

STATE WATER

RESPONSE TO THE DRAFT

I PART DETERMINATION

CONTENTS

1	Executive summary	3
2	Revenue Required for Operating Expenditure	4
2.1	Land Management Plans	4
2.2	Capitalisation of Heritage Maintenance Expenditure	4
2.3	Environmental Expenditure Contingencies	5
2.4	Summary of Revised Operating Expenditure	5
3	Revenue Required for Capital Expenditure	6
3.1	2009/10 Dam Safety Expenditure	6
3.2	Cold Water Pollution	6
3.3	Fish Passage Construction Estimates	7
3.4	Summary of Revised Capital Expenditure Program	7
4	Asset Lives	8
5	Consumption Forecasts	10
6	Financial Viability and Revenue Volatility	11
6.1	Financial Viability	11
6.2	Revenue Volatility Allowance	13
6.3	Weighted Average Cost of Capital	15
6.4	Financial Outcomes	16
7	Macquarie Generation Storage of Barnard Water	18
8	Output Measures	19
Appendices		
A	Notional Revenue Requirements – User and Government	20
B	RAB Roll Forward Calculations	21
C	Output Measures	22

2010 Determination

1. EXECUTIVE SUMMARY

State Water notes that IPART has accepted the key components of State Water's submission to the 2010 Determination. Although the increases in prices and Government contributions are significant, they reflect the reality of falling water availability and the increasing real costs of delivering water through regulated systems.

IPART has acknowledged the 20% efficiency improvements achieved since the 2006 Determination, and recognised the increasing costs associated with providing bulk water services whilst mitigating the impact of river regulation infrastructure on the environment. IPART has also accepted the new methodology for determining consumption forecasts, albeit with an extension of timeframes, and rebalanced the High Security premium to better reflect the benefit of holding a High Security licence over a General Security Licence.

However, State Water is disappointed that the draft Determination fails to secure an investment grade credit rating for State Water over the Determination period. Consequently, State Water believes that the draft Determination outcomes indicate that IPART has not given sufficient consideration to State Water's financial viability. Whilst State Water is encouraged that IPART has introduced a revenue volatility allowance as an alternative to accepting State Water's argument for a higher Weighted Average Cost of Capital, the financial outcomes of the draft Determination prove that this allowance does not go far enough.

State Water is seeking the following changes in the final Determination

- A revised revenue volatility allowance that incorporates the holding costs of actual over/under recovery of revenue requirements.
- State Water believes that some of Atkin/Cardno's recommendation in relation to operating and capital expenditure need to be revisited by IPART. In particular, State Water rejects the application of "catch up efficiency savings" on the basis that it is on track to achieve the IPART-determined efficient operating expenditure target in 2009/10.
- IPART sought State Water's comments on draft Output Measures which are included in Appendix C of this submission.

**Table 1: Summary of Revised Notional Revenue Requirements
(09/10 \$million)**

	09/10 (base)	10/11	11/12	12/13	13/14
Operating Expenditure	36.0	39.0	38.6	38.6	37.7
Depreciation	3.4	4.5	5.8	6.8	7.5
Return on Assets	27.1	36.8	43.5	49.2	52.8
Revenue Volatility Allowance	-	4.8	4.8	4.8	4.8
Total Notional Revenue	66.5	85.1	92.6	99.5	102.7

Totals may not add due to rounding

Excludes MDBA and BRC Costs

Return on Assets includes Working Capital allowance as per Draft Determination

2010 Determination

2. REVENUE REQUIRED FOR OPERATING EXPENDITURE

With the exception of the comments below, State Water accepts the adjustments made in the Atkins/Cardno review relating to the reductions in the thematic expenditure proposed in State Water's submission to IPART. Notwithstanding, State Water does have some concerns about the Atkins/Cardno methodology, specifically their application of "catchup efficiency" targets.

In addition to the various reductions in additional thematic expenditure, Atkins/Cardno recommended cumulative efficiency reductions of 9.2%, comprising targets for continuing and catch-up efficiencies. State Water supports the concept of continuing efficiency, as evidenced by the inclusion of 6% efficiency savings in our forward projections. However, State Water does not accept Atkins/Cardno's use of an unspecified "frontier firm" against which to benchmark the efficiency of an organisation. State Water notes that as the frontier firm does not exist, it is virtually impossible to prove that an organisation is as efficient as the frontier firm. Indeed, there seems to be an underlying assumption that a monopoly business can never be as efficient as the frontier firm, irrespective of the level of cost reductions it has achieved in previous regulatory periods.

State Water's baseline level of operating expenditure is based on the efficient level of operating expenditure from the 2006 Determination. By IPART's own definition, this means that State Water has reached an efficient level of expenditure at the end of 2009-10. Consequently, State Water rejects the notion of "catch-up" efficiency and maintains that any reductions in regulated operating expenditure in addition to the savings targets included in State Water's submission may result in reduced service delivery.

2.1 Land Management Plans

The draft determination proposes to reduce State Water's proposed land management thematic expenditure by half in the final two years of the determination. The expectation raised by Atkin/Cardno's report that State Water could generate revenue from land management has been cited as the reason for this reduction.

State Water would like to highlight the recently completed GHD Hassall report into land use options for its land holdings, which concluded that no feasible revenue generation opportunities exists for State Water's operational lands. The fundamental basis on which proposed expenditure was reduced in the final two years is therefore unsubstantiated by GHD Hassall review. Consequently State Water proposes that its original land management thematic expenditure proposal of \$300K/annum should be approved for all four years of the determination period. It should be noted that operational land comprises an area of over 110,000 hectares. The expenditure requested in State Water's proposal only amounts to less than \$2.75/ha/annum, representing an extremely cost-effective land management program.

