTEW will meet its service obligations to customers; and
- projections of climate change and climate variability will occur in line with predictions.

The report was cautious, and recommended a staged implementation of infrastructure solutions, beginning with the optimisation of our current water supply network, progressing with innovative solutions such as the Angle Crossing Option (this project was subsequently deferred in favour of lower cost, more immediate solutions), whilst continuing a program of demand management, water conservation and the implementation of an improved water restrictions scheme. The report also recommended further work be carried out on some of the larger and more expensive options, such as the Enlarged Cotter Dam, in order that it may be progressed quickly if required in the future.

The program of works that was begun in 2003, after the bushfires, was supplemented by other initiatives, and formed a robust strategy to protect the ACT and region from the immediate impacts of the current drought. The works included:

- the building of the Mount Stromlo Water Treatment Plant and the restoration of the Cotter Pump Station which allowed the use of the Lower Cotter Dam for the first time in decades. Without this extra water, Canberra water restrictions would have been more severe and prolonged and the introduction of Stage 4 Water Restrictions would have been required;
- augmentation of the Googong Water Treatment Plant has increased capacity from 180ML/day to 270ML/day thus ensuring that water can be supplied to all of Canberra and Queanbeyan from this source alone;
- building of new pipework has enabled the transfer of excess water from the Cotter River storages to the Googong Reservoir via the Mount Stromlo Water Treatment Plant and the existing water reticulation system when operations and water demand permit; and
- building a new pumping station in the Murrumbidgee River at Lower Cotter has enabled the extraction of water from the Murrumbidgee River. This is providing water directly into the water supply via Mount Stromlo Water Treatment Plant and allows the transfer of water from the Murrumbidgee River to the Googong Reservoir via the reticulation system when capacity permits.

In response to the drought, actions have further enhanced the extraction of water from the Murrumbidgee River at the Lower Cotter and have improved the use of recycled water, including:

- building additional pipework adjacent to the Murrumbidgee River;
- improving pump capacity in the Murrumbidgee River;
- recommissioning the fifth and sixth pumps at Cotter Pump Station;
- installation of an ultra-violet disinfection system and a facility for additional solids handling at Mt Stromlo Water Treatment Plant;
- increasing the capacity of the Lower Molonglo Water Quality Control Centre recycled water pipeline; and
- optimising the North Canberra Water Recycling Scheme.

This work has prevented the ever worsening climate from having a much large impact on Canberra's water supply.

2.3 The strategy becomes clear

A deterioration in inflows in 2006 triggered further analysis in 2007. At this point ACTEW informed the ACT Government:

The key challenge for the medium and long term is to build additional water supply assets that can cope not just with very much reduced long term average inflows into our dams, but with more frequent droughts which are longer and drier than that of 2001-2006, without having to go into high level water restrictions for extended periods.

To have the capability to deal with these longer, drier and more frequent droughts there is a need for future supply capacity that will be additional to that which is needed in years of average of higher than average inflow. The financial cost of this extra capacity is not wasted or premature investment but is essential and justified on the grounds of ensuring water security during these more frequent and more serious drought periods.

The recommendations to Government in July 2007 were very clear — there is no “silver bullet” to ensure water supply security for the ACT and region. What is required is a range of measures, or security through diversity. The report analysed many options, some of which had not been previously considered, and found that they may all have a role in providing the surety of supply that is required.

In order to deliver such a program of diversity, ACTEW developed criteria to be used in choosing new water supply options:

- maximising the use of existing infrastructure, both ACTEW’s and others’;
- increasing the diversity of sources of water;
- ensuring the availability of one source of water which is not dependent on rainfall in ACTEW’s water supply catchments;
- maximising operational flexibility to provide backup capabilities in the event any part of the system is out of operation for whatever reason;
- providing a net economic benefit to the community (this is defined as the gross community benefit expected from any reduced probability of drought restrictions, less the capital and operating costs of implementing that option); and
- optimising outcomes from capital and operational costs and minimising the consequent flow-on cost to consumers.

The application of these criteria to the analysis that had been undertaken on a range of options led to the recommendations of Government in 2007 in the report *Water security for the ACT and region—Recommendations to the ACT Government*.

After consideration of this report by the Government’s Water Security Task Force in October 2007, the ACT Government announced a range of projects that will be implemented to secure Canberra and the region’s water supply into the future and unlock the potential to provide water through extended dry (drought) periods. The projects endorsed by the Government include:

- Enlarging the Cotter Dam from 4 gegalitres (GL) to 78 GL, with planning and design work to begin immediately and work expected to be completed within three to five years;
- The installation of infrastructure to increase the volume of water transferred from the Murrumbidgee River to the Googong Dam;
- Design of a demonstration water purification plant, with the water produced during demonstration to be used for purposes other than drinking; and
- Progression of arrangements for the Tantangara Transfer option.

3 Progress with the implementation of the water security strategy

Since notice of the Government decision, ACTEW has been progressing with the implementation of the strategy, in particular the major project aspects. A procurement model of an Alliance was developed and the Bulk Water Alliance formed. The Bulk Water Alliance consists of Abigroup Contractors Pty Ltd, John Holland Pty Ltd and GHD Pty Ltd with ACTEW Corporation. Work is now well underway on the Enlarged Cotter Dam (ECD) and construction of the Murrumbidgee to Googong project (M2G) is expected to commence late in 2010 after all statutory approvals are received.

There was a significant risk associated with the "do nothing" option. The Future Water Options study in 2005 included an assessment of the need for an additional water supply option. The study determined that unless the ACT is prepared to accept the regular occurrence of water restrictions of a severity and frequency unprecedented in planning elsewhere in Australia, then additional supply is required. This analysis included an assessment of the actual cost of water restrictions experienced by the community since 2003. The assessment highlighted escalating costs dependant upon the level of restrictions, ranging from \$7 million per year for Stage 1 through to \$324 million for Stage 4. Effectively this study indicates that the ACT community will suffer economic loss under severe water restrictions and the economic benefits of a portfolio of new supply options outweigh the capital cost savings of a "do nothing" option. While the quantum may be arguable, the conclusions are not.

