Inland Rivers Network

Submission to IPART Review of Bulk Water Prices to be charged by State Water Corporation from 1 July 2010

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Summary

State Water has again argued for a change to the Weighted Average Cost of Capital. One element of this is a request to reduce the debt gearing percentage from 60 to 30. As the real ratio of debt to assets is set to increase over the determination period, debt gearing should not be changed.

State Water will be making extensive refits to its major dams to deal with safety concerns. As licencees gain benefits from these changes, we argue the user cost share borne by government should be less than 100%, even though these dams we built before 1997.

With the increased activity of the secondary water market over the last few years, encouraged by governments, it is the secondary market that guides the efficient allocation of water.

A new model for pricing bulk water is discussed. Its prime aim is to provide State Water with a more assured income stream that is independent of consumption forecasting at the time of the determination.

If licencees will not pay their fair share of capital and operational costs in running water delivery schemes and the community will not increase their share of costs then dams should be shut down and different methods of providing water to communities established.

A Consideration in changing the WACC

State Water has requested that IPART change the value of the Weighted Average Cost of Capital from 6.5% to 7.9%. One of the variables used in calculating the WACC is debt gearing. Currently, this is 60%. State Water wants to change it to 30%.

Debt gearing is the ratio of borrowings to net assets. Although WACC is set at a nominal rate, and thus could be reduced at the whim of IPART (if it was accepted by the NSW Government), the reality is that the actual debt to asset ratio will rise in the coming determination period.

Table 1 is Table 6.5: Balance Sheet from State Water's submission modified to provide a Loan Debt to Regulated Asset Base ratio and a Loan Debt to Total Asset ratio. These ratios rise from the high 30s to high 40s in the determination period.

Table 1

Regulatory Financials Balance Sheet (nominal $million)	**2011**	**2012**	**2013**	**2014**
Cash and Investments	-	-	-	-
Accounts Receivable	18.9	20.3	21.6	22.3
Regulated Asset Base (RAB)	618.0	735.6	824.0	859.5
TOTAL ASSETS	**636.9**	**755.9**	**845.6**	**881.9**
Loan Debt	243.6	334.3	391.4	395.0
Accounts Payable	20.4	16.5	13.4	7.5
Other	8.3	17.3	26.9	37.3
TOTAL LIABILITIES	**272.2**	**368.1**	**431.7**	**439.8**
SHAREHOLDER FUNDS	**364.7**	**387.8**	**413.9**	**442.2**
Loan Debt/RAB (%)	39.4	45.4	47.5	46.0
Loan Debt/Total Assets	38.2%	44.2	46.3	44.8

Thus, we do not support a change to the current debt gearing as it is ther reverse to what is actually happening.

Cost Sharing

We invite IPART to consider whether the share ratio of capital maintenance on capital items built before 1997 be changed.

In chapter 7 of State Water's submission, they request a revisit of the rationale for the allocation of cost shares but provide no arguments, depending instead to cite the cost recovery principles of the National Water Initiative.

Consider these points,

1. Infrastructure enhancement, such as dam safety upgrades benefits water license holders, as the probability of zero water allocations over a lengthy period due to dam failure is reduced. Dam failure may also increase costs as consequent flooding may damage infrastructure delivering water to crops.
2. What percentage of dam safety upgrades should be apportioned to users? If a dam had been built with all safety criteria incorporated there would not be the

need for current upgrades. So, user benefits arising from the safety upgrade should be discounted by the amount of time the dam has been in existence relative to its asset life of 83 years (160 years if IPART continues its previous determination).

3. Not all damage caused by dam failure is visited upon water licence holders. Water user share costs also need to be discounted by the value of community assets damaged in a dam failure event.

Thus, user share percentage for dam upgrades can be formulated by,

User share % =

(asset life – asset age)/asset life
multiplied by
(estimated total dcbif – estimated user dcbif)/ estimated total dcbif

where dcbif is damage caused by infrastructure failure

Dam safety upgrades will provide major benefits to licencees. They should pay for those benefits.

Water Pricing by State Water

We ask that IPART reconsider how State Water charges for its services. Consider the following,

1. Nearly all the costs in operating State Water infrastructure is independent of the volume of water delivered
2. Estimates of future extraction are inaccurate, so pricing based on these estimates rarely results in income from users close to that expected
3. State Water considers that its current methodology to estimate extractions is no longer viable
4. Volume pricing has no impact on the efficient distribution of water as the secondary market for water takes on that role.
5. We propose a model for charging that ensures General Security license holders pay entitlement costs only in situations where they do not order water

State Water Costs
In chapter 10 of its submission, State Water states that "cost reflective pricing for State Water would involve a high fixed charge and relatively low variable charge". The Murray-Darling Basin Authority in its submission to this Determination says,

"If prices should be as cost reflective as possible then there is a case for water charges to be fixed and not based on usage."

Inaccurate Estimates

In its Summary, State Water says,

"The water deliveries over the regulatory period were only 28.7% of the level estimated by IPART, leading the significant under recovery of revenues and downgrades of State Water's credit rating in both 2008 and 2009."(page 2)

The Centre for International Economics (CIE) has twice been asked to address the issue of forecasting extraction rates, once in 2006 and for this determination in 2009.