2.2 Capitalisation of Heritage Maintenance Expenditure

Consistent with State Water's response to the draft Atkins/Cardno report, we would like to once again stress that not all costs of implementing heritage management plans can be capitalised. Implementation of heritage management plans comprises a range of ongoing activities such as repairs to building floors and facades, repainting to ensure historic character, repairs to windows and doors, repairs to retaining walls and building piers. Individually each of these activities fall below the State Water's capitalisation

2010 Determination

threshold of \$5,000. Wherever a specific heritage project exceeds this amount, the asset planning process includes that project into State Water's Capital Investment Plan. For instance, heritage conservation work carried out at Burrinjuck Dam was included in the capital program during the current determination period. State Water therefore requests that the funding for heritage management works should be reconsidered as operational expenditure.

2.3 Environmental Expenditure Contingencies

State Water questions the basis on which Atkins/Cardno formed the view that individual environmental expenditure estimates include overstated contingencies. In recommending this adjustment, it appears that Atkins/Cardno did not fully understand the estimation procedures used by State Water for environmental projects.

Contrary to the comments made in Atkins/Cardno final report, State Water did not use P90 estimates for environmental projects included in the Environment Thematic Plan. A significant number of environmental projects are in fact delivered by the NSW Department of Industry and Investment, under a Memorandum of Understanding (MoU). As per the terms of this MoU, these projects are delivered at cost and State Water has no opportunity to pursue any efficiency gains. This clarification was previously provided in response to the draft Atkins/Cardno report.

The proposed reduction of \$1.12 million termed '*reduction in environmental contingencies*' is arbitrary and will erode actual project budgets, affecting the scope of the environmental thematic program. Unless this adjustment is reversed in the final Determination, State Water's ability to meet its environmental obligations will be compromised.

2.4 Summary of Revised Operating Expenditure

State Water requests that IPART makes the adjustments in the table below to the allowed operating expenditure in the final Determination.

Table 2.1: Summary of the Revised Operating Expenditure (09/10 \$million)

	10/11	11/12	12/13	13/14
Operating Expenditure in Draft Determination	38.62	38.19	38.06	37.11
<i>plus</i>				
Heritage Maintenance costs	0.40	0.40	0.40	0.40
Land Management	0	0	0.15	0.15
Revised Total Operating Expenditure	39.02	38.59	38.61	37.66

2010 Determination

3. REVENUE REQUIRED FOR CAPITAL EXPENDITURE

3.1 2009/10 Dam Safety Projects

State Water objects to the suggestion of reducing its 2009/10 capital expenditure program from \$73.6 million to \$60.6 million. This reduction is based on Atkin/Cardno's unsubstantiated view that State Water would not meet its dam safety program expenditure targets for 2009/10. IPART should be aware that the current forecast for expenditure on the Dam Safety Upgrade Program is \$54.65 million, compared to \$54.61 million at the time of State Water's submission to IPART.

Construction contracts are in place for the Keepit, Blowering, Copeton, Wyangala and Burrendong upgrades, and a contract for Chaffey is expected to be signed shortly. Expenditure to 31 March 2010 was \$31.4 million, compared to a budget of \$31 million for this period.

Consequently, State Water is extremely confident that the \$54 million dam safety program for 2009/10 will be achieved and requests that IPART amend the RAB roll forward accordingly in the final Determination, to remove the incorrect \$13 million adjustment in 2009/10.

3.2 Cold Water Pollution

Under the *Water Management Act 2000*, State Water is required to comply with the Works Approval conditions as determined by the NSW Office of Water. With regards to mitigation of Cold Water Pollution (CWP), priority dams were identified and the conditions required for each of them were determined using a conditions matrix. This matrix was endorsed by the Water CEOs at their meeting of 24 August 2007.

State Water is legislatively obliged to meet the requirements of the Works Approvals, including conditions pertaining to CWP works. The draft Determination has all but removed State Water's proposed program of works for CWP mitigation. The obvious consequence of this drastic cut will be that State Water will not be able to deliver works as determined in its Works Approval conditions for storages without a multi-level off-take.

Whilst State Water accepts there is some logic to staging CWP works to enable lessons from earlier projects to be incorporated into subsequent projects, State Water's experience indicates that each dam will require very different and tailored CWP solutions. For some dams, the CWP works cannot be easily separated from the dam safety upgrade works. The detailed designs for Keepit Dam CWP mitigation works are needed to finalise the design for Stage 2 dam safety upgrade works as both projects involve modifications to the storage's bridge and tower. Separating the design and construction will significantly increase the costs of the works. Furthermore, the CWP solution currently being investigated at Burrendong Dam is unlikely to provide any useful learnings at Keepit, due to the fundamental differences in the bridge and tower designs.

State Water requests that IPART include sufficient CWP expenditure in the final Determination to allow the completion of the CWP works at Keepit concurrent to the dam safety upgrade.

2010 Determination

3.3 Fish Passage Construction Estimates

In developing estimates for fishway construction costs, State Water adopted a figure of approximately \$1 million per metre of the height of the river structure on which the fishway was to be constructed. This figure was based on the range of fishway projects that State Water has delivered to date. Furthermore, this figure has proven to be accurate over the last few months during which State Water has awarded five fishway construction contracts.

These contracts are:

- Marebone Weir at 2.5 metre height, contract costs - \$3.3 million;
- Stevens weir at 3 metre height, contract costs- \$4.45 million;
- Edward's River Weir at approximately 1.5 metre height, contract costs-\$1.2 million;
- Gulpa Creek Weir at 1 metre height, contract costs - \$0.9 million; and
- Brewarrina Weir at approximately 1 metre height, contract costs - \$1.2 million.

The above actual contract figures average \$1.2 million per metre of weir height, and confirm State Water's methodology for fishway cost estimation is accurate. The claim by Atkins/Cardno that fishway cost estimates include excessive contingency amounts are therefore unfounded. State Water believes that efficiency applied to fishway construction cost estimates is unjustifiable and should be removed from fish passage costs in the final Determination.