The greatest uncertainty remains the future ACT climate, assessment of which will continue to be a priority for further work. But at this time, all the evidence shows the assumptions remaining valid.

The ACTEW strategy is based on diversification of supply involving a combination of building additional storage capacity, having the ability to move water between catchments, and the introduction of water that is not dependant on ACT catchments.

The Enlarged Cotter Dam is the only project in our water security strategy that is currently progressing with construction. Murrumbidgee to Googong is still subject to separate jurisdictions approval and is also the subject of further land acquisition processes for easements. Tantangara continues to be subject to major commercial and inter-jurisdictional hurdles. We are confident that both projects will ultimately be implemented but there is a way to go as yet. The risks to ACTEW and the community within the context of the above are substantial. We need only to consider the Traveston Dam in South East Queensland being stopped by the Commonwealth to see the approvals risk associated with major infrastructure.

The water security strategy involves the ECD, Murrumbidgee to Googong and Tantangara transfer initiatives. While individual supply measures may have differing economic outcomes, the most likely economic return for combined options is positive for both the CSIRO 2030 and significantly more so for the CSIRO 2070 climate scenario. The ACT's current climate is closer to the CSIRO 2070 climate. The ECD retains a positive NEB at the current cost except in the situation where we receive high inflows for a significant period of time. Once again, while the quantum is arguable, the conclusion is not.

The Murrumbidgee to Googong transfer will provide additional water for Googong Dam, thus better utilising this water storage asset. The Tantangara project, when in place, will deliver additional water from adjacent water catchments but the successful implementation of this initiative remains subject to operational, technical, environmental and jurisdictional issues that need to be resolved.

The ECD provides additional storage capacity to harvest the flows in the ACT's most reliable catchment. The strategy of a diversified portfolio of water supply options is as sound today as it was when accepted by the ACT Government and ACTEW Board in 2007, probably more so. To move away from this strategy would be a significant risk to the community, to business, and to ACTEW.

4 Net Economic Benefit calculation

4.1 Background

Making decisions about new water infrastructure, and in particular establishing the NEB of a project requires a series of difficult methodological decisions, many of which will, of course, be subject to genuine debate and uncertainty. Throughout the analysis it has undertaken, ACTEW has sought to establish and adhere to a systematic framework. Where difficult methodological decisions were made, they were made with careful consideration and in full knowledge of the methodological tradeoffs involved.

In order to understand the various methodological decisions that were made, it is important to understand the reasoning underlying the overall approach.

4.2 Using willingness to pay (WTP) estimates

Clearly, a crucial component of the NEB analysis is estimates of the cost of water restrictions to the ACT community. In doing this, ACTEW has drawn on previous analysis as well as commissioning new analysis. As the ICRC has noted in its draft report, a starting point for the analysis was the customer Willingness to Pay (WTP) estimates produced by NERA in 2003.

It is important to note that any WTP estimates are a snapshot of the community at a particular point in time, with a particular understanding of restrictions and the way in which they are applied. The challenge in using these estimates is to be able to account for the fact that the definition of restrictions, the ways in which they are applied and their effects, vary considerably over time.

The general approach to this issue was to use the estimates of WTP at different restriction levels to calibrate a reduced form household derived demand system for water. In this calibration, a number of key parameters are derived including the elasticity of the demand at various points along the demand curve, the income elasticity of demand and parameters that effectively define water use efficiency for households. The calibration used a linear expenditure system (LES). In the course of developing the analysis other demand systems were tested but the LES was found to be more appropriate.

This calibration effectively establishes a functional relationship between the cost of restrictions (WTP), the amount of water use restricted (ie the reduction in consumption targeted by the particular level of restrictions), prices, incomes, and (noted below) shifts in water use preferences.

It is crucial to calibrate such a functional relationship in order to appropriately construct a baseline to form the basis of the evaluation.

Given that the definition of water restrictions changes over time and the fact that the calibration of water restrictions is in fact a choice variable in water resources planning, it is essential for NEB analysis to define a functional relationship between expected water use reduction under a particular level of restrictions and costs (WTP and other costs). Without this functional relationship, it is very difficult to use WTP estimates in economic analysis, particularly analysis that has as many different variables as water use planning.

4.3 Using the upper bound of the NERA estimates

As the ICRC has noted, the NERA analysis was the starting point for calibrating the demand system and the main estimates used for the analysis was the upper 95 per cent of the NERA results. From the perspective of the *within* the NERA analysis itself, it would, of course, be appropriate to use the mean result. The upper confidence interval was used because in the course of the FWO project, ACTEW obtained *additional* and *new* information from the process of community engagement. This new information suggested the WTP was more towards the upper end. Importantly, this was incorporated to ensure that the WTP estimates were still within the bounds of the NERA analysis. (Note that in the 2005 analysis, sensitivity analysis of this decision was undertaken).

How to treat informal community information in any analysis is, of course, a difficult methodological decision. One option is simply to ignore the information. However, given the importance ACTEW places on community engagement (and the significant resources devoted to it in FWO), this would not be appropriate. Rather, the decision was made to incorporate this information carefully within the established framework for analysis. A choice was required at the time, and ACTEW believes an appropriate choice was made. This choice may be subject to genuine debate, but it cannot be considered as entirely inappropriate.

4.4 Including costs for levels 1 and 2 (level 1 in the new scheme)

NERA did not produce a statistically significant estimate for the cost of level 1 and level 2 restrictions. Nevertheless, both of these levels are designed to reduce water use, have proved to do so, and have been modelled as doing so in the hydrological analysis. The question for the economic analysis is whether this can be done at no cost to the household.