Current methodology inappropriate

State Water concurs with the CIE report that the prior forecasting methodology is no longer useful.

"Given the significant shortfalls in actual extractions compared to the IQQM forecasts, State Water, in conjunction with the then DWE, commissioned the Centre for International Economics (CIE) to prepare an alternative method for consumption forecasting. CIE found that use of historical long run average extractions derived from the IQQM was no longer a viable method for consumption forecasting. They found that there is strong statistic evidence to that the current low extractions reflect a structural break in patterns of water availability rather than normal climatic variability. Consequently, historical water availability is unlikely to accurately represent future extractions." (page 9-2)

Secondary market allocates water more efficiently than bulk water prices

State Water provides a graph (figure 12.1) comparing its bulk prices with that of the secondary market average price for water in the Murray and Murrumbidgee Rivers between 2006 and 2009. They state,

"The huge difference between State Water charges and the market price for water suggests that State Water charges are immaterial relative to the market value of water. It also suggests that customers who sell water into the spot market have access to large price premiums with which to buffer cyclical downturns." (page 12-3)

The Murray-Darling Basin Authority in its submission says,

"With temporary water trades at prices consistently in excess of $300/ML over the past three years and at times in excess of $1 OOO/ML, there is ample incentive through trading mechanisms to ensure that there are adequate price signals for water to move to its highest economic use. The record volumes traded during a period of record low allocations is testament that the market is working." (page 3)

Our analysis of water trades in the first three months of this financial year (1 July 2009 to 6 October 2009) using data from http://www.wma.dwe.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare indicates that 204,496 Ml of water was traded at an average of $1443 per Ml for a total value of $295mil.

Availability Price Charging – a new model

IRN suggests a pricing scheme that is reflective of water held in a dam. This involves an entitlement cost and a delivery cost that change with the amount of water in dam storages. Consider this model.

1. Different price levels for ordering/extracting water are charged for water a) below 40%, b) 40% to 70% and c) over 70% of dam capacity. When ordering any portion of an allocation, the fee charged is the total allocation value.
2. Entitlement charges do not vary with water availability
3. High security licencees receive 100% water allocation all the time
4. Water availability is determined at the beginning of the water year
5. There are 100 users, 30 high security and 70 general security
6. Each user has an entitlement to 10Ml
7. High security licencees pay twice that of general security licencees for their entitlement
8. The amount of water allocated to general security licencees as expressed as a ratio of allocated water to entitlement declines as water availability declines.
9. The ordering fee increases as water availability declines, but to a greater extent for high security licencees.
10. Revenue under any of the scenarios is the same

Figure 1 shows the model in operation

Figure 1

High Availability (>70% dam capacity)

100	Users	Ml entitlement/user	Entitlement fee ($/Ml)	holder fee revenue	allocation ratio	Ml allocated	ordering fee ($/Ml)	ordering fee revenue	total revenue
30	high security	10	2	600	1	300	1.4	420	
70	general security	10	1	700	0.90	665	0.85	535.5	
				1300				955.5	2255.5

Medium Availability (40-70% dam capacity)

100	Users	Ml entitlement/user	Entitlement fee ($/Ml)	holder fee revenue	allocation ratio	Ml allocated	ordering fee ($/Ml)	ordering fee revenue	
30	high security	10	2	600	1	300	2	600	
70	general security	10	1	700	0.5	350	1	350	
				1300				950	2250

Low Availability (<40% dam capacity)

100	Users	Ml entitlement/user	Entitlement fee ($/Ml)	holder fee revenue	allocation ratio	Ml allocated	ordering fee ($/Ml)	ordering fee revenue	
30	high security	10	2	600	1	300	2.65	795	
70	general security	10	1	700	0.2	140	1.1	154	
				1300				949	2249

With this model, State Water would reach its revenue forecasts more often than previously and would not be required to forecast water availability at the beginning of each determination period. Were water levels distributed evenly in the future, State Water would be assured of meeting or exceeding its revenue target 50% of the time.

We are not suggesting these exact parameters in the model be applied in this determination but that IPART determine the parameters to make this pricing regime work.

If Revenue Continues to be Insufficient

The infrastructure State Water owns is a result of previous governments' actions to provide economic benefits to people living in the Murray Darling Basin and water security to coastal towns.

The ecological and environmental damage wrought has been great and continues.

The Federal and State Governments have agreed to a Basin Plan that will involve determining Sustainable Diversion Limits that aim to stop and repair ecological and environmental damage. This will probably result in extractions declining in the long-term.

With the freeing up of the secondary water market, licencees can sell their allocation or their entitlement (if they want to leave the industry) at a price far in excess of what they pay.

It is time for IPART to determine prices that will give State Water an assured income. If licencees are not prepared to accept the price, perhaps it is time for the State Government to close down those water delivery systems.

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Inland Rivers Network is a coalition of the Nature Conservation Council of NSW, Australian Conservation Foundation, Nation Parks Association of NSW, Friends of the Earth, Central West Environment Council, and Coast and Wetlands Society