3.4 Summary of Revised Capital Expenditure Program

State Water requests that IPART make the adjustments in the table below to the allowed capital expenditure in the final Determination.

**Table 3.1: Summary of the Revised Capital Expenditure Program
(09/10 \$million)**

	09/10	10/11	11/12	12/13	13/14
Capital Expenditure in draft Determination	60.6	104.6	93.5	81.0	22.9
Revisions:					
Dam Safety program on-track for 09/10	13.0	-	-7.0	-6.0	-
Keepit Cold Water Pollution	-	-	-	5.0	-0.5
Keepit Fish Passage Offsets	-	0.8	0.8	0.8	-
Burrendong Fish Passage Offsets	-	-	0.3	0.3	-
Copeton Fish Passage Offsets	-	-	0.15	0.3	-
Wyangala Fish Passage Offsets	-	-	-	0.2	0.2
Heritage Maintenance costs	-	-0.4	-0.4	-0.4	-0.4
<i>Subtotal Revisions</i>	<i>13.0</i>	<i>0.4</i>	<i>-6.2</i>	<i>0.2</i>	<i>-0.7</i>
State Water revised capital expenditure	73.6	105.0	87.4	81.2	22.2

Totals may not add due to rounding.

2010 Determination

4 ASSET LIVES

In the draft Determination, IPART did not accept State Water's proposal to reduce average remaining asset lives to 83 years, opting instead to retain the use of asset lives from the 2006 Determination, namely 160 years for existing assets and 75 years for new assets.

State Water believes that the asset criticality and remaining life determination system incorporated in its total asset management plan and submission to IPART are consistent with industry best practice. In fact, the Atkins/Cardno review acknowledged the progressive nature of State Water's asset management systems. Over the next determination period, State Water plans to further enhance its asset criticality assessment systems to address the quality control issue raised by the Atkins/Cardno review.

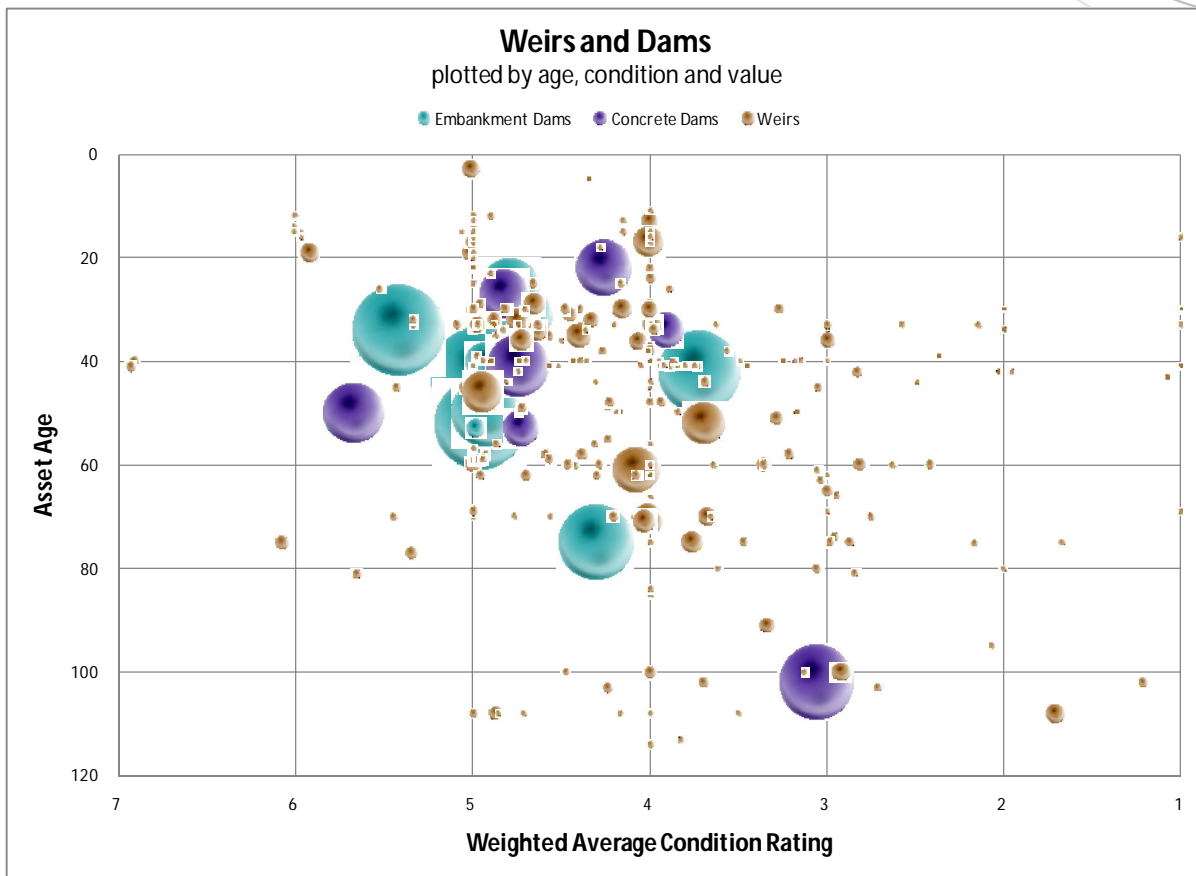
Notwithstanding the minor quality control issue, State Water believes that 83 years represents the best estimate of the remaining life of its asset portfolio and is certainly more accurate than the status quo. State Water's analysis indicates that the proposed asset life of 160 years as included in the draft Determination is unrealistic. The only way an average asset life of 160 years could mathematically be achieved if all assets (with expenditure before 1 July 2004) have a nominal lifespan of 200 years and an average age of 40 years. This is incorrect as outlined below.