Community feedback (informal, not generated through systematic surveys) at the time of the preparation of the 2005 estimates suggested that there was a cost from low levels of restrictions. Further, the calibration procedure described above (where the calibration was around the statistically significant estimates) suggested that there is a low cost from the lower levels of restrictions.

Given that this cost is not high, and given that most of the potential water options evaluated all reduced time at the lower levels of restrictions, this did not affect the ranking of different water security options.

4.5 The sequence of cost of restriction estimates

The Commission notes that the sequence of estimates of the cost of restrictions was not prepared as a time series, but nevertheless interprets them in that way. This interpretation is not appropriate. One of the main reasons the estimates changed is because of new information only some of which was updated relevant to economic data. This includes price and income changes, but also includes better estimates of the quantitative effect of restrictions (which, as noted above, is an important part of the calibration of the cost of restriction estimates) and changes to the restrictions regime itself

4.6 The effect of demand management on the cost of restrictions

The ICRC notes that over time consumers may become accustomed to restrictions and that this, along with a variety of demand management measures, may tend to reduce the cost of restrictions over time. This issue is effectively about the appropriate choice of a baseline against which to compare the 'with dam' scenario. When considering the cost of restrictions, the baseline should not include the effect of restrictions themselves otherwise there is not a clean distinction between the 'with' and 'without' scenarios. This is another methodological question open to debate, but the baseline chosen for the analysis is appropriate (if not the only baseline that could be chosen).

Further, the analysis *does* include the effect of per capita water use reductions due to factors independent of restrictions themselves.

Referring to the demand system calibration discussion above, the calibration explicitly includes a parameter for water savings technologies (as noted in the appendix of the 2005 CIE report).

Indeed, one of the purposes of establishing this functional relationship between key parameters and the cost of restrictions is, in fact, used to establish the cost of water restrictions over time, that is, to construct an appropriate baseline for the analysis. This baseline explicitly accounts for reductions in per capita water use over time (in the cost of restrictions analysis, this reduction is made consistent with the assumptions made in the hydrological modelling). This includes, for example, a 25 per cent reduction in per capita consumption by 2023.

There is not a simple relationship between shifts in the demand curve and cost of restrictions. It is likely, for example, as demand shifts because of more efficient water use over time, it also becomes

more inelastic. If this is the case, then the cost of water restrictions once imposed on the more efficient level of water use could, in fact, be higher. They do not decrease proportionately with the water use efficiency in the first place. In water parlance, this is 'demand hardening'.

The purpose of the calibration exercise is to allow this to be taken into account.

The ICRC may have in mind a particular alternative baseline scenario. The advantage of the framework that has been established is that such alternative baselines can readily be incorporated in the analysis.

4.7 The cost of stage 4 relative to stage 3

In discussing ACTEW's latest estimates of the cost of restrictions, the ICRC does not appear to recognise the basis on which the relationship between stage 3 costs and stage 4 costs was estimated.

It is not based simply on doubling to get from stage 3 to stage 4.

Rather, the relationship was determined through a household survey which assessed the impact in the ACT. But just as important as the survey itself was the work in preparation for it, including 6 lengthy focus group analyses as well as comprehensive piloting of the survey instrument itself.

The focus groups were conducted by a professional market research firm, facilitated by professional specialists in this field. The focus groups spent considerable time covering the question of the cost of water restrictions, actions taken by households in response to them, what these cost and so on. The focus groups looked particularly at what stage 4 could cost relative to stage 3. The implications of stage 4 were carefully explained and costs were explained to consist of both real financial costs but also broader consumer welfare costs ('consumer surplus', but not, of course, expressed in these terms). Participants were then asked to assess the cost of stage 4 relative to stage 3. The average ratio from the focus groups was 2.3.

The experience from the focus groups was used to inform the design of the survey instrument (ultimately completed by 801 households). The ratio between stage 4 and stage 3 costs from the survey was 2.7, a very similar order of magnitude to that emerging from focus groups. Whatever view one takes of the 801 household survey, the approximately 2 to 1 ratio between the costs of stage 4 and stage 3 cannot be said to either be based on assumption or to be arbitrary. It reflects the average view of a large sample of households

The nature of the costs at stage 4 is clearly different to those at stage 3. Obviously they no longer arise from hand watering, but through a number of other mechanisms, including the loss of garden/outdoor amenity.

The Commission appears to suggest that the cost of stage 4 could be lower than the cost of stage 3. This is inconsistent with other statements in the report, but is also clearly inconsistent with the general perceptions of the community.

4.8 ACTEW's latest estimates based on a new household survey

As the ICRC has noted, ACTEW's latest estimates of the cost of restrictions are based on a 'revealed preference' survey of households.

Using revealed preference rather than stated preference does of course raise some genuine methodological issues. As the ICRC points out, this has the potential to understate OR overstate true willingness to pay. Indeed, much of the concern in the WTP literature is that avoided or incurred costs can in fact understate true willingness to pay. This was the thrust of referees' comments on the updated survey work (ie that the estimates could understate the cost of restrictions).

The ICRC acknowledges that it is not possible to determine the extent or direction of any bias, but implicitly seems to presume that there is an overestimate. This is a methodological question subject to genuine debate.

It is important to note that these methodological tradeoffs were well understood by ACTEW, and that a number of steps were taken to mitigate this as much as possible.

The survey design took careful note of the fact that there is a wide distribution of opinions and actions relating to water restrictions. In choosing the sample frame, considerable analysis was undertaken of ACTEW's billing database to examine the residential billing unit (which is equivalent to a household in most cases except strata title) water consumption over time. The sample was stratified according to this analysis to ensure a good representation of the widely diverging range of responses to water restrictions.

Further, the survey design was informed by a series of detailed focus groups and pilot surveys to provide information about potential misunderstandings/misstatements etc in the course of the telephone surveys.

4.9 The magnitude of the cost of stage 4 restrictions

The ICRC is concerned with the magnitude of the revised estimates of the cost of restrictions to households.