The assumption that all dams (weirs) constructed prior to 2004 have a lifespan of 200 (150) years fails to take into account the range of asset types in State Water's portfolio and the nature of their components. While 200-year life might be appropriate for various types of earthworks and fill (including embankments, saddle dams, and clay cores), it is certainly an inappropriate measure for all other asset categories, including mechanical, electrical, concrete components, outlet pipes, penstocks and pipelines.

State Water's \$0.8 billion worth of weirs and other regulating structures have a nominal lifespan of less than 200 years. As seen in the plot below, weirs deteriorate faster than dams of a comparable age. In fact State Water has decommissioned, upgraded, and replaced weirs during the current and previous determination periods, which was deemed as prudent expenditure by IPART well before any of the structures were 200 years old.

Notwithstanding the above, for the purposes of modelling the revised revenue requirements in this submission, State Water has used IPART's methodology for asset lives.

2010 Determination



5 CONSUMPTION FORECASTS

State Water commends IPART on rectifying the incorrect consumption forecasting in the 2006 Determination by accepting State Water's proposed methodology of a rolling average of actual extractions. State Water notes that IPART choose to extend the period for the rolling average from 15 to 20 years to provide greater price stability and achieves a compromise between State Water's proposal and opposing stakeholder views.

Whilst State Water understands that IPART needs to balance competing stakeholder views, it should be noted that the additional 5 years are all well above long term average extractions. IPART has accepted that the use of long term averages to recover costs was a failure during the 2006 Determination period, which State Water believes is due to the fact that long term average extractions are no longer reflective of extractions going forward. Consequently, State Water believes that the 20 year average of 4,627,102 ML overstates likely extractions in the 2010 regulatory period, compared to the 15 year average proposed by State Water. The resulting under-recovery of regulated revenues reinforces the need for an over/under recovery mechanism, as outlined below.

2010 Determination

6 FINANCIAL VIABILITY AND REVENUE VOLATILITY

6.1 Financial Viability

IPART's draft Determination acknowledges that State Water's credit rating is likely to fall below investment grade over the course of the 2010 Determination, due largely to State Water's large forecast capital program which will require it to double its current debt gearing from 23 per cent in 2009/10 to 46 per cent in 2013/14. State Water notes that gearing levels over the determination period remain well below IPART's target benchmark of 60 per cent. State Water contends that the provision of an appropriate risk adjusted revenue allowance should facilitate achievement of an investment grade credit rating at gearing levels up to the target benchmark. As indicated in the table below, this is clearly not the case under the draft Determination.

Table 6.1: Draft Determination Credit Rating Outcomes

	10/11	11/12	12/13	13/14
Regulatory Gearing	36%	43%	46%	46%
Credit Rating Score	4.50	3.75	3.00	2.75
Credit Rating	BBB	BB+	BB+	BB

Source: IPART Draft Determination

State Water considers it imperative to maintain an investment grade credit rating throughout the 2010 determination and future regulatory periods. A firm's stand-alone credit rating is the key indication of credit worthiness and financial viability. Credit rating outcomes under the draft Determination are inconsistent with NSW Treasury's Capital Structure Policy requirement for Government owned businesses to maintain an appropriate investment grade credit rating.¹

State Water rejects IPART's assertion that its pricing proposal failed to achieve the Government's minimum credit rating. State Water's submission was based on a 30 per cent debt gearing benchmark and resultant higher WACC, reflecting State Water's higher business risk relative to metropolitan water businesses. Under these assumptions, table 6.1 in State Water's submission shows the achievement of a BBB+ credit rating in each year of the regulatory period.

State Water's submission argued that 60 per cent debt gearing is not appropriate for State Water given underlying revenue volatility and high operating leverage. State Water's higher relative business risk requires lower levels of financial risk (i.e. debt gearing) in order to achieve an investment grade credit rating. Alternatively, a significant reduction in business risk is required for State Water to achieve an investment grade credit rating under target 60 per cent gearing assumptions.

IPART's draft Determination identified several options that could be adopted to enable State Water to achieve and maintain an overall investment grade credit rating of BBB over the 2010 Determination period:

- increase State Water's equity funding through larger equity injections from its shareholder (the NSW Government)
- defer portions of State Water's forecast capital expenditure, much of which is required to meet its statutory and regulatory obligations
- allow State Water to earn a higher rate of return on its regulatory asset base, which would impose higher costs on the NSW Government and State Water's customers.

¹ NSW Treasury Office of Financial Management, Commercial Policy Framework, Capital Structure Policy For Government Businesses, September 2002.

2010 Determination

These options aim to constrain debt levels rather than reduce business risk. State Water believes it should not be required to defer efficient capital expenditure or seek equity injections from shareholders when projected gearing levels remain well below the target 60 per cent gearing level. It is inconsistent for IPART to apply 60 per cent debt gearing and BBB to BBB+ credit rating benchmarks when determining WACC, but then require State Water to limit gearing levels or otherwise accept below investment grade credit rating outcomes. The draft Determination requires State Water to limit financial risk in order to compensate for high business risk, but does not adequately recognise State Water's higher business risk in the WACC.

State Water acknowledges that IPART is required to balance the diverse needs and often-conflicting interests of stakeholders, while ensuring that State Water is adequately recompensed for the services it provides. This is a difficult task in the current environment of low extraction volumes and 60 per cent variable pricing structure. IPART's draft Determination considered options including a higher WACC and increased fixed charges as means of improving financial outcomes, but these were rejected due to adverse customer impacts.

State Water considers the best option to improve credit rating outcomes without materially impacting on pricing outcomes, is to reduce business risk. For regulated monopolies, regulatory risk is the major driver of business risk. Regulatory risk is high under the current price cap form of regulation, with State Water exposed to significant risk of revenue under recovery, as evidenced over the current regulatory period. This risk is exacerbated given forecast extraction volumes are based on 20-year historical averages. As acknowledged by IPART, the recent structural break in extraction volumes provides an upward bias in forecasts over the 2010 Determination period. If extraction volumes remain around current levels, it could take up to 16 years before this upward bias is removed, exposing State Water to an asymmetric risk of long term under recovery of regulated revenue requirements.

Under the current price cap, revenue under recovery resulting from lower than forecast water extractions is permanently foregone. IPART's proposed revenue volatility allowance compensates State Water for holding costs associated with projected revenue shortfalls over a single regulatory period, but does not address regulatory risk associated with long term under recovery of regulated revenue requirements.

State Water proposes a refinement to IPART's proposed revenue volatility allowance that incorporates a holding cost allowance based on the carry forward balance of past under / over recovered revenue. This represents a shift towards a revenue cap form of regulation, which is considered inherently less risky than a price cap, especially for businesses with high volumetric risk and predominantly fixed costs. Customers remain protected from price shocks as the volatility allowance is based on holding costs of under / over recovery balances, rather than through a direct adjustment to revenue requirements. Importantly, the revenue volatility allowance is based on actual, rather than projected, under / over recovery balances.

State Water believes that such a mechanism will materially reduce regulatory risk, thereby reducing the level of financial protection required for State Water to achieve an investment grade credit rating. Credit rating would be assessed under a 'below average risk' risk profile, consistent with the below average asset beta used to determine the cost of equity.

Further details pertaining to State Water's proposed revenue volatility allowance are provided in the following section.

6.2. Revenue Volatility Allowance

State Water is subject to high volumetric risk as water availability is largely dependent on surface water (i.e. rainfall run-off) and therefore supply is highly exposed to drought conditions. Relative to other NSW water businesses, State Water does not have the availability of alternative sources of water supply such as desalination and recycled water.

Under the current price cap form of regulation, 60 per cent of sales revenue from bulk water customers is recovered through usage charges, subjecting State Water to significant revenue volatility. Revenue risk is exacerbated by high operating leverage (i.e. State Water's operating costs are predominantly fixed), meaning that revenue shortfalls associated with lower than forecast consumption impact directly on regulated earnings.

IPART's draft Determination acknowledges that regardless of the approach used to forecast extractions, State Water will still be exposed to annual variability in the availability of water (and hence revenue volatility risk) because of the inherent difficulty in forecasting variable climatic conditions. The draft Determination further acknowledges that forecasts based on long-run averages are likely to understate water extractions over the 2010 Determination and that the proposed use of 20 year averages will only partly remove the upward bias of the current approach to forecasting extractions.

In principle, State Water supports the proposed introduction of a revenue volatility allowance in order to compensate State Water for volumetric risk. However, State Water believes that IPART's proposed approach only partially addresses State Water's revenue volatility risk. The proposed revenue volatility allowance compensates State Water for holding costs associated with potential revenue shortfalls over a single regulatory period, but does not address regulatory risk associated with the potential for long term under recovery of regulated revenue. IPART's methodology assumes that under recoveries over one regulatory period will be offset by over recoveries in subsequent regulatory periods.

However, the proposed adoption of 20-year averages for extraction forecasts exposes State Water to asymmetric risk of revenue under-recovery, should recent water extraction volumes represent a structural change relative to the 20-year average. Under this scenario, State Water remains exposed to significant regulatory risk associated with the long term under recovery of regulated revenue, with limited prospects for 'claw back' unless future extractions return to pre-2006 levels.

This risk is compounded by the recovery of the allowance from General Security licence holders only. As General Security allocations are the first to be impacted when water availability is reduced, there is a significant risk that the full revenue volatility allowance will not be recovered during the new regulatory period.

State Water proposes an alternative recovery volatility mechanism based on holding costs associated with the carry forward of actual over / under recovery balances over time. State Water believes that this approach has several advantages over the revenue volatility mechanism proposed by IPART:

- It is based on an ex-post adjustment for actual under / over recovery balances, rather than an ex-ante estimate of holding costs based on 'worst-case' extraction forecasts. Under IPART's approach, customers fund prospective under recovery balances on an ex-ante basis, regardless of actual under / over recovery outcomes.

2010 Determination

- It is symmetrical in that under and over recoveries are treated identically, i.e. future over recoveries of revenue will result in negative adjustment to the carry forward balance. If 20 year averages prove to be a reasonable predictor of future extraction volumes, then the carry forward under / over recovery balance should trend towards zero over the medium to long term.
- It reduces regulatory risk by transparently recognising actual under / over recovered revenue and carrying forward balances over future regulatory periods. Under IPART's proposed approach, there is no carry forward mechanism meaning that holding costs associated with long term under recovery of regulated revenue are only funded over a single regulatory period and potentially foregone thereafter.
- Debt servicing capacity and credit rating outcomes are improved as holding costs are provided on the full carry forward of under / over recovery balances.
- It recognises State Water's significant under recovery of revenue over the current regulatory period, consistent with NWI principles that access entitlement holders should bear volumetric risks.

Consistent with the recovery of the allowance based on actual over/under recovery, State Water also proposes that the recovery of the revenue allowance not be limited to General Security licence holders in valleys where High Security licence holders have also received less than their full entitlements. Although High Security licences have historically always received their full allocations, and therefore provide a more stable revenue stream than General Security licence holders, the current drought has resulted in High Security allocations of less than 100% in both the Lachlan and Murrumbidgee Valleys. Accordingly, State Water believes that the revenue volatility allowance should also be recovered from High Security licence holders in these valleys.

State Water's proposal incorporates an opening (1 July 2010) under recovery balance of \$64.3 million, representing actual under recovered revenue over the current 2006/07 to 2009/10 regulatory period. The opening balance will be further adjusted at the next regulatory reset based on actual under / over recovery outcomes over the 2010/11 to 2013/14 period.