The revised estimates suggest that the median household would be prepared to pay \$1107 to avoid spending **one year** at stage 4 restrictions. Stage 4 means no outside watering (possibly the use of recycled indoor use would be allowed). If stage 4 were in place, it would be the result of prolonged very low rainfall. A year of low rainfall and stage 4 restrictions in Canberra's very low humidity environment would mean (with a very high probability) that gardens would die with no prospect that the household would be able to do anything about it. While recycled indoor use (from showers and washing machines) is a possibility, this probably could not deliver the volume of water required (without unintended behavioural changes inside the house!). Further, such recycling involves risks — it cannot be used on vegetable gardens, and prolonged use of untreated recycled water is likely to build up very high salt loads in the soil.

Paying around \$1000 to avoid these consequences (where the replacement cost of plants could easily reach this amount) should be seen in this context.

4.10 ACTEW and ACT Government costs

The ICRC is concerned that ACTEW and ACT Government costs should not be included in the cost of restrictions as they represent a transfer rather than a loss of surplus. We agree that in hindsight this particular aspect of the cost of restriction is not particularly well explained in the documentation, and we agree that the actual basis of the calculation is subject to some methodological discussion. However, the clear intention is to measure a surplus loss and not a transfer.

The surplus loss arises because as a consequence of restrictions, ACT community 'capital' (importantly, the fixed costs related to the delivery of water) no longer generates a return to the community. The costs continue to be paid, but there is no return. This is a surplus loss to the community. The incidence of this may be on households or ACTEW or the government depending on regulatory arrangements as the ICRC correctly points out. Nevertheless, there is net loss of surplus.

4.11 The risk aversion factor

There are a large number of methodological issues that arise in relation to the 3.5 'risk aversion' factor. However it is very important to properly characterise this and understand its origins in order to understand the methodological issues.

The risk aversion factor was introduced not because of perceived problems with the underlying NERA or other survey, but because of a particular characterisation of the decision problem (facing ACTEW and the community).

The risk aversion factor does not relate to the increment in costs in going from lower to higher levels of restrictions. These costs get higher because the extent of restrictions increases for higher level of restrictions (the quantity reduction and therefore the loss of surplus gets higher and higher). Rather, the risk factor relates to decision making preferences and the weighting of particular potential outcomes. Within the framework for use of the 3.5 factor, these two cost increments are in different dimensions.

Portfolio theory can explain how different elements of a portfolio have different returns, but an investor is likely to weight the probability of these different returns according to his risk preferences. This weighting does not relate to his view of the portfolio returns being estimated incorrectly, but rather his appetite for risk. Similarly, the cost of restrictions at different levels represent a range of potential elements in a portfolio (in this case, a portfolio of costs, not returns). In this case, the decision maker has some choice over outcomes through his choice of water investments. In making this decision, the decision maker can either weight the probabilities of different restrictions outcomes equally (ie calculated the expected cost of restrictions as a simple sum of probability x consequence) or he can weight the probability of particular outcomes according to his risk preferences. The 3.5 factor is in fact a weighting applied to the probability of stage 4 not the value of the cost of stage 4 (although arithmetically, of course, this is equivalent).

We do not consider that this particular conception of the decision problem is captured in the NERA analysis as it asked about the elements of the portfolio (cost of restrictions) rather than about decision making preferences.

The question clearly arises as to why adopt this conception of the decision problem at all (it was, after all, not adopted in 2005). The historical reason in the course of the evolution of the analysis related to the very strong views put by a number of stakeholders about the cost of stage 4 restrictions. These views considered that the cost of stage 4 were considerably higher than the underlying estimates (ie, the CIE estimates updated for the new restrictions regime). Indeed, there was a view that under stage 4 the ACT would suffer substantive economic costs.

ACTEW commissioned some investigation into this issue and as a consequence did not accept this view, and chose not to increase the underlying cost of stage 4 (which was based on an explicit framework using available empirical evidence). Rather, to try to accommodate the concerns, ACTEW interpreted them as expressing a concern about risk preferences in a decision making context (as described above).

As the ICRC notes, these preferences were elicited through a survey instrument provided to the ACTEW Board.

The representativeness of the ACTEW Board relates to their appropriateness in representing the decision maker. We agree that this involves a methodological tradeoff, but note that arguments could be put either way (the Board, after all, is appointed by the Government).

ACTEW would also like to emphasise to the Commission that it recognised the tradeoffs involved in using the 3.5 factor, but viewed it as an appropriate approach with the limited time available. Further, ACTEW subsequently updated the cost of water restrictions with the best available information at the time, and within the timeframes available to it amid the worsening drought. Finally, and under the ICRC's definition of prudence, at the time of the decision to build the ECD, the 3.5 factor was not a consideration but had been superseded by a cost of restrictions based on community survey and focus groups, and to that extent is irrelevant to the issue of prudence.

5 The Way Forward

ACTEW believes that in the preparation of its Water Security Strategy it has taken the best possible advice and used a robust and scientific framework to reach its conclusions. Aspects of our methods have not been attempted previously, and the lack of a precedent will always walk the line between what is considered groundbreaking and what is considered to be arguable.

The strategy is borne out of multiple considerations including environmental, social and economic. In order to quantify these we have not only engaged experts from a range of disciplines, but work has also been extensively peer reviewed and signed off by Government, key policy makers and independent advisors to Government.

It is understandable that questions remain, and there are more debates to be had, but ACTEW stands by the advice it has provided to Government, and believes the considerations and data leading to that advice are valid and adequately tested, otherwise the data would not have been used in the formulation of the advice. Methodologies applied have been well considered and rational and subject to independent review.

There would appear to be in-principle support for the concept of the measurement of net economic benefit as a key decision support tool in determining the efficacy of infrastructure solutions. The application of this approach can greatly assist Government in guiding investment decisions. The issue is what is the decision point, and how do we reach agreement on the methodology?

Issues of concern have been raised by the ICRC in terms of the economic analysis, and the drivers sitting behind this including costs, benefits, impact of water restrictions, hydrology and the impact of climate change. The draft ICRC report points out issues in 5 broad areas related to the economics of restrictions and the way in which the cost of restrictions should be evaluated:

- The baseline — that is, under what basis are the alternatives be evaluated, and in particular against which the cost of restrictions are to be calculated;
- The appropriate interpretation of the nature of the effect of restrictions on households;
- The cost of water restrictions;
- The interpretation of the decision problem, particularly in early considerations of risk preferences from the perspective of the decision maker; and
- The interpretation of the cost of restrictions arising from the latest household survey that ActewAGL commissioned.

These are all questions of methodology where the ‘correct’ answer is not necessarily clear.

In each case, the ICRC comes to a different view on these areas to the views derived by ACTEW in the course of analysis over the past 5 years. Further comment on the ICRC’s analysis is included in Appendix A to this submission.

It is proposed that the 5 areas outlined above form the basis of a tranche of work leading to the next ICRC Pricing Determination. This work should be transparent, open and objective that will serve us into the future.

ACTEW will develop a further brief for work and a review regime which provides mechanisms for ACTEW, ACT Government, and ICRC input. The scope will broadly cover the 5 areas detailed above. The brief will also consider the findings of Professor Jeff Bennett in his report of September 2008 entitled *Costs of Restrictions and Market Segmentation Study – A Review*. The review considered the Colmar Brunton Social Research Report which establishes water market segments and considered the cost of restrictions against these segments. The review also considered the Centre for International Economics report which estimates the economic costs of imposing the various levels of

water restrictions as approximations of the benefits that would be created if the water supply was augmented so that the restrictions were no longer required.

The review found that both studies implement methodologies that are fundamentally sound and apply them in a logical manner. It also found that the results provided by both studies are of practical use to ACTEW in the development of marketing strategies to manage water demand and in the economic assessment of proposals to supplement water supply.

Two key conclusions arose from the review that can guide further work. These are:

- The data collected in the Colmar Brunton Social Research study could be further analysed to understand the cause and effect relationships in water restriction behaviour and so provide a more comprehensive market picture for ACTEW; and
- A comprehensive Choice Modelling study of the costs of water restrictions would avoid many of the limitations apparent in the CIE study that arose due to it being an “up-dating exercise” rather than a primary data collection exercise.

Consideration could also be given to conducting a new Willingness to Pay or similar study. Whilst the study may be expensive and time consuming, it would provide an essential cornerstone in understanding community views on water pricing into the future as the previous studies were undertaken before the community experienced water restrictions.

6 Conclusions

ACTEW notes that the ICRC in its draft report has given its preliminary endorsement to the final project cost and to the alliance arrangements put in place to deliver the new water infrastructure. The Commission has also endorsed the approach ACTEW took to use net economic benefit methodology to consider and compare the various water security options available.

Nonetheless the Commission has raised some issues with the ACTEW NEB model. Despite the difference in views on key quantitative aspects of the model, there is a real opportunity for the methodology and processes adopted by ACTEW to be further considered and refined so they can even better inform efficient public infrastructure investment decision making. By selectively criticising values and choices in the ACTEW model, there is a real risk that the Commission's report could discourage future use of the preferred NEB processes. This would mean that a real opportunity to set public investment strategy on a more productive path could be lost.

Therefore, the Commission has the opportunity to foster the NEB approach by joining a policy and strategic level debate which in turn can lead to a process of refinement of the drivers of the models in use.

We need to be cognisant of the fact that this is not a price determination process. A number of issues have arisen as part of this process that will need to be answered in a future price determination. It is proposed to set these issues aside for now, agree to the process to address the issues leading up to the next determination, and agree to pursue the development of the ECD as a marquee project for the ACT community.

Appendix A Specific ACTEW Responses to the Draft ICRC Report

Report Reference Page No/Section	Issue	ACTEW Response
Pg 2 Key Draft findings 1.6 and pg 5	Alternative options should have been given further consideration... as the true cost of the ECD became apparent	<p>In consideration of other options to the ECD, in the Board paper of August 2009:</p> <ul style="list-style-type: none"> ○ ACTEW carried out an additional financial analysis of the cost of water from the ECD at \$250M, \$350M and \$400M, as well as the M2G and Tantangara transfer (CIE 2009). In addition it compared those with the Tennent Dam (costed by an Independent Estimator) and a full sized Water Purification Plant (ie not a demonstration plant). This showed that the ECD at \$350M was still significantly cheaper and likely to yield more water than either Tennent Dam or the Water Purification Plant. It should also be noted that as part of the Water Purification Plant requirements, the ECD is needed to store the purified water from LMWQCC. ○ the ACTEW Board also sought information on the option of making the ECD only 45GL in capacity. They were advised that based on a 2008 report by the Bulk Water Alliance entitled "ECD optimisation study" that it was considered to be poor value for money as it reduced storage volume by over 40% and achieved a cost saving of only 6%. In addition it could have meant lengthy delays and significant additional risks to the project. <p>ACTEW has conducted an exhaustive process of option development and shortlisting, taking into consideration the economic, environmental and hydrological traits of a large number of options. ACTEW finds it hard to imagine what other options the Commission has in mind beyond those currently being constructed, and those considered by the ACTEW Board in August 2009 (listed in the first dot point above)</p>
Pg 2 3 rd dot point and pg 3	ACT Government provides very little guidance to ACTEW as to what it should be aiming to achieve in terms of its operating variables	ACTEW has since 2004 (see pg 25-27 comment below) used the Level of Service listed on page 25 of the ICRC draft report as an aid to deciding on what investments should be made. Refer to Figure 8.3 in ACTEW (2007).
Pg 3, 23,	ICRC's	ACTEW notes the ICRC's definition of the assessment of