Table 6.2: Under Recovered Revenue (09/10 \$million)

\$09/10 Million	06/07	07/08	08/09	09/10 (fcst)
Opening Balance	-	(10.1)	(25.4)	(42.8)
Allowed Revenue ¹	38.0	41.2	43.7	45.9
Actual Revenue	28.2	26.9	28.5	27.7
Over (Under) Recovery	(9.7)	(14.3)	(15.2)	(18.2)
Actual Holding Costs ²	(0.3)	(1.1)	(2.1)	(3.4)
Allowed Holding Costs ³	-	-	-	-
Total	(10.1)	(25.4)	(42.8)	(64.3)

Totals may not add due to rounding

1. Represents transitional (i.e. smoothed) revenue allowance
2. Holding costs based on 2006 determined WACC of 6.5 per cent multiplied by opening balance plus 50 per cent of current year over / under recovery.
3. No holding costs were allowed in IPART's 2006 Determination. In future periods, allowed holding costs are netted off from actual holding costs when rolling forward the under / over recovery balance.

This translates to a revenue volatility allowance of \$4.76 million per annum, derived by calculating holding costs based on the opening under recovery balance of \$64.3 million and the draft Determination WACC of 7.4 per cent. This represents a \$1.83 increase

2010 Determination

relative to the Draft Determination revenue volatility allowance of \$2.93 million, translating to a 2.75 per cent increase in notional revenue requirements over the 4-year regulatory period.

Preliminary discussions held with NSW Treasury have indicated that adoption of State Water's proposed revenue volatility mechanism will materially reduce regulatory risk, thereby reducing the level of financial protection required for State Water to achieve an investment grade credit rating. This is not achieved under IPART's revenue volatility proposal, as it is focused on a single regulatory period and does not address regulatory risk associated with long term under recovery of regulated revenue.

Importantly, State Water believes that the revised revenue volatility mechanism will largely address State Water's financial viability and credit rating concerns, without the need for large increases in WACC or customer prices. The proposed methodology effectively represents a shift towards a revenue cap form of regulation, given the transparent recognition and carry forward of under / over recovered revenue. Current pricing structures are retained and customers are protected from price shocks as revenue requirements are only adjusted for holding costs, rather than the entire under / over recovery balance.

Based on a 'below average' utility risk profile (consistent with the lower regulatory risk under State Water's proposed revenue volatility mechanism), financial modelling demonstrates that State Water can comfortably maintain an investment grade credit over the 2010 Determination period. Further details are provided in the Financial Outcomes section.

6.3 Weighted Average Cost of Capital

State Water supports adoption of the draft Determination WACC parameters, subject to:

- Implementation of State Water's proposed changes to the revenue volatility allowance outlined above, and
- Extension of the term structure of debt margins obtained from Australian corporate bonds to match the term of the risk free rate.

Debt Margin

A debt margin range of 2.0 per cent to 3.8 per cent is adopted in IPART's Draft Determination, based on 7-year BBB Bloomberg fair value yield curve data and a portfolio of corporate debt issues. State Water believes that the low end of this range may not accurately reflect the market-based debt margin for BBB to BBB+ rated securities over a 10-year maturity.

State Water is concerned that IPART's selected portfolio of proxy corporate bonds may underestimate the debt margin given their maturity periods are significantly shorter than the 10 year risk free period. Under IPART's current methodology, the corporate bond with the shortest maturity period will inevitably determine the low end of the debt margin range, thereby also impacting on the range mid-point.

The draft Determination excluded the July 2012 maturing Coles bond from the 'traditional universe' of securities as it 'may cause a downward bias in the calculation of debt margin'. However, the remaining bonds in IPART's selected portfolio also have maturities considerably shorter than the ten-year risk free rate period, and therefore may also cause downward bias.

2010 Determination

State Water acknowledges that IPART's Discussion Paper on Estimating the Debt Margin for the WACC outlined a methodology to extend the term structure of debt margins obtained from Australian corporate bonds to match the term of the risk free rate. State Water proposes that this methodology be implemented for the Final Determination in order to eliminate potential downward bias. Alternatively, the 7-year BBB Bloomberg fair value yield curve should be used as the sole proxy, as it is the only measure which approximates the 10-year risk free term.

6.4 Financial Outcomes

Table 6.3 sets out State Water's proposed revenue requirements based on the revised capital expenditure, operating cost, depreciation lives and revenue volatility allowance assumptions detailed above.

Table 6.3: Revised Notional Revenue (09/10 \$million)

	09/10 (base)	10/11	11/12	12/13	13/14
Operating Expenditure	36.0	39.0	38.6	38.6	37.7
Depreciation	3.4	4.5	5.8	6.8	7.5
Return on Assets	27.1	36.8	43.5	49.2	52.8
Revenue Volatility Allowance	-	4.8	4.8	4.8	4.8
Total Notional Revenue	66.5	85.1	92.6	99.5	102.7

Totals may not add due to rounding

Excludes MDBA and BRC Costs

Return on Assets includes Working Capital allowance as per draft Determination

Final year (2013/14) revenue requirements are \$4.2 million below that proposed in State Water's original submission and \$2.9 million above the draft Determination recommendation:

Table 6.4: Total Notional Revenue (09/10 \$million)

	09/10 (base)	10/11	11/12	12/13	13/14
SWC Original Submission	66.5	86.1	96.8	104.3	106.9
Draft Determination	66.5	81.7	89.5	96.4	99.8
SWC Revised Submission	66.5	85.1	92.6	99.5	102.7

Excludes MDBA and BRC Costs

Attachment A breaks down notional revenue requirements between User and Government shares. Attachment B shows regulatory asset based (RAB) roll forward calculations.

Table 6.5 shows credit rating outcomes under State Water's revised proposal, based on NSW Treasury's credit rating model. Importantly, an 'above average' business profile has been adopted (reflecting below average business risk), consistent with reduced regulatory risk under State Water's revised revenue volatility allowance proposal.

2010 Determination

Overall credit rating outcomes remain comfortably above investment grade over the regulatory period²:

Table 6.5: Credit Rating Outcomes (NSW Treasury Model)

	10/11	11/12	12/13	13/14
FFO Interest Cover	3.1	2.5	2.2	2.2
FFO / Average Debt	18.2%	12.7%	10.6%	10.3%
Debt Gearing	36%	42%	45%	44%
Pre-tax Interest Cover	2.8	2.2	2.0	1.9
Credit Rating Score	6.50	5.25	5.0	5.0
Credit Rating	A	BBB+	BBB+	BBB+

Based on Regulated Financials

As noted in the draft Determination, the decline in credit metrics reflects State Water's large, predominantly debt funded capital expenditure program. However, State Water's long term modelling indicates that debt levels are expected to peak towards the end of the upcoming regulatory period. Credit rating outcomes stabilise thereafter, indicative of State Water's long-term financial sustainability.

² A minimum credit rating score of 4.0 is required to achieve an investment grade credit rating under NSW Treasury's model

7 MACQUARIE GENERATION BARNARD RESERVE ACCOUNT

Since 1986, water from the Barnard River (Manning Valley) has been pumped into the Hunter Valley by an electrical power generator (now Macquarie Generation). The water is captured, stored and released from Glenbawn Dam, and then delivered to the generator's works within the Hunter Regulated River.

For largely historical circumstances, no water delivery charges have ever been set or collected for the services provided by State Water or its predecessors to Macquarie Generation in the regulated section of the river system to contribute towards the costs of running the system.

State Water and Macquarie Generation are both working to establish an understanding of the services and resource management that is both fair and equitable. One option being examined involves the payment of charges determined by IPART for a set entitlement and estimated usage amounts. This understanding will be provided to the resource regulator, NSW Office of Water (the Office) for consideration when determining the new licensing framework for Macquarie Generation.

As the understanding between State Water and Macquarie Generation has not yet been finalised, nor has it been endorsed by the Office, it would be premature for any adjustments to be made water charges at this stage. State Water will continue to work with both Macquarie Generation and NOW and will inform IPART once an outcome has been reached.

8 OUTPUT MEASURES

State Water welcomes the opportunity to incorporate agreed output measures in the 2010 Determination. As requested by IPART, State Water has considered the range of output measures proposed in the draft Determination. State Water has made some modifications to the measures where appropriate, to ensure they are both measurable and reflect projected outputs over the next four years. Where relevant, State Water has included some additional measures, for example in relation to the telemetry outputs resulting from the iSMART project and the key milestones for the dam safety upgrade projects.

In many cases, State Water is still collecting the baseline data for these indicators, such as those resulting from the ongoing improvements to the Facilities Management Maintenance System. Consequently, IPART should be aware that when reporting against these targets, it may be appropriate for the targets to be modified to reflect State Water's improved understanding of the system.

State Water's comments and targets against each measure are included in Appendix C.

**Notional Revenue Requirements – User and Government
(09/10 \$million)**

User Share	09/10	10/11	11/12	12/13	13/14
Operating Expenditure	34.0	35.4	35.0	35.0	34.2
Depreciation	1.5	1.7	1.9	2.2	2.4
Return on Assets	12.1	14.6	16.1	17.5	18.2
Revenue Volatility Allowance	-	4.8	4.8	4.8	4.8
Total Notional Revenue	47.6	56.4	57.9	59.5	59.6

Totals may not add due to rounding

Excludes MDBA and BRC Costs

Return on Assets includes Working Capital allowance as per Draft Determination

Variation to Draft Determination	09/10	10/11	11/12	12/13	13/14
Operating Expenditure	-	0.2	0.2	0.3	0.3
Depreciation	-	0.0	0.0	0.0	0.0
Return on Assets	-	0.0	0.1	0.2	0.3
Revenue Volatility Allowance	-	1.8	1.8	1.8	1.8
Total Notional Revenue	-	2.1	2.1	2.4	2.5

Totals may not add due to rounding

Government Share	09/10	10/11	11/12	12/13	13/14
Operating Expenditure	2.0	3.6	3.6	3.6	3.4
Depreciation	1.9	2.9	3.8	4.6	5.2
Return on Assets	15.0	22.2	27.4	31.8	34.6
Revenue Volatility Allowance	-	-	-	-	-
Total Notional Revenue	18.9	28.7	34.8	40.0	43.2

Totals may not add due to rounding

Excludes MDBA and BRC Costs

Return on Assets includes Working Capital allowance as per Draft Determination

Variation to Draft Determination	09/10	10/11	11/12	12/13	13/14
Operating Expenditure	-	0.2	0.2	0.2	0.2
Depreciation	-	0.2	0.1	0.1	0.0
Return on Assets	-	1.0	0.8	0.4	0.2
Revenue Volatility Allowance	-	-	-	-	-
Total Notional Revenue	-	1.4	1.1	0.7	0.5

Totals may not add due to rounding

ATTACHMENT B

RAB Roll Forward Calculations (09/10 \$million)

Total RAB	10/11	11/12	12/13	13/14
Opening Balance	463.8	564.2	645.6	719.7
Capital Expenditure	105.0	87.4	81.2	22.2
Depreciation	4.7	6.0	7.1	7.8
Closing Balance	564.2	645.6	719.7	734.1

User RAB	10/11	11/12	12/13	13/14
Opening Balance	192.9	210.5	233.8	246.4
Capital Expenditure	19.4	25.3	14.9	9.1
Depreciation	1.7	2.0	2.3	2.4
Closing Balance	210.5	233.8	246.4	253.1

Government RAB	10/11	11/12	12/13	13/14
Opening Balance	270.9	353.6	411.8	473.3
Capital Expenditure	85.6	62.1	66.3	13.1
Depreciation	3.0	4.0	4.8	5.3
Closing Balance	353.6	411.8	473.3	481.0

OUTPUT MEASURES

Where State Water has suggested amendments to the output measures, the targets below refer to the amended measures.