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Section 4.2 last para	assessment of prudence	<p>prudence as “..... the prudence of how the decision to invest in the ECD at the reviewed cost estimate was made”¹. ACTEW interprets this to mean that prudence should be assessed up to and at the time the decision to invest was made at the September 2009 ACTEW Board meeting, and at that time;</p> <ul style="list-style-type: none"> ➤ The ACTEW Board considered many issues in making the decision, and the NEB analysis was just one of those issues. The ICRC report makes no reference of the other (e.g. environmental and social) elements of the decision that cannot currently be fully reflected in the NEB analysis; ➤ The NEB analysis available to the Board at that time included NEB on CSIRO 2030 (ACTEW likely) and 2070 (ACTEW worst case) climate change analysis², plus analysis of recent historic climate (2006 repeating and 2001- 2007 repeating)³ <p>More detail on the issue of the prudence of the decision is included in a separate ACTEW submission.</p>
Pp 9, Key Draft Finding 6.1	“The original decision in 2007 to adopt the ECD over other water security supply options should have been tested against these other options on a standalone basis once it became clearer that the true cost of the ECD was significantly higher than the 2007 estimate”	<p>The response to Key Draft Finding on page 3, above, shows how the ACTEW Board did test other options at the time the true cost of the ECD was apparent.</p> <p>In addition to this the Commission does state (Draft Findings 1.4 and 1.5) that while ECD alone may not meet a 1year in 20 objective, construction of the entire Water Security Program (i.e. all three projects) is likely to meet this objective. Hence, given more than one option was required, the correct approach was to see if an alternative option could replace ECD in the portfolio of options required. ACTEW undertook such analysis.</p> <p>Further, The ACTEW Board strategy of recommending a “portfolio” of projects, Enlarged Cotter Dam (ECD), Murrumbidgee to Googong (M2G) and Tantangara transfer (TT) was based on a portfolio approach to the risks associated with this Water Security program. The recommended projects were selected by ACTEW as the best options for the ACT after consideration of more than thirty options, alone and in various combinations.</p> <p>In its report to Government in July 2007⁴, ACTEW noted that</p> <p style="text-align: center;"><i><u>The combination of an enlarged Cotter Dam and significant increased capacity to take or store water from the Murrumbidgee River will provide assurance in most</u></i></p>

¹ Last paragraph on page 23

² CIE (2009) *Economic benefits of new water supply options. Using 2030 and 2070 climate sequences.* For ACTEW, August.

³ ACTEW (2008) *Water security for the ACT region. Progress report and recommendations to ACT Government.* December.

⁴ *Water Security for the ACT and Region – Recommendations to Government – ACTEW, July 2007, page vii*

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		<p><i>circumstances of water security long into the future.</i></p> <p><i>..... In prolonged and severe droughts of the kind that now need to be accommodated as a more frequent occurrence in the future, the river options above may not suffice.</i></p> <p><i>There are three options which would provide substantial quantities of water in such circumstances of severe drought:</i></p> <p>The Report goes on to list options for consideration in these circumstances. Ultimately the Tantangara option was chosen from this list of three options.</p> <p>The ACTEW Board decided on a portfolio approach to minimise the risk associated with the projects selected to provide water security for Canberra. This portfolio approach is designed to diversify the ACT’s water sources – allowing us to make the most of flows when available and storing water for times of scarcity. We also need to be sure we have a strategy that accounts for both the economics of the portfolio, but also the uncertainty of the climate, long lead time and difficult approval processes that are required to actually deliver these projects, and a range of other operational issues.</p> <p>The options and their respective merits were constantly reviewed as new information became available, right up to when the decision to build ECD was taken in August 2009. In August 2009, as now, the following guided the Board’s thinking;</p> <ul style="list-style-type: none"> ➤ The need for prompt action given the climate outlook (in August 2009) of; <ul style="list-style-type: none"> ○ The previous 3 years’ inflows being around the average assumed in the 2070 climate scenario. So whilst in 2007 ACTEW’s view was that 2030 climate was the best projection of future climate for the ACT, by late 2009 inflows had continued to trend down, and were now more like the 2070 climate scenario; ○ El Nino predicted for 2009/10 summer, hence a higher chance than normal that storages would drop; ○ the recent experience of 2006 where one of the lowest inflow years on record caused a dramatic drop in storages; ○ Scientific community reporting that climate change was happening faster than anticipated, and the link between carbon in the atmosphere and the recent “drought” (i.e. a growing

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		<p>consensus that the situation would not be returning to 'normal')</p> <ul style="list-style-type: none"> ➤ The implementation risk involved in each of the projects under consideration. For example, the TT and M2G schemes have high to extreme implementation risk;
Pp25-27, section 4.4	ICRC's assessment of water security standard	<p>ACTEW would like to clarify the sequence in which it developed standards for measuring the performance of various water supply options. The summary below omits the hydrological methodologies used to make the assessments. While integral to the outcome, they are omitted for the sake of brevity.</p> <ol style="list-style-type: none"> 1. Between August and October 2004 ACTEW assessed the various water security standards used across Australia, and produced a report entitled "System Performance Criteria". The report was reviewed by an independent expert (Prof. Tom McMahon). The report proposed the Level of Service (LOS) criteria listed on page 25 of the ICRC report; 2. In December 2004 ACTEW produced the report "An assessment of the need to increase the ACT's Water Storage" (ICRC Ref; ACTEW 2004) which summarized and referenced the System Performance Criteria (see references at the bottom of page 13 of this report). These criteria were used as one of the methods to assess the relative performance of different supply options; 3. In 2005 CIE⁵ analysed the net benefits of various water supply options using the 2003 NERA Willingness to pay research study for ACTEW. This analysis used an earlier version of the hydrological method which did not show the range of outcomes that might arise from the climate uncertainty. 4. In 2007, ACTEW enhanced the 2005 approach by adopting the NEB as one of the criteria for assessing the relative merits of competing options but continued to report LOS performance for consistency with earlier work. The NEB method is consistent with the approach of the Water Services Association of Australia (WSAA) in their Occasional Paper No 14 Framework for urban water resources planning published in 2005. CIE⁶ updated the restrictions costs to be used in this 2007 analysis to reflect the changed restrictions scheme (4 stage, not 5 stage) and cost information available at the time. This cost information is presented in Table 8.1 of ACTEW's July 2007 report "Water Security for the ACT

⁵ CIE (2005) *Economic benefit-cost analysis of new water supply options for the ACT*. For ACTEW, April.