IPART Proposed	State Water comment	Proposed Targets			
		2010/11	2011/12	2012/13	2013/14
FMMS					
Extent of maintenance jobs/tasks planned on FMMS (% and \$ cost)	State Water agrees that it would be useful to develop a measure to track the increased usage of the FMMS however that this stage, as the FMMS is not linked to the IFMS, it is not possible to provide costing for this measure.	30%	45%	60%	75%
Number of jobs/tasks planned per annum	State Water notes that it will report actual completed planned jobs when reporting against this measure. IPART should be aware that State Water may propose future adjustments to this target as improvements are made to the quality and consistency of jobs contained within FMMS. As well as new jobs being added, other jobs will be removed to remove duplication. For example, gate painting may currently appear as a separate job for each gate but in future this will be replaced with one job for all gates at the same storage.	1,066	1,226	1,410	1,621

2010 Determination

IPART Proposed	State Water comment	Proposed Targets			
		2010/11	2011/12	2012/13	2013/14
Backlog of maintenance activity – number and time to resolve	This measure should be amended to require State Water to report on the number of backlog jobs at 30 June each year, excluding surveillance audit jobs which are primarily condition based and can fluctuate significantly year on year. As at 1 January 2010, the backlog was 700 jobs. At this stage not all jobs have hours against them. Therefore it is not possible to provide the time to resolve.	50% reduction from 1 January 2010 backlog.	A further 25% reduction	No change	No change
Ratio of planned to condition based/breakdown maintenance	This measure should be deleted as it would duplicate the first FMMS measure.	N/A	N/A	N/A	N/A
Asset Condition Profile					
RAB condition profile as per Atkins/Cardno report	State Water can readily report on this measure but notes that the target of 83 years is based on the methodology which was not endorsed by IPART.	No deterioration	No deterioration	No deterioration	No deterioration
Maintenance – Completion of dam safety schemes					
Reduction in risk level through the completion of the dam safety upgrades	State Water intends to update the Portfolio Risk Assessment (PRA) in 2011/12. The PRA will enable State Water to report on the risk reduction on those dams where the upgrades have been completed. As factors other than the upgrades will affect the updated risk rating, it is not possible to assign a numerical target to this measure.	N/A	Risk reduction in Blowering and Chaffey Dams	N/A	N/A

2010 Determination

IPART Proposed	State Water comment	Proposed Targets			
		2010/11	2011/12	2012/13	2013/14
Proposed construction program and agreed dam safety compliance Phase 1 target dates as per Atkins/Cardno report	Rather than just the completion dates, State Water proposes to report on key milestones for each project: design completion, award of the construction contract and completion of construction.				
	<i>Blowering Dam</i>	Project complete			
	<i>Burrendong Dam</i>	Design complete	Award contract	Project complete	
	<i>Chaffey Dam</i>	Award contract	Project complete		
	<i>Copeton Dam</i>	Design complete	Award contract	Project complete	
	<i>Keepit Dam</i>	Design complete	Award contract	Project complete	
	<i>Split Rock Dam</i>	Design complete	Award contract	Project complete	
	<i>Wyangala Dam</i>	Design complete		Award contract	Project complete
Telemetry					
The number and percentage of key sites with established telemetry for monitoring and control of assets	This measure should be revised to refer specifically to remote monitoring which State Water will be installing over the new regulatory period as per the iSMART project, rather than existing telemetry.	15 Dams (83%) 43 Weirs & Regulators (83%)	3 Dams (100%) 14 Weirs & Regulators (100%)		

2010 Determination

IPART Proposed	State Water comment	Proposed Targets			
		2010/11	2011/12	2012/13	2013/14
Automation of key sites	This is the second stage of the iSMART project which will rationalise the existing telemetry infrastructure to ensure that full benefit of the iSMART project is realised.	9 Dams (69%) 14 Weirs & Regulators (30%)	1 Dams (77%) 22 Weirs & Regulators (76%)	0 Dams (77%) 4 Weirs & Regulators (85%)	3 Dams (100%) 7 Weirs & Regulators (100%)
Surveillance Monitoring Works	This project phase relates installation of new Dam and Weir instrumented surveillance systems to ensure that full benefit of the iSMART project is realised.	7 Dams (58%) 21 Weirs & Regulators (40%)	5 Dams (100%) 17 Weirs & Regulators (77%)	11 Weirs & Regulators (94%)	3 Weirs & Regulators (100%)
Environmental					
Total length of river open to fish by valley, length, year.	State Water already reports this output under an existing agreement with the Industry and Investment NSW (Fisheries).	N/A	Macquarie 380 kms Lachlan 519 kms	Murrumbidgee 210 kms	Gwydir 368 kms Namoi 340 kms
For valleys where cold water pollution works are currently proposed, State Water is to achieve satisfactory performance by the scheduled date, as defined by the Operating Protocols under the Works Approvals.	The draft Determination does not include sufficient expenditure to complete even one of the multi-level offtake towers proposed by State Water. Consequently, this measure will not be relevant to State Water's performance until the next regulatory period.	N/A	N/A	N/A	N/A

2010 Determination

IPART Proposed	State Water comment	Proposed Targets			
		2010/11	2011/12	2012/13	2013/14
Water Delivery					
Expenditure to enhance water delivery operations	State Water is developing performance indicators for water delivery for each valley. These indicators will be rolled up to a state total.	Establish water delivery performance indicators and benchmarks in each major valley based on historical performance.	Set performance improvement targets for each valley. Measure and report performance against performance indicators.	Measure performance against performance indicator targets.	Measure performance against performance indicator targets.