⁶ CIE (2007) *Methodology for evaluating future water options*, For ACTEW, April.

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		<p>and Region”;</p> <ol style="list-style-type: none"> 5. In September 2008, CIE updated the cost of restrictions based on information from community surveys and focus groups⁷ and; 6. In 2009, CIE updated the NEB results based on a range of costs for the ECD and under the CSIRO 2030 and 2070 climates. <p>We note the ICRC’s support for the use of NEB analysis (Finding 1.1).</p> <p>ACTEW notes the Commission recognition on page 31 that ACTEW’s approach to the calculations of the NEB is unique in Australia and reflects the adoption of the WSAA recommendations and the basic principles applied are completely consistent with the normal business case presentation of cost and benefits. ACTEW is the first utility to properly account for climate variability, climate change and the use of NEB to support large infrastructure investments of this kind.</p>
Pp 3, 28-31, Section 4.5	ICRC’s assessment of climate change and frequency of restrictions	<p>ACTEW notes the Commission states an understanding of the uncertainty of future climate and the need for a conservative approach to planning long term supply infrastructure. There has never in modern times, been a time where planning future water supply has been more uncertain.</p> <p>ACTEW would like to point out that the use of the term “CSIRO worst case” refers to ACTEW’s selection of a CSIRO assessment of the most extreme annual rainfall reduction and annual evaporation increase from a range of outcomes from 13 climate models. This was based on ACTEW’s view that this case best reflected the likely current and future climate for the ACT. ACTEW consider this not the worst case but the “most likely” case as explained below, ACTEW is using CSIRO 2070 climate, plus ongoing repeats of 2006 to examine system performance under a worst case scenario.</p> <p>It should be noted that the 2030 climate is very close to the actual average inflows since 1994. This outcome is consistent with ACTEW’s choice of 2030 climate as one basis for making infrastructure decisions. Further the use of 2070 climate as a worst case is also supported by the average inflows in the last 4 years being very similar to that climate. ACTEW believes the actual climate of the last 15 years is sufficient justification to</p>

⁷ CIE report *Updated Estimates of the cost of water restrictions*

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		<p>stand by its decision to use 2030 climate as the most likely climate on which to base these investment decisions and this is supported by the Commission on page 3 (second last paragraph). The last 4 years (for which the current projects may not be sufficient) support using 2070 climate as the worst case, and considering the tangible risks to the community in the event the current climate continues to mirror 2070 projections.</p> <p>ACTEW has used a detailed hydrological methodology, had that methodology independently reviewed by a pre-eminent hydrological consulting firm Sinclair Knight Merz, and used it to generate the NEB output for various options. ACTEW developed the method specifically to demonstrate the uncertainty inherent in climate assumptions, and to demonstrate that there is a wide range of possible economic outcomes arising from a decision to invest, including that the investment might not be warranted (i.e. the NEB could be negative in some sequences of 2030 or 2070 climate). ACTEW believe that this approach did provide the Commission's desired outcome of "<i>a clear context for the decision and the likely impacts or risks associated with the various investments</i>"⁸. However we reinforce the point that the NEB analysis does not include all the associated social and environmental costs and benefits for each option that also need to be considered. These include, but are not limited to: ICRC personnel said we should have included the costs of stage 5; issues that Goulburn faced – loss of development and loss of employment; environmental secondary effects eg kangaroos feeding off urban grasses, mental health impacts being studied at ANU, etc.</p> <p>The text on pages 30 and 31 of the report show that some of the Commission's views are based on an insufficient understanding of hydrological work done by ACTEW to support the investment decisions, specifically;</p> <p>The Commission suggests⁹ that ACTEW should have undertaken three climate change scenarios. This did happen at the time of the decision to build the ECD (i.e. consistent with the ICRC's definition of Prudence) the ACTEW Board considered NEBs resulting from the following climate scenarios (CIE 2009);</p> <ul style="list-style-type: none"> ➤ High impact – ACTEW considers the 2070 climate to be

⁸ Page 31, under the three dot points in the centre of the page

⁹ Middle of page 31, the three dot points

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		<p>this case, reinforced by the last 4 years having average inflows equivalent to the 2070 average annual inflow;</p> <ul style="list-style-type: none"> ➤ Medium impact - ACTEW considers the 2030 climate to be this case, and it is consistent with the average annual inflows since 1994; ➤ Low impact – ACTEW considers historic inflows to be this case. In the 2005 review ACTEW considered this outlook without taking account of climate change, and concluded that under these conditions no water supply augmentation action was necessary at that time (i.e. if it is assumed that historic inflow levels would return). This of course has not happened since 2005 and has meant that the water supply system has not met our required level of service. ACTEW also noted in 2005 that if the climate continued to deteriorate and/or it was believed that a step change had occurred, then this position should be reviewed. ACTEW subsequently did so. <p>The Commission notes the position taken by ACTEW on climate assumptions is a conservative one, and Halcrow notes it is consistent with the approach of other utilities. However, the latest views of the scientific community that climate change progress is more rapid than expected, means ACTEW do not categorise its choice of 2030 climate scenario as a conservative approach. The declining trend in inflows in recent years makes ACTEW concerned that even the 2070 climate scenario may no longer be conservative.</p> <p>ACTEW will continue to engage with the ICRC to explain the details of the hydrology and its application to NEB to assist the ICRC in its understanding of the methodology.</p>
Page 32 para 4 Last sentence	Once the 2011 ECD was rated the preferred option on the basis of this (NEB) criterion, there was limited review of the ordering of the other options	<p>ACTEW reiterates the issues mentioned above in relation to the need for a portfolio of options to minimise risk, and that NEB was not the only factor determining this portfolio. ACTEW would like to also stress that the portfolio chosen does have a positive NEB, as reported in the CIE report of 2009.</p> <p>CIE 2009 was one of a number of independent reports commissioned by ACTEW during planning for the Enlarged Cotter Dam. These reports confirm that the ECD is a sound water security measure for the ACT region.</p> <p>It has been claimed that the CIE report does not support the building of ECD. This is not correct.</p> <p>The aim of the report was to provide ACTEW with information to assist a decision on ECD. The report did not make any recommendations, simply provided the ACTEW Board with information to consider, along with other information, when making the decision.</p>

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		<p>The following points address the CIE report;</p> <ul style="list-style-type: none"> ➤ The report states (page 7, under Figure 1) that for 2070 climate (which is closer to what we are experiencing) the range of net benefits is always positive, and that “<i>the combination of all three options yields the best outcome</i>” and later that “<i>the combined options are broadly preferable to any of the individual options</i>”; ➤ The report (page 9) also refers to the complementary nature of the ECD and M2G projects, and how this comes out in the economic analysis in the 2070 climate sequences, but not in the 2030 sequences (even though it exists); ➤ With the \$363M cost of ECD, and <u>2030 climate</u> (like Figure 2, page 8), and all the assumptions about risks associated with the other projects, the ECD “<i>does not appear to contribute to improved economic outcomes when it is combined with other options</i>”. This can be derived from the chart or associated tables, and is stated in the report at the bottom of page 8. However, the combined option (ECD and M2G together) reduces the likelihood of restrictions and is likely to have a positive NEB. The combined option, under 2030 climate, also enables ACTEW to meet the ACT Government’s target of water restrictions one year in every 20. This could not be achieved with ECD or M2G alone. ➤ With the \$363M cost of ECD, and <u>2070 climate</u> (also Figure 2, page 8) building ECD makes “<i>a significant contribution</i>” over and above M2G. Table A2, page 10, puts the additional economic benefit to the community of a \$363M ECD (above M2G) at between around \$140M and \$600M. This benefit would be realised with weather similar to that experienced in the last four years; ➤ The last paragraph of the CIE report puts a caveat on the Tantangara option in relation to water availability. ACTEW believe that, whilst there are many difficult issues/approvals/negotiations to be resolved before Tantangara is an operational project, the issue of water availability is not the one with the most risk in the Tantangara project.
Pg 50 para 3, second sentence	Reference to changes in BWA incentive mechanisms is misleading	<p>There needs to be clarity here that the changes to BWA incentive mechanisms referenced apply only to the ECD project, and not other projects being delivered by the BWA. Additionally there was no renegotiation of the TOC – just the finalisation of TOC.</p> <p>Recommended word change to sentence 2:</p> <p>“At the same time, as part of the finalisation of the TOC, a decision was taken to modify the incentive mechanism for</p>

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		the BWA associated with the ECD project.”
Pg 52 para 4 and second sentence	The Commission’s view that there is an increased incentive for upward revision of the TOC.	<p>This view is disputed in that the PAA for the Bulk Water Alliance has a well defined definition of a ‘Change’ and a ‘Scope Change’. A scope change is the only mechanism by which the TOC can be changed.</p> <p>Additionally there are a set of ALG agreed Scope Change Guidelines which guide ALG’s assessment of ‘changes’ and ‘scope changes’.</p> <p><i>‘Errors in initial cost estimates prepared by the contractors’ are not cause for a ‘scope change’</i> which would see an increase in the TOC, however they will impact on the AOC.</p> <p>Recommended action: That the ICRC review this paragraph and consider its deletion</p>
Pg 52 footnote 27	Definition of AOC is incomplete.	<p>The definition of AOC needs to be revised to include the word ‘actual’.</p> <p>Recommended change is below “The AOC is the actual direct costs associated with the Alliance exclusive of ACTEW’s owner costs.”</p>
Pg 59 last paragraph	Reported statement that “No NEB of the project which includes this revised cost estimate has been made available to the Commission although ACTEW has stated” is incorrect.	<p>Paper presented to ACTEW Board Paper Meeting 180, 26 August 2009 documents that the NEB has been reassessed for revised price and that project remains “<i>economically viable at the current proposed cost and for costs to at least \$400 million</i>”.</p> <p>This Board paper was made available to the ICRC for review.</p> <p>The above NEB analysis was also provided to the ICRC on 23 March 2010.</p> <p>Recommended action: That the ICRC review this statement and consider its deletion.</p>
Pg 65 para 1 last sentence	The statement “The Commission notes that no pre-TOC costs were included in the 2007 estimate” is misleading.	<p>The costs referred to where incurred after the formation of the alliance in 2008 and prior to TOC being approved and are part of the total project cost.</p> <p>ACTEW would have been unaware of the likely pre-TOC costs prior to making a decision to proceed with the project in 2007 and the decision to deliver the project via an alliance. These were part of the total project cost at that time.</p> <p>Recommended action: That the ICRC review this statement and consider its deletion.</p>

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Pg 76 footnote 32	Footnote states ACTEW and ActewAGL have a majority vote on the ALG. Statement is incorrect.	<p>The ALG makes all decisions by consensus – not by majority vote of Owner and Non Owner Partners. When consensus on key decisions (which could involve decisions on scope changes) is not achieved at the ALG level, there are mechanisms within the Alliance Agreement for going to a higher level of the alliance partner companies (namely chief executive officers) to resolve a dispute.</p> <p>Recommended change is below</p> <p>“The activation of change and scope change provisions must be approved by the ALG.”</p>